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Date: August 30, 2024

Our Ref: 30218437.RPTI4
30224425.NAVI4

Subject: 2024 Second Quarter Operation, Maintenance, and Monitoring Report, Operable Unit 2, Northrop Grumman and Naval Weapons Industrial Reserve Plant (NWIRP) Sites, Bethpage, New York.
(NYSDEC Site #'s 1-30-003A and B)

Dear Ms. Johnston:

On behalf of Northrop Grumman, Arcadis is providing the NYSDEC with the Second Quarter 2024 Operation, Maintenance, and Monitoring Report (Report). This Report was prepared to document the operation, maintenance, and monitoring (OM&M) activities conducted for the Operable Unit 2 (OU2) groundwater remedy and the results of ongoing volatile organic compound (VOC) and inorganic monitoring in groundwater to meet the remedial objectives set forth in the March 2001 OU2 Record of Decision (ROD) and associated December 2019 Amended Record of Decision (AROD).

Table 1 summarizes OU2 remedial system performance operational data, mass removed, and water balance. **Tables 2 and 3A/3B** provide the analytical results for remedial system water and vapor samples, respectively, for this period. **Tables 4A and 4B** provide an air quality impact analysis (under 6 CRR-NY 212 [Rule 212]) for quarterly vapor sample results collected from the Building 96 and Building 102 systems, respectively, including air modeling analysis if warranted. **Tables 5 through 7** provide validated analytical results associated with groundwater monitoring efforts completed during this period. **Figures 1 through 3** show the Locations of Wells and On-site Groundwater Remedy, ONCT Groundwater Extraction and Treatment System Site Plan, and the ONCT Groundwater Extraction and Treatment System Schematic, respectively.

Sarah Johnston
NYSDEC
August 30, 2024

Please contact us if you have any questions or comments.

Sincerely,
Arcadis of New York, Inc.



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Enclosures

Tables

Table 1
Operational Summary for the Treatment System
Second Quarter 2024⁽¹⁾ Reporting Period
Operable Unit 2
Northrop Grumman
Bethpage, New York



	Quarterly Flow Rates (gpm)		Quarterly Flow Volumes (MG)			Quarterly VOC Concentrations (µg/L)		VOC Mass Removed (lbs)		Second Quarter Remedial Well Uptime (%)
	Current Model Design ⁽²⁾	Current Operational Flow ^(3,4)	Design ⁽²⁾	Actual ^(3,4)	% of Design	TCE ⁽⁵⁾	TVOC ^(5,6)	Quarterly	Cumulative	
Influent Groundwater ⁽⁷⁾										
Well 1	800	810	105	92	88%	446	469	361	57,324	86%
Well 3R	700	832	92	106	115%	178	237	210	94,883	97%
Well 17	1,000	1,106	131	132	101%	118	134	148	56,495	91%
Well 18	800	1,007	105	130	124%	22.2	42.0	46	7,615	98%
Well 19	500	508	66	65	98%	58.7	74.0	40	9,811	98%
Total ⁽⁸⁾	3,800	4,263	499	525	105%	--	--	805	226,128	--
Effluent Groundwater ^(9,14)										
Calpine	100 - 400	169	--	22	--	--	--	--	--	--
OXY Biosparge ⁽¹⁰⁾	2 - 42	0	--	0	--	--	--	--	--	--
West Recharge Basins	1,112 - 1,455	1,217	--	159	--	--	ND	--	--	--
South Recharge Basins (Building 102)	2231 - 4631	2,662	296 - 607	368	--	--	ND	--	--	--
South Recharge Basins (Building 109)	1,500	1,676	197	200	--	--	ND	--	--	--
South Recharge Basins (Combined)	2231 - 4631	4,338	495 - 806	568	--	--	ND	--	--	--
Total	--	4,048	--	549	--	--	ND	--	--	--
Additional Flow to South Recharge Basins										
Storm Water Runoff Contributing to South Recharge Basins Flow Volume ⁽¹¹⁾	--	--	--	19	--	--	--	--	--	--
Total Flow Volume to South Recharge Basins ^(10,11,12)	--	--	495 - 806	587	--	--	--	--	--	--
Treatment Efficiencies ⁽¹³⁾										
Building 96 System:	>99.9%									
Building 102 System:	>99.9%									

See Notes and Abbreviations on last page.

Notes and Abbreviations:

- (1) Quarterly reporting period: April 1, 2024 through June 30, 2024.
- (2) "Current Model Design" flow rates were determined for the five remedial wells and for the South Recharge Basin based on computer modeling (ARCADIS G&M, Inc. 2002, updated in 2021 and 2023). Flow rates for Calpine Power Plant (Calpine), Occidental Chemical (OXY) Biosparge, and West Recharge Basin flow rates are typical flow rates and are provided for reader information. Flow to SRB reflects operation of the B109 treatment system. High-end of range reflects up to a 2,400 gpm contribution from B109 (RW-21 and DEC-EX-06). Model simulations demonstrated ONCT capture zone maintained for SRB discharge rates within range. "Design" flow volumes represent the volume of water that is expected to be pumped/discharged during the reporting period and is calculated by multiplying the design rate by the reporting period duration.
- (3) Actual flow rates for the remedial wells represent the average actual pumping rates when the pumps are operational and do not take into account the time that a well is not operational. Actual flow volumes are collated from the monthly SPDES reports, which are calculated using the SCADA instantaneous flow rates transmitted from local flow meters.
- (4) "Actual" flow rates for the system discharges represent the average flow rate during the reporting period and are determined by dividing the total flow recorded during the reporting period by the reporting period duration.
- (5) The TCE and TVOC concentrations are from the quarterly sampling events performed during this reporting period on May 14, 2024.
- (6) The TVOC concentrations for the West Recharge Basin (Outfall 006 of the Building 96 System) and the South Recharge Basin (Outfall 005 of the Building 102 System) are their respective average monthly Outfall SPDES concentrations for the current quarter.
- (7) Building 96 (Wells 1 and 3R): Well 1 was shut down this reporting period on April 18th through April 30th due to flow meter malfunctions.
 Building 102 (Wells 17, 18, and 19) was shut down this reporting period on April 29th, June 14th, 20th, and the 29th for minor system repairs.
- (8) Total pumpage/recharge rates are accurate to ±15% based on available information and expected or typical precision/accuracy factors for the gauges and meters.
- (9) There are four possible discharges for the effluent groundwater: South Recharge Basins, West Recharge Basins, Calpine, and the OXY Biosparge system. Treated water is continuously discharged to the south and west recharge basins during routine operation, and is available "on-demand" to both Calpine for use as make-up water, and the OXY Biosparge remediation system. For this quarter, the quarterly flow rates to the south and west recharge basins (SRB and WRB, respectively) were calculated using the remedial well flow rates and available additional information and assumptions provided by Northrop Grumman regarding flow distribution, as follows: the Building 96 system (Remedial Wells 1 and 3R) discharges effluent water to the WRB, less Calpine usage and less 119 gpm of Building 102 steam condenser usage (15.8 MG); the Building 102 System (Remedial Wells 17 through 19), including the Building 102 steam condenser usage (15.8 MG), and the Building 109 System (Remedial Wells 20 through 22) discharge effluent water to the SRB.
- (10) Oxy has not reported any water usage for the OXY Biosparge system since May 2016.
- (11) Storm water runoff volume is calculated by multiplying the adjusted tributary area and NOAA precipitation data for the reporting periods. The tributary area is adjusted by the runoff coefficient to exclude the infiltration volume from the total rainfall volume. The tributary area, runoff coefficient, and adjusted tributary area are from Dvirka and Bartilucci Consulting Engineers' Storm Water Permit Evaluation Report (January, 28, 2010). The NOAA precipitation data are calculated as a sum of NOAA daily precipitation data for the reporting period. NOAA precipitation data are retrieved from Station GHCND:USW00054787 - FARMINGDALE REPUBLIC AIRPORT, NY US for April, May, and June 2024.
- (12) Total flow volume to South Recharge Basins is estimated as a sum of flow volumes contributed by the effluent groundwater to South Recharge Basins (B102 and B109 treatment systems) and from storm water runoff to South Recharge Basins. Second Quarter 2024 calculated South Recharge Basin flow volume is within historical operating range.
- (13) Treatment system efficiencies are calculated by dividing the difference between the remedial well flow weighted influent and effluent TVOC concentrations by the remedial well flow weighted influent concentration.
- (14) RW-21 system start-up testing was initiated in May 2023, and continuing with full-scale operation beginning in August 2023. As such, flow volumes to the south recharge basins are representative of volumes from the Building 102 and Building 109 treatment systems since RW-21 system start-up.

- Not Applicable
- µg/L micrograms per liter
- gpm gallons per minute
- lbs pounds
- MG million gallons
- NOAA National Oceanic and Atmospheric Administration
- SCADA Supervisory Controls and Data Acquisition
- SPDES State Pollution Discharge Elimination System
- TCE trichloroethene
- TVOC total volatile organic compounds
- VOC volatile organic compounds

Table 2
Concentrations of Constituents in Remedial Wells and
Treatment System Effluents
Second Quarter 2024⁽¹⁾ Reporting Period
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituents⁽²⁾ (units in µg/L)	CAS#	Location ID: Sample ID: Sample Date:	WELL 1 WELL 1 5/14/2024	WELL 3R WELL 3R 5/14/2024	96 EFFLUENT 96 EFFLUENT 5/14/2024
<u>Volatile Organic Compounds (VOCs)⁽³⁾</u>					
1,1,1-Trichloroethane	00071-55-6		<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane	00079-34-5		<1.0	<1.0	<1.0
1,1,2-Trichloroethane	00079-00-5		<1.0	<1.0	<5.0
1,1-Dichloroethane	00075-34-3		<1.0	<1.0	<1.0
1,1-Dichloroethene	00075-35-4		0.86 J	1.4	<1.0
1,2-Dichloroethane	00107-06-2		0.97 J	5.1	<1.0
1,2-Dichloropropane	00078-87-5		<1.0	<1.0	<1.0
2-Butanone (MEK)	00078-93-3		2.4	<1.0	<1.0
2-Hexanone (MBK)	00591-78-6		<10	<10	<10
4-Methyl-2-Pentanone (MIK)	00108-10-1		<5.0	<5.0	<5.0
Acetone	00067-64-1		<5.0	<5.0	<5.0
Benzene	00071-43-2		<10	<10	<10
Bromodichloromethane	00075-27-4		<0.50	<0.50	<0.50
Bromoform	00075-25-2		<1.0	<1.0	<1.0
Bromomethane	00074-83-9		<1.0	<1.0	<1.0
Carbon Disulfide	00075-15-0		<2.0	<2.0	<2.0
Carbon Tetrachloride	00056-23-5		<2.0	<2.0	<2.0
Chlorobenzene	00108-90-7		<1.0	<1.0	<1.0
Chloroethane	00075-00-3		<1.0	<1.0	<1.0
Chloroform	00067-66-3		<1.0	<1.0	<1.0
Chloromethane	00074-87-3		<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	00156-59-2		<1.0	<1.0	<1.0
cis-1,3-Dichloropropene	10061-01-5		5.8	3.4	<1.0
Dibromochloromethane	00124-48-1		<1.0	<1.0	<1.0
Ethylbenzene	00100-41-4		<1.0	<1.0	<1.0
Dichloromethane	00075-09-2		<1.0	<1.0	<1.0
Styrene	00100-42-5		<2.0	<2.0	<2.0
Tetrachloroethene	00127-18-4		<1.0	<1.0	<1.0
Toluene	00108-88-3		10.8	44.8	<1.0
trans-1,2-Dichloroethene	00156-60-5		<1.0	<1.0	<1.0
trans-1,3-Dichloropropene	10061-02-6		<1.0	<1.0	<1.0
Trichloroethylene	00079-01-6		446	178	<1.0
Trichlorotrifluoroethane (Freon 113)	00076-13-1		1.7 J	2.4 J	<1.0
Vinyl Chloride	00075-01-4		<1.0	1.7	<1.0
Xylene-o	00095-47-6		<1.0	<1.0	<1.0
Xylene-m,p	179601-23-1		<1.0	<1.0	<1.0
Total VOCs⁽⁴⁾			469	237	ND
1,4-Dioxane⁽³⁾			6.4	7.3	6.9

Table 2
Concentrations of Constituents in Remedial Wells and
Treatment System Effluents
Second Quarter 2024⁽¹⁾ Reporting Period
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituents⁽²⁾ (units in µg/L)	CAS#	Location ID: Sample ID: Sample Date:	WELL 17 WELL 17 5/14/2024	WELL 18 WELL 18 5/14/2024	WELL 19 WELL 19 5/14/2024	102 EFFLUENT 102 EFFLUENT 5/14/2024
<u>Volatile Organic Compounds (VOCs)⁽³⁾</u>						
1,1,1-Trichloroethane	00071-55-6		<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane	00079-34-5		<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	00079-00-5		<1.0	<1.0	<1.0	<5.0
1,1-Dichloroethane	00075-34-3		<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene	00075-35-4		<1.0	1.4	<1.0	<1.0
1,2-Dichloroethane	00107-06-2		0.74 J	0.69 J	1.1	<1.0
1,2-Dichloropropane	00078-87-5		<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)	00078-93-3		1.0	<1.0	<1.0	<1.0
2-Hexanone (MBK)	00591-78-6		<10	<10	<10	<10
4-Methyl-2-Pentanone (MIK)	00108-10-1		<5.0	<5.0	<5.0	<5.0
Acetone	00067-64-1		<5.0	<5.0	<5.0	<5.0
Benzene	00071-43-2		<10	<10	<10	<10
Bromodichloromethane	00075-27-4		<0.50	<0.50	<0.50	<0.50
Bromoform	00075-25-2		<1.0	<1.0	<1.0	<1.0
Bromomethane	00074-83-9		<1.0	<1.0	<1.0	<1.0
Carbon Disulfide	00075-15-0		<2.0	<2.0	<2.0	<2.0
Carbon Tetrachloride	00056-23-5		<2.0	<2.0	<2.0	<2.0
Chlorobenzene	00108-90-7		<1.0	<1.0	<1.0	<1.0
Chloroethane	00075-00-3		<1.0	<1.0	<1.0	<1.0
Chloroform	00067-66-3		<1.0	<1.0	<1.0	<1.0
Chloromethane	00074-87-3		<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	00156-59-2		<1.0	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene	10061-01-5		2.3	2.4	8.0	<1.0
Dibromochloromethane	00124-48-1		<1.0	<1.0	<1.0	<1.0
Ethylbenzene	00100-41-4		<1.0	<1.0	<1.0	<1.0
Dichloromethane	00075-09-2		<1.0	<1.0	<1.0	<1.0
Styrene	00100-42-5		<2.0	<2.0	<2.0	<2.0
Tetrachloroethene	00127-18-4		<1.0	<1.0	<1.0	<1.0
Toluene	00108-88-3		10.7	14.3	4.8	<1.0
trans-1,2-Dichloroethene	00156-60-5		<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene	10061-02-6		<1.0	<1.0	<1.0	<1.0
Trichloroethylene	00079-01-6		118	22.2	58.7	<1.0
Trichlorotrifluoroethane (Freon 113)	00076-13-1		1.4 J	0.96 J	0.94 J	<1.0
Vinyl Chloride	00075-01-4		<1.0	<1.0	<1.0	<1.0
Xylene-o	00095-47-6		<1.0	<1.0	<1.0	<1.0
Xylene-m,p	179601-23-1		<1.0	<1.0	<1.0	<1.0
Total VOCs⁽⁴⁾			134	42	74	ND
1,4-Dioxane⁽³⁾			7.0	4.9	3.2	4.6

Table 2
Concentrations of Constituents in Remedial Wells and
Treatment System Effluents
Second Quarter 2024⁽¹⁾ Reporting Period
Operable Unit 2
Northrop Grumman
Bethpage, New York



Notes and Abbreviations:

- (1) Quarterly reporting period: April 1, 2024 through June 30, 2024.
- (2) Results for the program are validated at 20% frequency, per protocols specified in OU2 Groundwater Monitoring Plan (Arcadis 2016).
- (3) VOC samples analyzed using USEPA Method 8260C. 1,4-Dioxane samples analyzed using USEPA Method 8270D-SIM.
- (4) TVOC concentrations are rounded to the number of decimal places of the individual VOC with the least numerical precision (decimal place), including whole numbers with no decimal place.

1.4	Bold value indicates a detection
< 0.50	Compound is not detected above its laboratory quantification limit
µg/L	micrograms per liter
J	Compound detected below its reporting limit; value is estimated
ND	Not detected
OU2	Operable Unit 2
REP	Blind Replicate Sample
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound

Table 3A
Vapor Sample Analytical Results,
Building 96 Treatment System,
Second Quarter 2024⁽¹⁾ Reporting Period
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituents (units in µg/m3)	Location ID: Sample ID: Sample Date:	96 INFLUENT T96 INFLUENT 5/14/2024	96 MID-EFFLUENT T96 MIDTRAIN 5/14/2024	96 EFFLUENT T96 EFFLUENT 5/14/2024
<u>Volatile Organic Compounds (VOCs)⁽²⁾</u>	CAS #			
1,1,1-Trichloroethane	00071-55-6	< 22	10	<2.2
1,1,2,2-Tetrachloroethane	00079-34-5	< 27	<11	<2.7
1,1,2-Trichloroethane	00079-00-5	< 22	<8.7	<2.2
1,1-Dichloroethane	00075-34-3	40.1	63.5	2.0 J
1,1-Dichloroethene	00075-35-4	155	228	47.6
1,2-Dichloroethane	00107-06-2	< 32	<13	<3.2
1,2-Dichloropropane	00078-87-5	44	<15	<3.7
Benzene	00071-43-2	< 26	<10	<2.6
Bromodichloromethane	00075-27-4	< 27	<11	<2.7
Bromoform	00075-25-2	< 17	<6.6	<1.7
Bromomethane	00074-83-9	< 31	<12	<3.1
Carbon Disulfide	00075-15-0	< 25	<10	<2.5
Carbon Tetrachloride	00056-23-5	< 10	<4.0	<1.0
Chlorobenzene	00108-90-7	< 37	<15	<3.7
Chloroethane	00075-00-3	< 21	<8.4	2.3
Chloroform	00067-66-3	< 39	24	<3.9
Chloromethane	00074-87-3	< 17	<6.6	1.3 J
cis-1,2-Dichloroethene	00156-59-2	179	220	<0.63
cis-1,3-Dichloropropene	10061-01-5	< 36	<15	<3.6
Dibromochloromethane	00124-48-1	< 34	<14	<3.4
Ethylbenzene	00100-41-4	< 35	<14	<3.5
Dichloromethane	00075-09-2	< 28	<11	<2.8
Styrene	00100-42-5	< 34	<14	<3.4
Tetrachloroethene	00127-18-4	1130	<4.3	<1.1
Toluene	00108-88-3	< 30	<12	<3.0
trans-1,2-Dichloroethene	00156-60-5	< 32	<13	<3.2
trans-1,3-Dichloropropene	10061-02-6	< 36	<15	<3.6
Trichloroethylene	00079-01-6	17,700	2,210	33
Trichlorotrifluoroethane (Freon 113)	00076-13-1	113	150	<3.1
Vinyl Chloride	00075-01-4	26.6	28.4	24
Xylene-o	00095-47-6	< 35	<14	<3.5
Xylene-m,p	179601-23-1	< 35	<14	<3.5
Total VOCs⁽³⁾		19,388	2,934	110

Notes and abbreviations on last page.

Table 3A
Vapor Sample Analytical Results,
Building 96 Treatment System,
Second Quarter 2024⁽¹⁾ Reporting Period
Operable Unit 2
Northrop Grumman
Bethpage, New York



Notes and Abbreviations:

- (1) Quarterly reporting period: April 1, 2024 through June 30, 2024.
 - (2) Vapor samples collected by Arcadis on the dates shown and submitted to a NYSDOH ELAP certified laboratory for VOC analyses per Modified USEPA Method TO-15.
 - (3) TVOC concentrations are rounded to the number of decimal places of the individual VOC with the least numerical precision (decimal place), including whole numbers with no decimal place.
- 10.0** Bold value indicates a detection
- < 22 Compound is not detected above its laboratory quantification limit
- µg/m³ micrograms per cubic meter
- J Compound detected below its reporting limit; value is estimated
- ELAP Environmental Laboratory Approval Program
- NYSDOH New York State Department of Health
- USEPA United States Environmental Protection Agency
- VOC Volatile Organic Compound

Table 3B
Vapor Sample Analytical Results
Building 102 Treatment System
Second Quarter 2024⁽¹⁾ Reporting Period
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constitents (units in µg/m3)	Location ID: Sample ID: Sample Date:	102 INFLUENT T102 INFLUENT 5/14/2024	102 EFFLUENT T102 EFFLUENT 5/14/2024
<u>Volatile Organic Compounds (VOCs) ⁽²⁾</u>	CAS #		
1,1,1-Trichloroethane	00071-55-6	<8.7	4.1
1,1,2,2-Tetrachloroethane	00079-34-5	< 11	<1.4
1,1,2-Trichloroethane	00079-00-5	<8.7	<1.1
1,1-Dichloroethane	00075-34-3	25	26
1,1-Dichloroethene	00075-35-4	51.1	50.7
1,2-Dichloroethane	00107-06-2	< 13	1.7
1,2-Dichloropropane	00078-87-5	13 J	1.7 J
Benzene	00071-43-2	<10	<1.3
Bromodichloromethane	00075-27-4	< 11	<1.3
Bromoform	00075-25-2	<6.6	<0.83
Bromomethane	00074-83-9	<12	<1.6
Carbon Disulfide	00075-15-0	<10	<1.2
Carbon Tetrachloride	00056-23-5	<4.0	2.3
Chlorobenzene	00108-90-7	<15	<1.8
Chloroethane	00075-00-3	<8.4	<1.1
Chloroform	00067-66-3	<16	6.3
Chloromethane	00074-87-3	<6.6	1.2
cis-1,2 Dichloroethene	00156-59-2	105	112
cis-1,3-Dichloropropene	10061-01-5	<15	<1.8
Dibromochloromethane	00124-48-1	< 14	<1.7
Ethylbenzene	00100-41-4	< 14	<1.7
Dichloromethane	00075-09-2	< 11	1.6
Styrene	00100-42-5	<14	<1.7
Tetrachloroethene	00127-18-4	452	3.1
Toluene	00108-88-3	<12	<1.5
trans-1,2-Dichloroethene	00156-60-5	< 13	1.3 J
trans-1,3-Dichloropropene	10061-02-6	<15	<1.8
Trichloroethylene	00079-01-6	2,840	365
Trichlorotrifluoroethane (Freon 113)	00076-13-1	44	44
Vinyl Chloride	00075-01-4	<1.6	<0.20
Xylene-o	00095-47-6	< 14	<1.7
Xylene-m,p	179601-23-1	< 14	<1.7
Total VOCs ⁽³⁾		3,530	621

Notes and abbreviations on last page.

Table 3B
Vapor Sample Analytical Results
Building 102 Treatment System
Second Quarter 2023⁽¹⁾ Reporting Period
Operable Unit 2
Northrop Grumman
Bethpage, New York



Notes and Abbreviations:

- (1) Quarterly reporting period: April 1, 2024 through June 30, 2024.
- (2) Vapor samples collected by Arcadis on the dates shown and submitted to a NYSDOH ELAP certified laboratory for VOC analyses per Modified USEPA Method TO-15.
- (3) TVOC concentrations are rounded to the number of decimal places of the individual VOC with the least numerical precision (decimal place), including whole numbers with no decimal place.

4.1	Bold value indicates a detection
< 1.1	Compound is not detected above its laboratory quantification limit
µg/m ³	micrograms per cubic meter
J	Compound detected below its reporting limit; value is estimated
ELAP	Environmental Laboratory Approval Program
NYSDOH	New York State Department of Health
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound

Table 4A
 Rule 212 Evaluation
 Building 96 Treatment System
 Second Quarter 2024⁽¹⁾ Reporting Period
 Operable Unit 2
 Northrop Grumman
 Bethpage, New York



Project VOCs	CAS#	HTAC ²	Tower 96 Treatment System Effluent Conc. (ug/m3) ³	Tower 96 Emissions (lb/yr) ⁴	Rule 212 Limit (lb/yr) ⁵	Rule 212 Evaluation ⁶	Further evaluation Required? ⁶
1,1-Dichloroethane	75-34-3	No	2.0	0.290	100	Less than limit, Rule 212 compliant	N
1,1-Dichloroethene	75-35-4	No	47.6	6.906	100	Less than limit, Rule 212 compliant	N
Chloroethane	75-00-3	No	2.3	0.334	100	Less than limit, Rule 212 compliant	N
Chloromethane	74-87-3	No	1.3	0.189	100	Less than limit, Rule 212 compliant	N
Trichloroethylene	79-01-6	Yes	33	4.788	500	Less than limit, Rule 212 compliant	N
Vinyl Chloride	75-01-4	Yes	24	3.482	100	Less than limit, Rule 212 compliant	N

Flowrates and Normalized Modeling Impacts

Description	Flow (cfm)	AERMOD Normalized Ambient Impact at 1 g/s	
		Hourly ([µg/m ³]/[g/s])	Annual ([µg/m ³]/[g/s])
Tower 96	4,431	148.1	4.3

Notes and Abbreviations:

- (1) Quarterly reporting period: April 1, 2024 through June 30, 2024.
- (2) High toxicity air contaminant (HTAC) based on 6 CRR-NY Rule 212-2.2, Table 2 – High Toxicity Air Contaminant List.
- (3) Effluent concentrations based on sampling performed in the quarterly reporting period. Compounds not detected above the laboratory reporting limit are excluded from the air quality impact analysis summary.
- (4) Emission rate calculated based on maximum effluent concentration and maximum air flow rates measured during the sampling events. Emission rate standardized at 70 °F and 1 atm.

$$\text{Trichloroethylene (lb/yr)} = \text{Trichloroethylene } [\mu\text{g}/\text{m}^3] \times \text{Air Flow Rate } [\text{ft}^3/\text{min}] \times (1 \text{ m}^3/35.3147 \text{ ft}^3) \times (60 \text{ min}/\text{hr}) \times (0.000001 \text{ g}/1 \mu\text{g}) \times (0.0022 \text{ lb}/\text{g}) \times 8,760 \text{ hrs}/\text{yr}$$

- (5) 100 lb/yr for non-HTACs, and mass emission limits based on Rule 212-2.2, Table 2 for HTACs.
- (6) For HTACs, no further demonstration is required if the actual emissions are less than mass emission limit. For non-HTACs, no further demonstration is required if the actual emissions are less than 100 lbs/yr.

SGC Short-Term Guideline Concentrations
 AGC Annual Guideline Concentrations

Table 4B
 Rule 212 Evaluation
 Building 102 Treatment System
 Second Quarter 2024⁽¹⁾ Reporting Period
 Operable Unit 2
 Northrop Grumman
 Bethpage, New York



Project VOCs	CAS#	HTAC ²	Tower 102 Treatment System Effluent Conc. (ug/m3) ^{3,8}	Tower 102 Emissions (lb/yr) ⁴	Rule 212 Limit (lb/yr) ⁵	Rule 212 Evaluation ⁶	Further evaluation Required? ⁶
1,1,1-Trichloroethane	71-55-6	No	4.1	1.021	100	Less than limit, Rule 212 compliant	N
1,1-Dichloroethane	75-34-3	No	26	6.476	100	Less than limit, Rule 212 compliant	N
1,1-Dichloroethene	75-35-4	No	50.7	12.629	100	Less than limit, Rule 212 compliant	N
1,2-Dichloroethane	107-06-2	Yes	1.7	0.423	100	Less than limit, Rule 212 compliant	N
1,2-Dichloropropane	78-87-5	No	1.7	0.423	100	Less than limit, Rule 212 compliant	N
Carbon Tetrachloride	56-23-5	Yes	2.3	0.573	100	Less than limit, Rule 212 compliant	N
Chloroform	67-66-3	Yes	6.3	1.569	100	Less than limit, Rule 212 compliant	N
Chloromethane	74-87-3	No	1.2	0.299	100	Less than limit, Rule 212 compliant	N
cis-1,2 Dichloroethene	156-59-2	No	112	27.898	100	Less than limit, Rule 212 compliant	N
Methylene Chloride	75-09-2	No	1.6	0.399	100	Less than limit, Rule 212 compliant	N
Tetrachloroethene	127-18-4	Yes	3.1	0.772	1,000	Less than limit, Rule 212 compliant	N
trans-1,2-Dichloroethene	156-60-5	No	1.3	0.324	100	Less than limit, Rule 212 compliant	N
Trichloroethylene	79-01-6	Yes	365	90.919	500	Less than limit, Rule 212 compliant	N
Trichlorotrifluoroethane (Freon 113)	76-13-1	No	44	10.960	100	Less than limit, Rule 212 compliant	N

Flowrates and Normalized Modeling Impacts			
Description	Flow (cfm)	AERMOD Normalized Ambient Impact at 1 g/s	
		Hourly ([µg/m ³]/[g/s])	Annual ([µg/m ³]/[g/s])
Tower 102	7,607	348.9	2.3

Notes and Abbreviations:

- (1) Quarterly reporting period: April 1, 2024 through June 30, 2024.
- (2) High toxicity air contaminant (HTAC) based on 6 CRR-NY Rule 212-2.2, Table 2 – High Toxicity Air Contaminant List.
- (3) Effluent concentrations based on sampling performed in the quarterly reporting period. Compounds not detected above the laboratory reporting limit are excluded from the air quality impact analysis summary.
- (4) Emission rate calculated based on maximum effluent concentration and maximum air flow rates measured during the sampling events. Emission rate standardized at 70 °F
 $\text{Trichloroethylene (lb/yr)} = \text{Trichloroethylene } [\mu\text{g}/\text{m}^3] \times \text{Air Flow Rate } [\text{ft}^3/\text{min}] \times (1 \text{ m}^3/35.3147 \text{ ft}^3) \times (60 \text{ min}/\text{hr}) \times (0.000001 \text{ g}/1 \mu\text{g}) \times (0.0022 \text{ lb}/\text{g}) \times 8,760 \text{ hrs}/\text{yr}$
- (5) 100 lb/yr for non-HTACs, and mass emission limits based on Rule 212-2.2, Table 2 for HTACs.
- (6) For HTACs, no further demonstration is required if the actual emissions are less than mass emission limit. For non-HTACs, no further demonstration is required if the actual emissions are less than 100 lbs/yr.

SGC Short-Term Guideline Concentrations
 AGC Annual Guideline Concentrations

Table 5
Concentrations of Volatile Organic Compounds and 1,4 Dioxane in Monitoring Wells
Second Quarter 2024
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituent (units in µg/L)	Well ID:	FW-03	GM-13D	GM-15I	GM-15SR
	Sample ID: Date:	FW-03 5/22/2024	GM-13D 4/30/2024	GM-15I 4/23/2024	GM-15SR 4/23/2024
<u>Volatile Organic Compounds (VOCs)^(1, 2)</u>					
1,1,1-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane		<1.0	<1.0	<1.0	<1.0
1,1,2-trichloro-1,2,2-trifluoroethane (Freon113)		<5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane		<1.0	0.94 J	<1.0	<1.0
1,1-Dichloroethene		<1.0	0.80 J	<1.0	<1.0
1,2-Dichloroethane		<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane		<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)		<10	<10	<10	<10
4-Methyl-2-Pentanone		<5.0	<5.0	<5.0	<5.0
Acetone		<10	<10	<10	<10
Benzene		<0.50	<0.50	<0.50	<0.50
Bromodichloromethane		<1.0	<1.0	<1.0	<1.0
Bromoform		<1.0	<1.0	<1.0	<1.0
Bromomethane		<2.0	<2.0	<2.0	<2.0
Carbon Disulfide		<2.0	<2.0	<2.0	<2.0
Carbon Tetrachloride		<1.0	<1.0	<1.0	<1.0
Chlorobenzene		<1.0	<1.0	<1.0	<1.0
Chlorodibromomethane		<1.0	<1.0	<1.0	<1.0
Chloroethane		<1.0	<1.0	<1.0	<1.0
Chloroform		<1.0	<1.0	<1.0	<1.0
Chloromethane		<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene		<1.0	2.3	<1.0	<1.0
cis-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Dichloromethane		<2.0	<2.0	<2.0	<2.0
Ethylbenzene		<1.0	<1.0	<1.0	<1.0
m&p-Xylenes		<1.0	<1.0	<1.0	<1.0
Methyl N-Butyl Ketone (2-Hexanone)		<5.0	<5.0	<5.0	<5.0
o-Xylene		<1.0	<1.0	<1.0	<1.0
Styrene (Monomer)		<1.0	<1.0	<1.0	<1.0
Tetrachloroethene		<1.0	12.2	<1.0	<1.0
Toluene		<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene		<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Trichloroethene		<1.0	7.6	0.97 J	9.9
Vinyl chloride		<1.0	<1.0	<1.0	<1.0
Total VOCs⁽³⁾		ND	23.8 J	0.97 J	9.9
1,4 Dioxane^(1,2)		<0.25	2.1	1.0	1.8

See notes on last page

Table 5
Concentrations of Volatile Organic Compounds and 1,4 Dioxane in Monitoring Wells
Second Quarter 2024
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituent (units in µg/L)	Well ID:	GM-15D	GM-15D2	GM-17I	GM-17D
	Sample ID: Date:	GM-15D 4/23/2024	GM-15D2 4/23/2024	GM-17I 4/30/2024	GM-17D 4/30/2024
<u>Volatile Organic Compounds (VOCs)^(1, 2)</u>					
1,1,1-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1,1,2-Tetrachloroethane		<1.0	<1.0	<1.0	<1.0
1,1,1,2-trichloro-1,2,2-trifluoroethane (Freon113)		<5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane		<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene		<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane		<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane		<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)		<10	<10	<10	<10
4-Methyl-2-Pentanone		<5.0	<5.0	<5.0	<5.0
Acetone		<10	<10	<10	<10
Benzene		<0.50	<0.50	<0.50	<0.50
Bromodichloromethane		<1.0	<1.0	<1.0	<1.0
Bromoform		<1.0	<1.0	<1.0	<1.0
Bromomethane		<2.0	<2.0	<2.0	<2.0
Carbon Disulfide		<2.0	<2.0	<2.0	<2.0
Carbon Tetrachloride		<1.0	<1.0	<1.0	<1.0
Chlorobenzene		<1.0	<1.0	<1.0	<1.0
Chlorodibromomethane		<1.0	<1.0	<1.0	<1.0
Chloroethane		<1.0	<1.0	<1.0	<1.0
Chloroform		<1.0	<1.0	<1.0	<1.0
Chloromethane		<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene		<1.0	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Dichloromethane		<2.0	<2.0	<2.0	<2.0
Ethylbenzene		<1.0	<1.0	<1.0	<1.0
m&p-Xylenes		<1.0	<1.0	<1.0	<1.0
Methyl N-Butyl Ketone (2-Hexanone)		<5.0	<5.0	<5.0	<5.0
o-Xylene		<1.0	<1.0	<1.0	<1.0
Styrene (Monomer)		<1.0	<1.0	<1.0	<1.0
Tetrachloroethene		<1.0	2.5	<1.0	<1.0
Toluene		<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene		<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Trichloroethene		<1.0	5.8	<1.0	<1.0
Vinyl chloride		<1.0	<1.0	<1.0	<1.0
Total VOCs⁽³⁾		ND	8.3	ND	ND
1,4 Dioxane^(1,2)		<0.24	2.8	5.1	5.6

See notes on last page

Table 5
Concentrations of Volatile Organic Compounds and 1,4 Dioxane in Monitoring Wells
Second Quarter 2024
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituent (units in µg/L)	Well ID:	GM-18I	GM-18D	GM-20I	GM-20D
	Sample ID: Date:	GM-18I 4/17/2024	GM-18D 4/17/2024	GM-20I 4/18/2024	GM-20D 4/18/2024
<u>Volatile Organic Compounds (VOCs)^(1, 2)</u>					
1,1,1-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane		<1.0	<1.0	<1.0	<1.0
1,1,2-trichloro-1,2,2-trifluoroethane (Freon113)		<5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane		<1.0	<1.0	0.64 J	<1.0
1,1-Dichloroethene		<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane		<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane		<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)		<10	<10	<10	<10
4-Methyl-2-Pentanone		<5.0	<5.0	<5.0	<5.0
Acetone		<10	<10	<10	<10
Benzene		<0.50	<0.50	<0.50	<0.50
Bromodichloromethane		<1.0	<1.0	<1.0	<1.0
Bromoform		<1.0	<1.0	<1.0	<1.0
Bromomethane		<2.0	<2.0	<2.0	<2.0
Carbon Disulfide		<2.0	<2.0	<2.0	<2.0
Carbon Tetrachloride		<1.0	<1.0	<1.0	<1.0
Chlorobenzene		<1.0	<1.0	<1.0	<1.0
Chlorodibromomethane		<1.0	<1.0	<1.0	<1.0
Chloroethane		<1.0	<1.0	<1.0	<1.0
Chloroform		<1.0	<1.0	<1.0	<1.0
Chloromethane		<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene		<1.0	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Dichloromethane		<2.0	<2.0	<2.0	<2.0
Ethylbenzene		<1.0	<1.0	<1.0	<1.0
m&p-Xylenes		<1.0	<1.0	<1.0	<1.0
Methyl N-Butyl Ketone (2-Hexanone)		<5.0	<5.0	<5.0	<5.0
o-Xylene		<1.0	<1.0	<1.0	<1.0
Styrene (Monomer)		<1.0	<1.0	<1.0	<1.0
Tetrachloroethene		<1.0	<1.0	<1.0	<1.0
Toluene		<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene		<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Trichloroethene		<1.0	0.76 J	<1.0	0.70 J
Vinyl chloride		<1.0	<1.0	<1.0	<1.0
Total VOCs⁽³⁾		ND	0.76 J	0.64 J	0.70 J
1,4 Dioxane^(1,2)		6.5	8.2	3.0	4.4

See notes on last page

Table 5
Concentrations of Volatile Organic Compounds and 1,4 Dioxane in Monitoring Wells
Second Quarter 2024
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituent (units in µg/L)	Well ID:	GM-21S	GM-21I	GM-21D	GM-21D2
	Sample ID: Date:	GM-21S 4/29/2024	GM-21I 4/29/2024	GM-21D 4/29/2024	GM-21D2 4/29/2024
<u>Volatile Organic Compounds (VOCs)^(1, 2)</u>					
1,1,1-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1,1,2-Tetrachloroethane		<1.0	<1.0	<1.0	<1.0
1,1,1,2-trichloro-1,2,2-trifluoroethane (Freon113)		<5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane		1.7	1.0	<1.0	<1.0
1,1-Dichloroethene		<1.0	<1.0 J	<1.0 J	<1.0 J
1,2-Dichloroethane		0.87 J	<1.0	<1.0	<1.0
1,2-Dichloropropane		<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)		<10	<10	<10	<10
4-Methyl-2-Pentanone		<5.0	<5.0	<5.0	<5.0
Acetone		<10	<10 J	<10	<10 J
Benzene		<0.50	<0.50	<0.50	<0.50
Bromodichloromethane		<1.0	<1.0	<1.0	<1.0
Bromoform		<1.0	<1.0	<1.0	<1.0
Bromomethane		<2.0 J	<2.0	<2.0	<2.0
Carbon Disulfide		<2.0	<2.0	<2.0	<2.0
Carbon Tetrachloride		<1.0	<1.0	<1.0	<1.0
Chlorobenzene		<1.0	<1.0	<1.0	<1.0
Chlorodibromomethane		<1.0	<1.0	<1.0	<1.0
Chloroethane		<1.0	<1.0	<1.0	<1.0
Chloroform		0.62 J	0.69 J	<1.0	<1.0
Chloromethane		<1.0 J	<1.0 J	<1.0	<1.0 J
cis-1,2-Dichloroethene		<1.0	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Dichloromethane		<2.0	<2.0	<2.0	<2.0
Ethylbenzene		<1.0	<1.0	<1.0	<1.0
m&p-Xylenes		<1.0	<1.0	<1.0	<1.0
Methyl N-Butyl Ketone (2-Hexanone)		<5.0	<5.0	<5.0	<5.0
o-Xylene		<1.0	<1.0	<1.0	<1.0
Styrene (Monomer)		<1.0 J	<1.0	<1.0	<1.0
Tetrachloroethene		<1.0	<1.0	<1.0	0.66 J
Toluene		<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene		<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Trichloroethene		<1.0	<1.0	0.62 J	3.9
Vinyl chloride		<1.0	<1.0 J	<1.0 J	<1.0 J
Total VOCs⁽³⁾		3.2 J	1.7 J	0.62	4.6 J
1,4 Dioxane^(1,2)		2.5	2.4	3.9	4.5

See notes on last page

Table 5
Concentrations of Volatile Organic Compounds and 1,4 Dioxane in Monitoring Wells
Second Quarter 2024
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituent (units in µg/L)	Well ID: Sample ID: Date:	GM-33D2 GM-33D2 4/16/2024	GM-34D GM-34D 4/17/2024	GM-34D REP041724PQ1 4/17/2024	GM-34D2 GM-34D2 4/17/2024
<u>Volatile Organic Compounds (VOCs)^(1, 2)</u>					
1,1,1-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane		<1.0	<1.0	<1.0	<1.0
1,1,2-trichloro-1,2,2-trifluoroethane (Freon113)		0.66 J	<5.0	<5.0	<5.0
1,1,2-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane		<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene		<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane		<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane		<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)		<10	<10	<10	<10
4-Methyl-2-Pentanone		<5.0	<5.0	<5.0	<5.0
Acetone		<10	<10	<10	<10
Benzene		<0.50	<0.50	<0.50	<0.50
Bromodichloromethane		<1.0	<1.0	<1.0	<1.0
Bromoform		<1.0	<1.0	<1.0	<1.0
Bromomethane		<2.0	<2.0	<2.0	<2.0
Carbon Disulfide		<2.0	<2.0	<2.0	<2.0
Carbon Tetrachloride		<1.0	<1.0	<1.0	<1.0
Chlorobenzene		<1.0	<1.0	<1.0	<1.0
Chlorodibromomethane		<1.0	<1.0	<1.0	<1.0
Chloroethane		<1.0	<1.0	<1.0	<1.0
Chloroform		<1.0	<1.0	<1.0	<1.0
Chloromethane		<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene		<1.0	1.9	1.6	<1.0
cis-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Dichloromethane		<2.0	<2.0	<2.0	<2.0
Ethylbenzene		<1.0	<1.0	<1.0	<1.0
m&p-Xylenes		<1.0	<1.0	<1.0	<1.0
Methyl N-Butyl Ketone (2-Hexanone)		<5.0	<5.0	<5.0	<5.0
o-Xylene		<1.0	<1.0	<1.0	<1.0
Styrene (Monomer)		<1.0	<1.0	<1.0	<1.0
Tetrachloroethene		<1.0	5.5	4.9	5.0
Toluene		<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene		<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Trichloroethene		3.3	56.8	58.9	27.5
Vinyl chloride		<1.0	<1.0	<1.0	<1.0
Total VOCs⁽³⁾		4.0 J	64.2	65.4	32.5
1,4 Dioxane^(1,2)		11	6.2	6.6	7.5

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Table 5
Concentrations of Volatile Organic Compounds and 1,4 Dioxane in Monitoring Wells
Second Quarter 2024
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituent (units in µg/L)	Well ID:	GM-35D2	GM-36D	GM-36D2	GM-37D
	Sample ID: Date:	GM-35D2 4/30/2024	GM-36D 4/22/2024	GM-36D2 4/22/2024	GM-37D 5/22/2024
<u>Volatile Organic Compounds (VOCs)^(1, 2)</u>					
1,1,1-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1,1,2-Tetrachloroethane		<1.0	<1.0	<1.0	<1.0
1,1,1,2-trichloro-1,2,2-trifluoroethane (Freon113)		<5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane		<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene		<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane		<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane		<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)		<10	<10	<10	<10
4-Methyl-2-Pentanone		<5.0	<5.0	<5.0	<5.0
Acetone		<10	<10	<10	<10
Benzene		<0.50	<0.50	<0.50	<0.50
Bromodichloromethane		<1.0	<1.0	<1.0	<1.0
Bromoform		<1.0	<1.0	<1.0	<1.0
Bromomethane		<2.0	<2.0	<2.0	<2.0
Carbon Disulfide		<2.0	<2.0	<2.0	<2.0
Carbon Tetrachloride		<1.0	<1.0	<1.0	<1.0
Chlorobenzene		<1.0	<1.0	<1.0	<1.0
Chlorodibromomethane		<1.0	<1.0	<1.0	<1.0
Chloroethane		<1.0	<1.0	<1.0	<1.0
Chloroform		<1.0	<1.0	<1.0	<1.0
Chloromethane		<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene		<1.0	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Dichloromethane		<2.0	<2.0	<2.0	<2.0
Ethylbenzene		<1.0	<1.0	<1.0	<1.0
m&p-Xylenes		<1.0	<1.0	<1.0	<1.0
Methyl N-Butyl Ketone (2-Hexanone)		<5.0	<5.0	<5.0	<5.0
o-Xylene		<1.0	<1.0	<1.0	<1.0
Styrene (Monomer)		<1.0	<1.0	<1.0	<1.0
Tetrachloroethene		3.2	<1.0	<1.0	<1.0
Toluene		<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene		<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Trichloroethene		11.3	<1.0	3.7	6.9
Vinyl chloride		<1.0	<1.0	<1.0	<1.0
Total VOCs⁽³⁾		14.5	ND	3.7	6.9
1,4 Dioxane^(1,2)		5.1	0.97	6.6	<0.23

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Table 5
Concentrations of Volatile Organic Compounds and 1,4 Dioxane in Monitoring Wells
Second Quarter 2024
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituent (units in µg/L)	Well ID: Sample ID: Date:	GM-37D2 GM-37D2 4/22/2024	GM-38D GM-38D 4/22/2024	GM-38D REP042224SV1 4/22/2024
<u>Volatile Organic Compounds (VOCs)^(1, 2)</u>				
1,1,1-Trichloroethane		<1.0	<1.0	<1.0
1,1,1,2-Tetrachloroethane		<1.0	<1.0	<1.0
1,1,2-trichloro-1,2,2-trifluoroethane (Freon113)		<5.0	<5.0	<5.0
1,1,2-Trichloroethane		<1.0	<1.0	<1.0
1,1-Dichloroethane		<1.0	<1.0	<1.0
1,1-Dichloroethene		<1.0	<1.0	<1.0
1,2-Dichloroethane		<1.0	0.87 J	0.92 J
1,2-Dichloropropane		<1.0	<1.0	<1.0
2-Butanone (MEK)		<10	<10	<10
4-Methyl-2-Pentanone		<5.0	<5.0	<5.0
Acetone		<10	<10	<10
Benzene		<0.50	<0.50	<0.50
Bromodichloromethane		<1.0	<1.0	<1.0
Bromoform		<1.0	<1.0	<1.0
Bromomethane		<2.0	<2.0	<2.0
Carbon Disulfide		<2.0	<2.0	<2.0
Carbon Tetrachloride		<1.0	<1.0	<1.0
Chlorobenzene		<1.0	<1.0	<1.0
Chlorodibromomethane		<1.0	<1.0	<1.0
Chloroethane		<1.0	<1.0	<1.0
Chloroform		<1.0	<1.0	<1.0
Chloromethane		<1.0	<1.0	<1.0
cis-1,2-Dichloroethene		<1.0	0.54 J	0.60 J
cis-1,3-Dichloropropene		<1.0	<1.0	<1.0
Dichloromethane		<2.0	<2.0	<2.0
Ethylbenzene		<1.0	<1.0	<1.0
m&p-Xylenes		<1.0	<1.0	<1.0
Methyl N-Butyl Ketone (2-Hexanone)		<5.0	<5.0	<5.0
o-Xylene		<1.0	<1.0	<1.0
Styrene (Monomer)		<1.0	<1.0	<1.0
Tetrachloroethene		0.90 J	1.5	1.4
Toluene		<1.0	<1.0	<1.0
trans-1,2-Dichloroethene		<1.0	<1.0	<1.0
trans-1,3-Dichloropropene		<1.0	<1.0	<1.0
Trichloroethene		0.87 J	130	134
Vinyl chloride		<1.0	<1.0	<1.0
Total VOCs⁽³⁾		1.77 J	133 J	137 J
1,4 Dioxane^(1,2)		0.69	3.4	3.3

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Table 5
Concentrations of Volatile Organic Compounds and 1,4 Dioxane in Monitoring Wells
Second Quarter 2024
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituent (units in µg/L)	Well ID:	GM-38D2	GM-39DA	GM-39DB	GM-70D2
	Sample ID: Date:	GM-38D2 4/22/2024	GM-39DA 4/18/2024	GM-39DB 4/18/2024	GM-70D2 4/24/2024
<u>Volatile Organic Compounds (VOCs)^(1, 2)</u>					
1,1,1-Trichloroethane		0.56 J	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane		<1.0	<1.0	<1.0	<1.0
1,1,2-trichloro-1,2,2-trifluoroethane (Freon113)		<5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane		1.5	<1.0	<1.0	<1.0
1,1-Dichloroethene		1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane		<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane		<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)		<10	<10	<10	<10
4-Methyl-2-Pentanone		<5.0	<5.0	<5.0	<5.0
Acetone		<10	<10	<10	<10
Benzene		<0.50	<0.50	<0.50	<0.50
Bromodichloromethane		<1.0	<1.0	<1.0	<1.0
Bromoform		<1.0	<1.0	<1.0	<1.0
Bromomethane		<2.0	<2.0	<2.0	<2.0
Carbon Disulfide		<2.0	<2.0	<2.0	<2.0
Carbon Tetrachloride		<1.0	<1.0	<1.0	<1.0
Chlorobenzene		<1.0	<1.0	<1.0	<1.0
Chlorodibromomethane		<1.0	<1.0	<1.0	<1.0
Chloroethane		<1.0	<1.0	<1.0	<1.0
Chloroform		<1.0	<1.0	<1.0	<1.0
Chloromethane		<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene		1.0	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Dichloromethane		<2.0	<2.0	<2.0	<2.0
Ethylbenzene		<1.0	<1.0	<1.0	<1.0
m&p-Xylenes		<1.0	<1.0	<1.0	<1.0
Methyl N-Butyl Ketone (2-Hexanone)		<5.0	<5.0	<5.0	<5.0
o-Xylene		<1.0	<1.0	<1.0	<1.0
Styrene (Monomer)		<1.0	<1.0	<1.0	<1.0
Tetrachloroethene		<1.0	<1.0	<1.0	1.8
Toluene		<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene		<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Trichloroethene		122	6.1	22.7	4.2
Vinyl chloride		<1.0	<1.0	<1.0	<1.0
Total VOCs⁽³⁾		126	6.1	22.7	6.0
1,4 Dioxane^(1,2)		3.6	2.9	3.3	4.9

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Table 5
Concentrations of Volatile Organic Compounds and 1,4 Dioxane in Monitoring Wells
Second Quarter 2024
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituent (units in µg/L)	Well ID: Sample ID: Date:	GM-71D2 GM-71D2 4/22/2024	GM-73D GM-73D 4/15/2024	GM-73D2 GM-73D2 4/15/2024	GM-73D2 REPO41524PQ1 4/15/2024
<u>Volatile Organic Compounds (VOCs)^(1, 2)</u>					
1,1,1-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane		<1.0	<1.0	<1.0	<1.0
1,1,2-trichloro-1,2,2-trifluoroethane (Freon113)		<5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane		0.71 J	<1.0	<1.0	<1.0
1,1-Dichloroethene		<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane		<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane		<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)		<10	<10	<10	<10
4-Methyl-2-Pentanone		<5.0	<5.0	<5.0	<5.0
Acetone		<10	<10	<10	<10
Benzene		<0.50	<0.50	<0.50	<0.50
Bromodichloromethane		<1.0	<1.0	<1.0	<1.0
Bromoform		<1.0	<1.0	<1.0	<1.0
Bromomethane		<2.0	<2.0	<2.0	<2.0
Carbon Disulfide		<2.0	<2.0	<2.0	<2.0
Carbon Tetrachloride		<1.0	<1.0	<1.0	<1.0
Chlorobenzene		<1.0	<1.0	<1.0	<1.0
Chlorodibromomethane		<1.0	<1.0	<1.0	<1.0
Chloroethane		<1.0	<1.0	<1.0	<1.0
Chloroform		<1.0	<1.0	<1.0	<1.0
Chloromethane		<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene		<1.0	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Dichloromethane		<2.0	<2.0	<2.0	<2.0
Ethylbenzene		<1.0	<1.0	<1.0	<1.0
m&p-Xylenes		<1.0	<1.0	<1.0	<1.0
Methyl N-Butyl Ketone (2-Hexanone)		<5.0	<5.0	<5.0	<5.0
o-Xylene		<1.0	<1.0	<1.0	<1.0
Styrene (Monomer)		<1.0	<1.0	<1.0	<1.0
Tetrachloroethene		<1.0	1.2	<1.0	<1.0
Toluene		<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene		<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Trichloroethene		7.5	102	18.4	18.9
Vinyl chloride		<1.0	<1.0	<1.0	<1.0
Total VOCs⁽³⁾		8.2 J	103	18.4	18.9
1,4 Dioxane^(1,2)		3.2	0.98	1.5	1.5

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Table 5
Concentrations of Volatile Organic Compounds and 1,4 Dioxane in Monitoring Wells
Second Quarter 2024
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituent (units in µg/L)	Well ID:	GM-73D3	GM-74I	GM-74D	GM-74D2
	Sample ID: Date:	GM-73D3 6/25/2024	GM-74I 4/15/2024	GM-74D 4/15/2024	GM-74D2 4/15/2024
<u>Volatile Organic Compounds (VOCs)^(1, 2)</u>					
1,1,1-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane		<1.0	<1.0	<1.0	<1.0
1,1,2-trichloro-1,2,2-trifluoroethane (Freon113)		<5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane		<1.0	<1.0	<1.0	1.2
1,1-Dichloroethene		<1.0	<1.0	<1.0	1.4
1,2-Dichloroethane		<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane		<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)		<10	<10	<10	<10
4-Methyl-2-Pentanone		<5.0	<5.0	<5.0	<5.0
Acetone		<10	<10	<10	<10
Benzene		<0.50	<0.50	<0.50	<0.50
Bromodichloromethane		<1.0	<1.0	<1.0	<1.0
Bromoform		<1.0	<1.0	<1.0	<1.0
Bromomethane		<2.0	<2.0	<2.0	<2.0
Carbon Disulfide		<2.0	<2.0	<2.0	<2.0
Carbon Tetrachloride		<1.0	<1.0	<1.0	<1.0
Chlorobenzene		<1.0	<1.0	<1.0	<1.0
Chlorodibromomethane		<1.0	<1.0	<1.0	<1.0
Chloroethane		<1.0	<1.0	<1.0	<1.0
Chloroform		<1.0	<1.0	<1.0	<1.0
Chloromethane		<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene		<1.0	<1.0	<1.0	1.6
cis-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Dichloromethane		<2.0	<2.0	<2.0	<2.0
Ethylbenzene		<1.0	<1.0	<1.0	<1.0
m&p-Xylenes		<1.0	<1.0	<1.0	<1.0
Methyl N-Butyl Ketone (2-Hexanone)		<5.0	<5.0	<5.0	<5.0
o-Xylene		<1.0	<1.0	<1.0	<1.0
Styrene (Monomer)		<1.0	<1.0	<1.0	<1.0
Tetrachloroethene		1.5	<1.0	<1.0	8.0
Toluene		<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene		<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Trichloroethene		1.9	<1.0	2.3	14.2
Vinyl chloride		<1.0	<1.0	<1.0	<1.0
Total VOCs⁽³⁾		3.4	ND	2.3	26.4
1,4 Dioxane^(1,2)		0.79	2.2	4.4	2.1

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Table 5
Concentrations of Volatile Organic Compounds and 1,4 Dioxane in Monitoring Wells
Second Quarter 2024
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituent (units in µg/L)	Well ID: Sample ID: Date:	GM-74D3 GM-74D3 4/15/2024	GM-75D2 GM-75D2 4/16/2024	GM-78S GM-78S 4/24/2024	GM-78I GM-78I 4/24/2024
<u>Volatile Organic Compounds (VOCs)^(1, 2)</u>					
1,1,1-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane		<1.0	<1.0	<1.0	<1.0
1,1,2-trichloro-1,2,2-trifluoroethane (Freon113)		<5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane		<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene		<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane		<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane		<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)		<10	<10	<10	<10
4-Methyl-2-Pentanone		<5.0	<5.0	<5.0	<5.0
Acetone		<10	<10	<10	<10
Benzene		<0.50	<0.50	<0.50	<0.50
Bromodichloromethane		<1.0	<1.0	<1.0	<1.0
Bromoform		<1.0	<1.0	<1.0	<1.0
Bromomethane		<2.0	<2.0	<2.0	<2.0
Carbon Disulfide		<2.0	<2.0	<2.0	<2.0
Carbon Tetrachloride		<1.0	<1.0	<1.0	<1.0
Chlorobenzene		<1.0	<1.0	<1.0	<1.0
Chlorodibromomethane		<1.0	<1.0	<1.0	<1.0
Chloroethane		<1.0	<1.0	<1.0	<1.0
Chloroform		<1.0	<1.0	<1.0	<1.0
Chloromethane		<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene		<1.0	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Dichloromethane		<2.0	<2.0	<2.0	<2.0
Ethylbenzene		<1.0	<1.0	<1.0	<1.0
m&p-Xylenes		<1.0	<1.0	<1.0	<1.0
Methyl N-Butyl Ketone (2-Hexanone)		<5.0	<5.0	<5.0	<5.0
o-Xylene		<1.0	<1.0	<1.0	<1.0
Styrene (Monomer)		<1.0	<1.0	<1.0	<1.0
Tetrachloroethene		3.5	<1.0	<1.0	<1.0
Toluene		<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene		<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Trichloroethene		3.2	9.1	<1.0	0.66 J
Vinyl chloride		<1.0	<1.0	<1.0	<1.0
Total VOCs⁽³⁾		6.7	9.1	ND	0.66 J
1,4 Dioxane^(1,2)		1.2	5.7	1.9	2.6

See notes on last page

Table 5
Concentrations of Volatile Organic Compounds and 1,4 Dioxane in Monitoring Wells
Second Quarter 2024
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituent (units in µg/L)	Well ID:	GM-78D	GM-78D2	GM-79I	GM-79D
	Sample ID: Date:	GM-78D 4/24/2024	GM-78D2 4/24/2024	GM-79I 4/17/2024	GM-79D 4/17/2024
<u>Volatile Organic Compounds (VOCs)^(1, 2)</u>					
1,1,1-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane		<1.0	<1.0	<1.0	<1.0
1,1,2-trichloro-1,2,2-trifluoroethane (Freon113)		<5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane		<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethene		<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane		<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane		<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)		<10	<10	<10	<10
4-Methyl-2-Pentanone		<5.0	<5.0	<5.0	<5.0
Acetone		<10	<10	<10	<10
Benzene		<0.50	<0.50	<0.50	<0.50
Bromodichloromethane		<1.0	<1.0	<1.0	<1.0
Bromoform		<1.0	<1.0	<1.0	<1.0
Bromomethane		<2.0	<2.0	<2.0	<2.0
Carbon Disulfide		<2.0	<2.0	<2.0	<2.0
Carbon Tetrachloride		<1.0	<1.0	<1.0	<1.0
Chlorobenzene		<1.0	<1.0	<1.0	<1.0
Chlorodibromomethane		<1.0	<1.0	<1.0	<1.0
Chloroethane		<1.0	<1.0	<1.0	<1.0
Chloroform		<1.0	<1.0	<1.0	<1.0
Chloromethane		<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene		<1.0	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Dichloromethane		<2.0	<2.0	<2.0	<2.0
Ethylbenzene		<1.0	<1.0	<1.0	<1.0
m&p-Xylenes		<1.0	<1.0	<1.0	<1.0
Methyl N-Butyl Ketone (2-Hexanone)		<5.0	<5.0	<5.0	<5.0
o-Xylene		<1.0	<1.0	<1.0	<1.0
Styrene (Monomer)		<1.0	<1.0	<1.0	<1.0
Tetrachloroethene		<1.0	<1.0	<1.0	<1.0
Toluene		<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene		<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Trichloroethene		0.88 J	1.1	0.57 J	16.1
Vinyl chloride		<1.0	<1.0	<1.0	<1.0
Total VOCs⁽³⁾		0.88 J	1.1	0.57 J	16.1
1,4 Dioxane^(1,2)		7.8	8.7	4.4	4.9

See notes on last page

Table 5
Concentrations of Volatile Organic Compounds and 1,4 Dioxane in Monitoring Wells
Second Quarter 2024
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituent (units in µg/L)	Well ID:	HN-24I	HN-40S	HN-40I	HN-42S
	Sample ID: Date:	HN-24I 5/22/2024	HN-40S 4/25/2024	HN-40I 4/25/2024	HN-42S 4/25/2024
<u>Volatile Organic Compounds (VOCs)^(1, 2)</u>					
1,1,1-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1,1,2-Tetrachloroethane		<1.0	<1.0	<1.0	<1.0
1,1,1,2-trichloro-1,2,2-trifluoroethane (Freon113)		<5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane		1.2	<1.0	<1.0	<1.0
1,1-Dichloroethene		<1.0	<1.0	<1.0	<1.0
1,2-Dichloroethane		<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane		<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)		<10	<10	<10	<10
4-Methyl-2-Pentanone		<5.0	<5.0	<5.0	<5.0
Acetone		<10	<10 J	<10 J	<10 J
Benzene		<0.50	<0.50	<0.50	<0.50
Bromodichloromethane		<1.0	<1.0	<1.0	<1.0
Bromoform		<1.0	<1.0	<1.0	<1.0
Bromomethane		<2.0	<2.0	<2.0 J	<2.0 J
Carbon Disulfide		<2.0	<2.0	<2.0	<2.0
Carbon Tetrachloride		<1.0	<1.0	<1.0	<1.0
Chlorobenzene		<1.0	<1.0	<1.0	<1.0
Chlorodibromomethane		<1.0	<1.0	<1.0	<1.0
Chloroethane		<1.0	<1.0	<1.0	<1.0
Chloroform		<1.0	<1.0	<1.0	<1.0
Chloromethane		<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene		0.51 J	<1.0	<1.0	<1.0
cis-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Dichloromethane		<2.0	<2.0 J	<2.0	<2.0
Ethylbenzene		<1.0	<1.0	<1.0	<1.0
m&p-Xylenes		<1.0	<1.0	<1.0	<1.0
Methyl N-Butyl Ketone (2-Hexanone)		<5.0	<5.0	<5.0	<5.0
o-Xylene		<1.0	<1.0	<1.0	<1.0
Styrene (Monomer)		<1.0	<1.0	<1.0	<1.0
Tetrachloroethene		2.8	<1.0	1.3	<1.0
Toluene		<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene		<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Trichloroethene		6.8	<1.0	<1.0	<1.0
Vinyl chloride		<1.0	<1.0	<1.0 J	<1.0 J
Total VOCs⁽³⁾		11.3 J	ND	1.3	ND
1,4 Dioxane^(1,2)		1.0	<0.24	<0.24	<0.24

See notes on last page

Table 5
Concentrations of Volatile Organic Compounds and 1,4 Dioxane in Monitoring Wells
Second Quarter 2024
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituent (units in µg/L)	Well ID:	HN-42I	MW-3-1	MW-3-1	N-10624
	Sample ID: Date:	HN-42I 4/25/2024	MW-3-1 4/30/2024	REP043024KK1 4/30/2024	N-10624 4/16/2024
<u>Volatile Organic Compounds (VOCs)^(1, 2)</u>					
1,1,1-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1,1,2-Tetrachloroethane		<1.0	<1.0	<1.0	<1.0
1,1,2-trichloro-1,2,2-trifluoroethane (Freon113)		<5.0	0.63 J	0.98 J	<5.0
1,1,2-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane		<1.0	1.4	1.6	<1.0
1,1-Dichloroethene		<1.0	1.4	1.7	<1.0
1,2-Dichloroethane		<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane		<1.0	<1.0	<1.0	<1.0
2-Butanone (MEK)		<10	<10	<10	<10
4-Methyl-2-Pentanone		<5.0	<5.0	<5.0	<5.0
Acetone		<10 J	<10	<10	<10
Benzene		<0.50	<0.50	<0.50	<0.50
Bromodichloromethane		<1.0	<1.0	<1.0	<1.0
Bromoform		<1.0	<1.0	<1.0	<1.0
Bromomethane		<2.0	<2.0	<2.0	<2.0
Carbon Disulfide		<2.0	<2.0	<2.0	<2.0
Carbon Tetrachloride		<1.0	<1.0	<1.0	<1.0
Chlorobenzene		<1.0	<1.0	<1.0	<1.0
Chlorodibromomethane		<1.0	<1.0	<1.0	<1.0
Chloroethane		<1.0	0.80 J	<1.0	<1.0
Chloroform		<1.0	<1.0	<1.0	<1.0
Chloromethane		<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene		<1.0	8.6	10.4	<1.0
cis-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Dichloromethane		<2.0 J	<2.0	<2.0	<2.0
Ethylbenzene		<1.0	<1.0	<1.0	<1.0
m&p-Xylenes		<1.0	<1.0	<1.0	<1.0
Methyl N-Butyl Ketone (2-Hexanone)		<5.0	<5.0	<5.0	<5.0
o-Xylene		<1.0	<1.0	<1.0	<1.0
Styrene (Monomer)		<1.0	<1.0	<1.0	<1.0
Tetrachloroethene		<1.0	15.2	17.7	<1.0
Toluene		<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene		<1.0	<1.0	<1.0	<1.0
trans-1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0
Trichloroethene		<1.0	128	141	<1.0
Vinyl chloride		<1.0	32.6	39.7	<1.0
Total VOCs⁽³⁾		ND	189 J	213 J	ND
1,4 Dioxane^(1,2)		<0.24	6.0	5.6	3.5

See notes on last page

Table 5
Concentrations of Volatile Organic Compounds and 1,4 Dioxane in Monitoring Wells
Second Quarter 2024
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituent (units in µg/L)	Well ID:	N-10627	N-10631R
	Sample ID:	N-10627	N-10631R
	Date:	4/16/2024	4/16/2024
<u>Volatile Organic Compounds (VOCs)^(1, 2)</u>			
1,1,1-Trichloroethane		<1.0	<1.0
1,1,1,2-Tetrachloroethane		<1.0	<1.0
1,1,2-trichloro-1,2,2-trifluoroethane (Freon113)		<5.0	<5.0
1,1,2-Trichloroethane		<1.0	<1.0
1,1-Dichloroethane		<1.0	<1.0
1,1-Dichloroethene		<1.0	<1.0
1,2-Dichloroethane		<1.0	<1.0
1,2-Dichloropropane		<1.0	<1.0
2-Butanone (MEK)		<10	<10
4-Methyl-2-Pentanone		<5.0	<5.0
Acetone		<10	<10
Benzene		<0.50	<0.50
Bromodichloromethane		<1.0	<1.0
Bromoform		<1.0	<1.0
Bromomethane		<2.0	<2.0
Carbon Disulfide		<2.0	<2.0
Carbon Tetrachloride		<1.0	<1.0
Chlorobenzene		<1.0	<1.0
Chlorodibromomethane		<1.0	<1.0
Chloroethane		<1.0	<1.0
Chloroform		<1.0	<1.0
Chloromethane		<1.0	<1.0
cis-1,2-Dichloroethene		<1.0	<1.0
cis-1,3-Dichloropropene		<1.0	<1.0
Dichloromethane		<2.0	<2.0
Ethylbenzene		<1.0	<1.0
m&p-Xylenes		<1.0	<1.0
Methyl N-Butyl Ketone (2-Hexanone)		<5.0	<5.0
o-Xylene		<1.0	<1.0
Styrene (Monomer)		<1.0	<1.0
Tetrachloroethene		<1.0	<1.0
Toluene		<1.0	<1.0
trans-1,2-Dichloroethene		<1.0	<1.0
trans-1,3-Dichloropropene		<1.0	<1.0
Trichloroethene		0.56 J	<1.0
Vinyl chloride		<1.0	<1.0
Total VOCs⁽³⁾		0.56 J	ND
1,4 Dioxane^(1,2)		4.0	3.5

See notes on last page

Table 5
Concentrations of Volatile Organic Compounds and 1,4 Dioxane in Monitoring Wells
Second Quarter 2024
Operable Unit 2
Northrop Grumman
Bethpage, New York



Notes and Abbreviations:

- (1) Samples were analyzed for VOCs using USEPA Method 8260C. Samples were analyzed for 1,4-dioxane using USEPA Method 8270D-SIM.
 - (2) Results for the program are validated at 20% frequency, per protocols specified in OU2 Groundwater Monitoring Plan (Arcadis 2016).
 - (3) TVOC concentrations are rounded to the number of decimal places of the individual VOC with the least precision (decimal places), including whole numbers with no decimal place.
- Bold** Constituent detected
J Constituent value is estimated
REP Blind Replicate Sample
µg/L Micrograms per liter
VOCs Volatile Organic Compounds
<1.0 Compound not detected above its laboratory quantification limit
ND Not Detected

Table 6
 Concentrations of Metals and 1,4-Dioxane in Monitoring Wells^(1,2)
 Second Quarter 2024
 Operable Unit 2
 Northrop Grumman
 Bethpage, New York

Constituent (units in µg/L)	Well ID: Sample ID: Date:	GM-15SR GM-15SR 4/23/2024	GM-78S GM-78S 4/24/2024	GM-78I GM-78I 4/24/2024	MW-01GF MW-01GF 4/24/2024	MW-02GF MW-02GF 4/24/2024	MW-02GF ⁽⁴⁾ MW-02GF 6/3/2024	N-10631R N-10631R 4/16/2024	PLT1 MW-04 PLT1 MW-04 4/23/2024	PLT1 MW-05 PLT1 MW-05 4/23/2024	PLT1 MW-05 PLT1 MW-05 4/23/2024	PLT1 MW-05 ⁽⁴⁾ PLT1 MW-05 6/3/2024	PLT1 MW-06 PLT1 MW-06 4/23/2024
Metals ⁽³⁾													
Cadmium (Total)		--	<3.0	<3.0	<3.0	<3.0	--	<3.0	--	--	--	--	--
Cadmium (Dissolved)		--	<3.0	<3.0	<3.0	<3.0	--	<3.0	--	--	--	--	--
Chromium (Total)		204	<10	<10	<10	31.8	20.1	18.3	13.5	1,020	1,030	854	129
Chromium (Dissolved)		207	<10	<10	<10	32.1	19.9	20.1	12.0	982	1,010	828	131
1,4-Dioxane ⁽⁴⁾		1.8	1.9	2.6	4.3	2.6	--	3.5	0.98	<0.23	<0.23	--	<0.24

Notes and Abbreviations:

- (1) Results for the program are validated at 20% frequency, per protocols specified in OU2 Groundwater Monitoring Plan (Arcadis 2016).
- (2) Samples analyzed for total unfiltered and dissolved filtered cadmium and chromium using USEPA Method 6010C.
- (3) Samples were analyzed for 1,4-dioxane using USEPA Method 8270D-SIM.
- (4) MW-02GF and PLT1 MW-05 were resampled for metals on June 3, 2024 to confirm April sampling results that were significantly below (MW-02GF) or above (PLT1 MW-05) previous results (since 2019).

µg/L Micrograms per liter
 -- Not analyzed
 <3.0 Compound not detected above its laboratory quantification limit
Bold Constituent detected

Table 7
Concentrations of Volatile Organic Compounds and 1,4 Dioxane in Outpost Wells
Second Quarter 2024
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituents (units in ug/L)	Well ID:	BPOW 1-1	BPOW 1-2	BPOW 1-3	BPOW 1-4
	Sample ID:	BPOW 1-1	BPOW 1-2	BPOW 1-3	BPOW 1-4
	Date:	5/14/2024	5/14/2024	5/14/2024	5/16/2024
Volatile Organic Constituents ^(1,2)					
1,1,1-Trichloroethane		<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane		<0.50	<0.50	<0.50	<0.50
1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113)		<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane		<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethane		<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethene		<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane		<0.50	<0.50	<0.50	<0.50
1,2-Dichloropropane		<0.50	<0.50	<0.50	<0.50
2-Butanone (MEK)		<5.0	<5.0	<5.0	<5.0
4-Methyl-2-Pentanone		<2.0	<2.0	<2.0	<2.0
Acetone		<5.0	<5.0	<5.0	<5.0
Benzene		<0.50	<0.50	<0.50	<0.50
Bromodichloromethane		<0.50	<0.50	<0.50	<0.50
Bromoform		<0.50	<0.50	<0.50	<0.50
Bromomethane		<0.50	<0.50	<0.50	<0.50
Carbon Disulfide		<0.50	<0.50	<0.50	<0.50
Carbon Tetrachloride		<0.50	<0.50	<0.50	<0.50
Chlorobenzene		<0.50	<0.50	<0.50	<0.50
Chlorodibromomethane		<0.50	<0.50	<0.50	<0.50
Chloroethane		<0.50	<0.50	<0.50	<0.50
Chloroform		<0.50	<0.50	<0.50	<0.50
Chloromethane		<0.50	<0.50	<0.50	<0.50
cis-1,2-Dichloroethene		<0.50	<0.50	<0.50	<0.50
cis-1,3-Dichloropropene		<0.50	<0.50	<0.50	<0.50
Dichloromethane		<0.50	<0.50	<0.50	<0.50
Ethylbenzene		<0.50	<0.50	<0.50	<0.50
m&p-Xylenes		<0.50	<0.50	<0.50	<0.50
Methyl N-Butyl Ketone (2-Hexanone)		<2.0	<2.0	<2.0	<2.0
o-Xylene		<0.50	<0.50	<0.50	<0.50
Styrene (Monomer)		<0.50	<0.50	<0.50	<0.50
Tetrachloroethene		<0.50	<0.50	<0.50	<0.50
Toluene		<0.50	<0.50	<0.50	<0.50
trans-1,2-Dichloroethene		<0.50	<0.50	<0.50	<0.50
trans-1,3-Dichloropropene		<0.50	<0.50	<0.50	<0.50
Trichloroethene		0.68	0.25 J	<0.50	<0.50
Vinyl chloride		<0.50	<0.50	<0.50	<0.50
TVOCs ⁽³⁾		0.68	0.25 J	ND	ND
1,4 Dioxane ^(1,2)		<0.200 B	<0.200	0.675	0.415

See notes and abbreviations on last page.

Table 7
Concentrations of Volatile Organic Compounds and 1,4 Dioxane in Outpost Wells
Second Quarter 2024
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituents (units in ug/L)	Well ID: Sample ID: Date:	BPOW 1-5 BPOW 1-5 5/16/2024	BPOW 1-6 BPOW 1-6 5/16/2024	BPOW 1-6 REP051624SV1 5/16/2024	BPOW 2-1 BPOW 2-1 5/16/2024
Volatile Organic Constituents ^(1,2)					
1,1,1-Trichloroethane		<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane		<0.50	<0.50	<0.50	<0.50
1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113)		<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane		<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethane		<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethene		<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane		<0.50	<0.50	<0.50	<0.50
1,2-Dichloropropane		<0.50	<0.50	<0.50	<0.50
2-Butanone (MEK)		<5.0	<5.0	<5.0	<5.0
4-Methyl-2-Pentanone		<2.0	<2.0	<2.0	<2.0
Acetone		<5.0	<5.0	<5.0	<5.0
Benzene		<0.50	<0.50	<0.50	<0.50
Bromodichloromethane		<0.50	<0.50	<0.50	<0.50
Bromoform		<0.50	<0.50	<0.50	<0.50
Bromomethane		<0.50	<0.50	<0.50	<0.50
Carbon Disulfide		<0.50	<0.50	<0.50	<0.50
Carbon Tetrachloride		<0.50	<0.50	<0.50	<0.50
Chlorobenzene		<0.50	<0.50	<0.50	<0.50
Chlorodibromomethane		<0.50	<0.50	<0.50	<0.50
Chloroethane		<0.50	<0.50	<0.50	<0.50
Chloroform		<0.50	<0.50	<0.50	<0.50
Chloromethane		<0.50	<0.50	<0.50	<0.50
cis-1,2-Dichloroethene		<0.50	<0.50	<0.50	<0.50
cis-1,3-Dichloropropene		<0.50	<0.50	<0.50	<0.50
Dichloromethane		<0.50	<0.50	<0.50	<0.50
Ethylbenzene		<0.50	<0.50	<0.50	<0.50
m&p-Xylenes		<0.50	<0.50	<0.50	<0.50
Methyl N-Butyl Ketone (2-Hexanone)		<2.0	<2.0	<2.0	<2.0
o-Xylene		<0.50	<0.50	<0.50	<0.50
Styrene (Monomer)		<0.50	<0.50	<0.50	<0.50
Tetrachloroethene		<0.50	<0.50	<0.50	<0.50
Toluene		<0.50	<0.50	<0.50	<0.50
trans-1,2-Dichloroethene		<0.50	<0.50	<0.50	<0.50
trans-1,3-Dichloropropene		<0.50	<0.50	<0.50	<0.50
Trichloroethene		<0.50	<0.50	<0.50	<0.50
Vinyl chloride		<0.50	<0.50	<0.50	<0.50
TVOCs ⁽³⁾		ND	ND	ND	ND
1,4 Dioxane ^(1,2)		<0.200	0.0402 J	<0.200	4.48

See notes and abbreviations on last page.

Table 7
Concentrations of Volatile Organic Compounds and 1,4 Dioxane in Outpost Wells
Second Quarter 2024
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituents (units in ug/L)	Well ID:	BPOW 2-2	BPOW 2-3	BPOW 3-1	BPOW3-2
	Sample ID:	BPOW 2-2	BPOW 2-3	BPOW 3-1	BPOW3-2
	Date:	5/16/2024	5/16/2024	5/20/2024	5/20/2024
Volatile Organic Constituents ^(1,2)					
1,1,1-Trichloroethane		<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane		<0.50	<0.50	<0.50	<0.50
1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113)		<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane		<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethane		<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethene		<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane		<0.50	<0.50	<0.50	<0.50
1,2-Dichloropropane		<0.50	<0.50	<0.50	<0.50
2-Butanone (MEK)		<5.0	<5.0	<5.0	<5.0
4-Methyl-2-Pentanone		<2.0	<2.0	<2.0	<2.0
Acetone		<5.0	<5.0	<5.0	<5.0
Benzene		<0.50	<0.50	<0.50	<0.50
Bromodichloromethane		<0.50	<0.50	<0.50	<0.50
Bromoform		<0.50	<0.50	<0.50	<0.50
Bromomethane		<0.50	<0.50	<0.50	<0.50
Carbon Disulfide		<0.50	<0.50	<0.50	<0.50
Carbon Tetrachloride		<0.50	<0.50	<0.50	<0.50
Chlorobenzene		<0.50	<0.50	<0.50	<0.50
Chlorodibromomethane		<0.50	<0.50	<0.50	<0.50
Chloroethane		<0.50	<0.50	<0.50	<0.50
Chloroform		<0.50	<0.50	<0.50	<0.50
Chloromethane		<0.50	<0.50	<0.50	<0.50
cis-1,2-Dichloroethene		<0.50	<0.50	<0.50	<0.50
cis-1,3-Dichloropropene		<0.50	<0.50	<0.50	<0.50
Dichloromethane		<0.50	<0.50	<0.50	<0.50
Ethylbenzene		<0.50	<0.50	<0.50	<0.50
m&p-Xylenes		<0.50	<0.50	<0.50	<0.50
Methyl N-Butyl Ketone (2-Hexanone)		<2.0	<2.0	<2.0	<2.0
o-Xylene		<0.50	<0.50	<0.50	<0.50
Styrene (Monomer)		<0.50	<0.50	<0.50	<0.50
Tetrachloroethene		<0.50	<0.50	<0.50	<0.50
Toluene		<0.50	<0.50	<0.50	<0.50
trans-1,2-Dichloroethene		<0.50	<0.50	<0.50	<0.50
trans-1,3-Dichloropropene		<0.50	<0.50	<0.50	<0.50
Trichloroethene		<0.50	<0.50	<0.50	<0.50
Vinyl chloride		<0.50	<0.50	<0.50	<0.50
TVOCs ⁽³⁾		ND	ND	ND	ND
1,4 Dioxane ^(1,2)		0.594	3.52	0.680	3.28

See notes and abbreviations on last page.

Table 7
Concentrations of Volatile Organic Compounds and 1,4 Dioxane in Outpost Wells
Second Quarter 2024
Operable Unit 2
Northrop Grumman
Bethpage, New York



Constituents (units in ug/L)	Well ID:	BPOW 3-3	BPOW 3-4	BPOW 4-1R	BPOW 4-2R
	Sample ID:	BPOW 3-3	BPOW 3-4	BPOW 4-1R	BPOW 4-2R
	Date:	5/20/2024	5/20/2024	5/13/2024	5/13/2024
Volatile Organic Constituents ^(1,2)					
1,1,1-Trichloroethane		<0.50	0.69	0.22 J	<0.50
1,1,2,2-Tetrachloroethane		<0.50	<0.50	<0.50	<0.50
1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113)		1.2	10.4	52.2	44.8
1,1,2-Trichloroethane		<0.50	1.5	<0.50	<0.50
1,1-Dichloroethane		<0.50	1.4	<0.50	<0.50
1,1-Dichloroethene		<0.50	11.9	1.4	1.0
1,2-Dichloroethane		<0.50	0.23 J	<0.50	<0.50
1,2-Dichloropropane		<0.50	<0.50	<0.50	<0.50
2-Butanone (MEK)		<5.0	<5.0	<5.0	<5.0
4-Methyl-2-Pentanone		<2.0	<2.0	<2.0	<2.0
Acetone		<5.0	<5.0	<5.0	<5.0
Benzene		<0.50	<0.50	<0.50	<0.50
Bromodichloromethane		<0.50	<0.50	<0.50	<0.50
Bromoform		<0.50	<0.50	<0.50	<0.50
Bromomethane		<0.50	<0.50	<0.50	<0.50
Carbon Disulfide		<0.50	<0.50	<0.50	<0.50
Carbon Tetrachloride		<0.50	0.99	0.43 J	0.30 J
Chlorobenzene		<0.50	<0.50	<0.50	<0.50
Chlorodibromomethane		<0.50	<0.50	<0.50	<0.50
Chloroethane		<0.50	<0.50	<0.50	<0.50
Chloroform		<0.50	1.7	0.49 J	<0.50
Chloromethane		<0.50	<0.50	<0.50	<0.50
cis-1,2-Dichloroethene		<0.50	2.5	0.57	0.32 J
cis-1,3-Dichloropropene		<0.50	<0.50	<0.50	<0.50
Dichloromethane		<0.50	<0.50	<0.50	<0.50
Ethylbenzene		<0.50	<0.50	<0.50	<0.50
m&p-Xylenes		<0.50	<0.50	<0.50	<0.50
Methyl N-Butyl Ketone (2-Hexanone)		<2.0	<2.0	<2.0	<2.0
o-Xylene		<0.50	<0.50	<0.50	<0.50
Styrene (Monomer)		<0.50	<0.50	<0.50	<0.50
Tetrachloroethene		<0.50	<0.50	<0.50	1.5
Toluene		<0.50	<0.50	<0.50	<0.50
trans-1,2-Dichloroethene		<0.50	<0.50	<0.50	<0.50
trans-1,3-Dichloropropene		<0.50	<0.50	<0.50	<0.50
Trichloroethene		<0.50	212	2.4	4.5
Vinyl chloride		<0.50	<0.50	<0.50	<0.50
TVOCs ⁽³⁾		1.2	243 J	57.7 J	52.4 J
1,4 Dioxane ^(1,2)		9.32	14.4	5.92	3.11

See notes and abbreviations on last page.

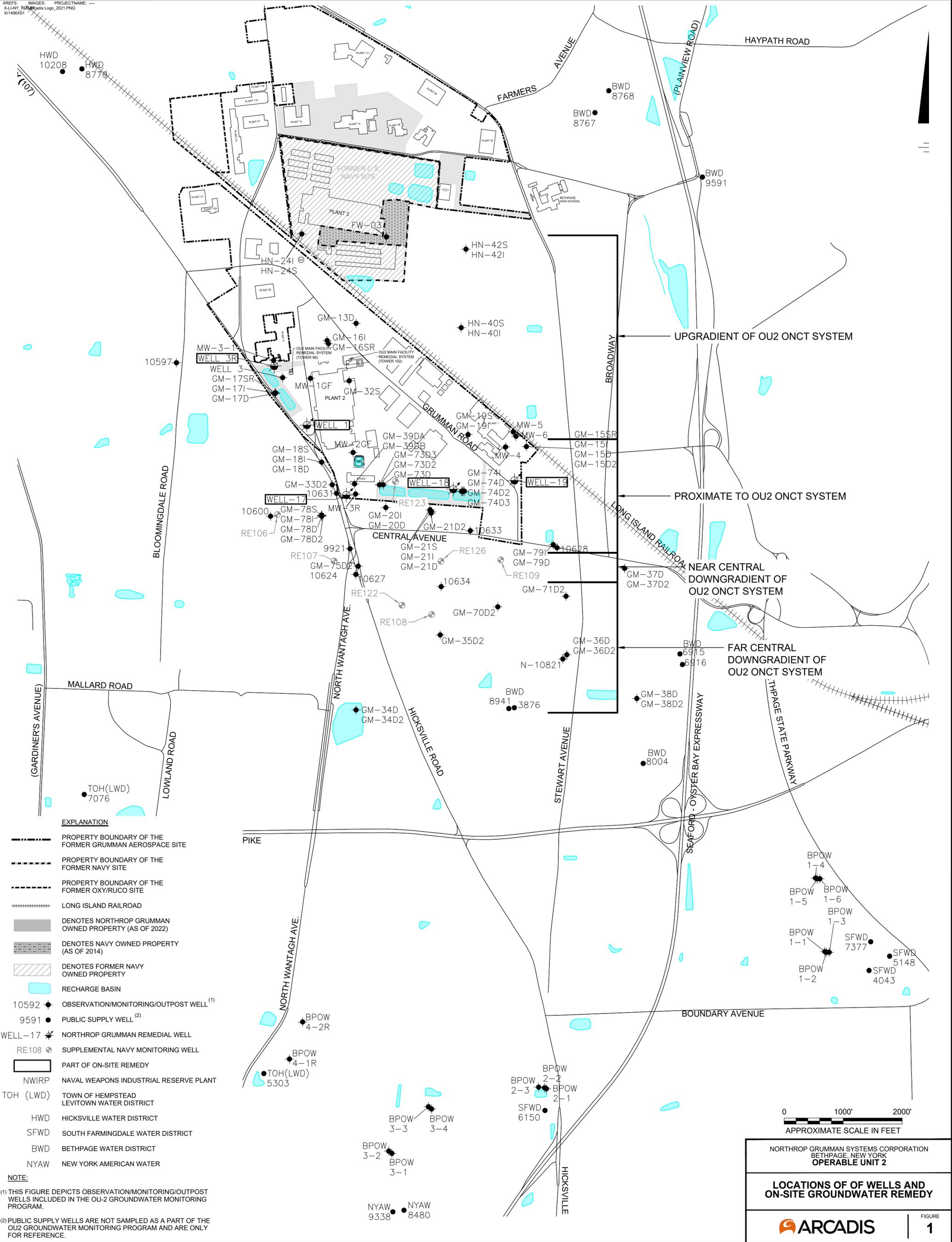
Table 7
Concentrations of Volatile Organic Compounds
and 1,4 Dioxane in Outpost Wells
Second Quarter 2024
Operable Unit 2
Northrop Grumman
Bethpage, New York

Notes and Abbreviations:

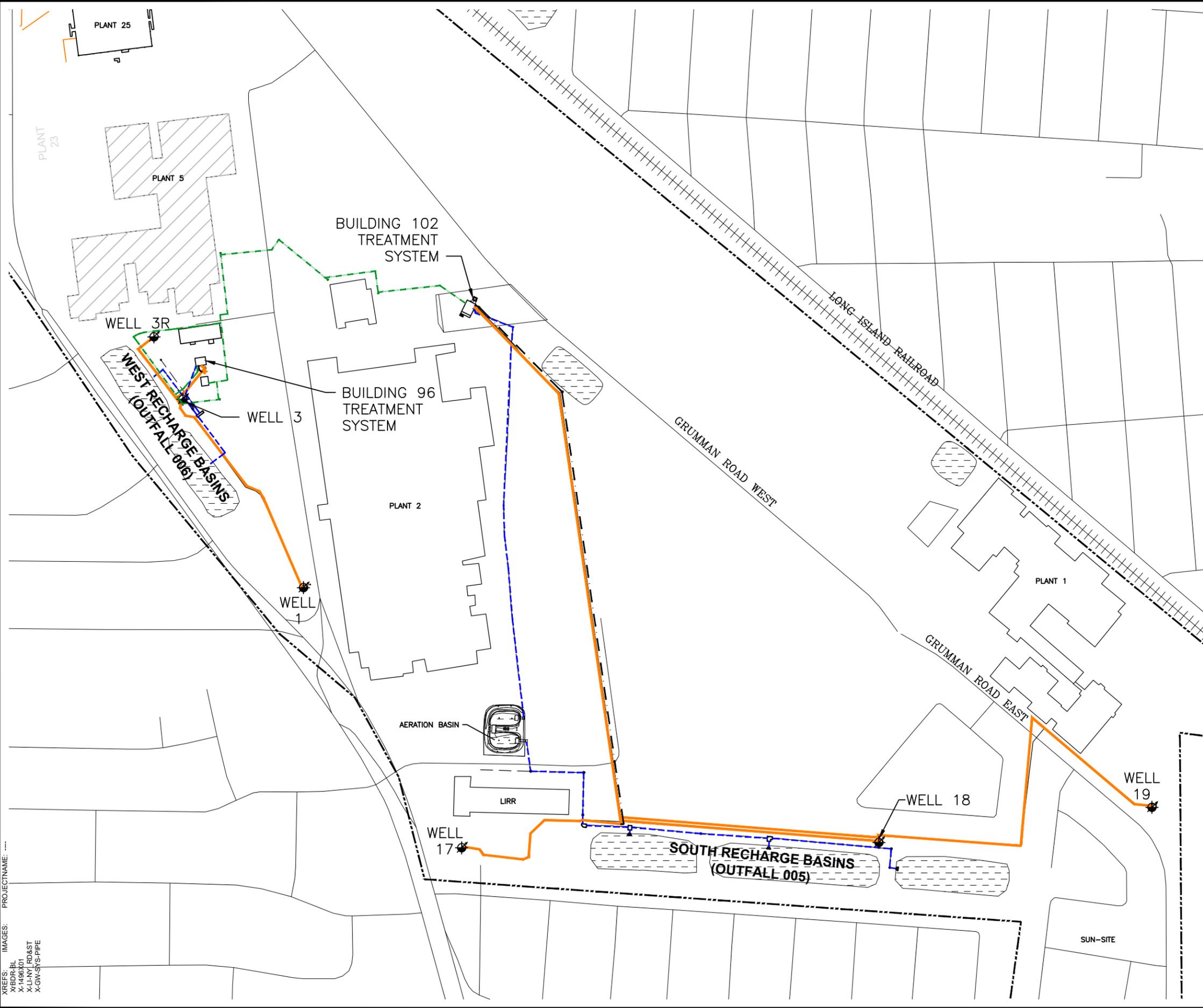
- (1) Samples were analyzed for VOCs using USEPA Method 524.2. Samples were analyzed for 1,4-dioxane using USEPA Method 522.
- (2) Results for the program are validated at 20% frequency, per protocols specified in OU2 Groundwater Monitoring Plan (Arcadis 2016).
- (3) TVOC concentrations are rounded to the number of decimal places of the individual VOC with the least precision (decimal places), including whole numbers with no decimal place.

Bold	Value indicates constituent detected
TVOCs	Total Volatile Organic Compounds
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compounds
µg/L	micrograms per liter
<0.5	Compound not detected above its laboratory quantification limit
B	Contamination found in associated blank
J	Value is estimated concentration
ND	Not Detected
REP	Blind Duplicate Sample

Figures



CITY:SYRACUSE,NY DIV:GROUPEPENY DBA:ARCADIS L:DALE DC:(G) TH:(G) LVR:(G)ON:4-CF-REF: C:\Users\smallbrian\OneDrive\Documents\ARCADIS\Projects\BETHPAGE_NY\Project Files\10_WIP\101_ARC_EN\202401-DWG\GEN-ONCT-GW-ETS-STEP\PLAN.DWG LAYOUT:2 SAVED:5/30/2024 4:50 PM ACADVER:24.2S (LMS TECH) PAGES:SETUP:--- PLOTTED:5/30/2024 4:51 PM BY:SMALL BRIAN



LEGEND:

- FORMER NORTHROP GRUMMAN PROPERTY LINE
- INFLUENT LINE
- BYPASS
- STORM DRAIN (EFFLUENT)
- NON POTABLE WATER DISTRIBUTION LINE (EFFLUENT)
- +++++ RAILROAD TRACKS
- x-x-x- FENCE
- WELL 18 REMEDIAL WELL
- BASIN
- ONCT ON-SITE CONTAMINANT

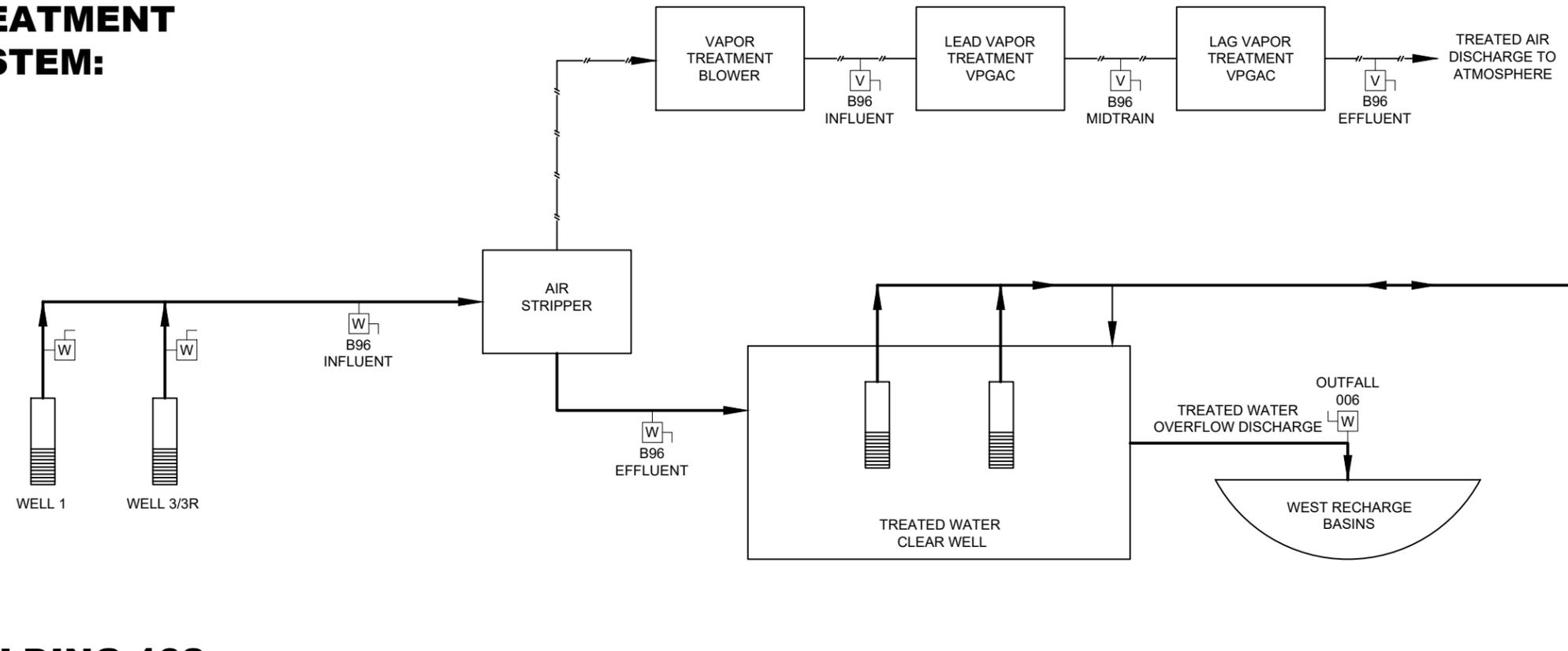
NOTES:

1. DRAWING IS NOT TO BE USED FOR DESIGN PURPOSES. LAYOUT OF PIPING IS FOR REPRESENTATION ONLY (LOCATIONS ARE APPROXIMATE).
2. THE PIPING REPRESENTED IN THIS DRAWING MAY BE CONSTRUCTED OF CAST IRON PIPE (CIP), DUCTILE IRON PIPE (DIP), ASBESTOS CEMENT PIPE (ACP) OR TRANSITE, OR A COMBINATION OF THESE PIPE TYPES.

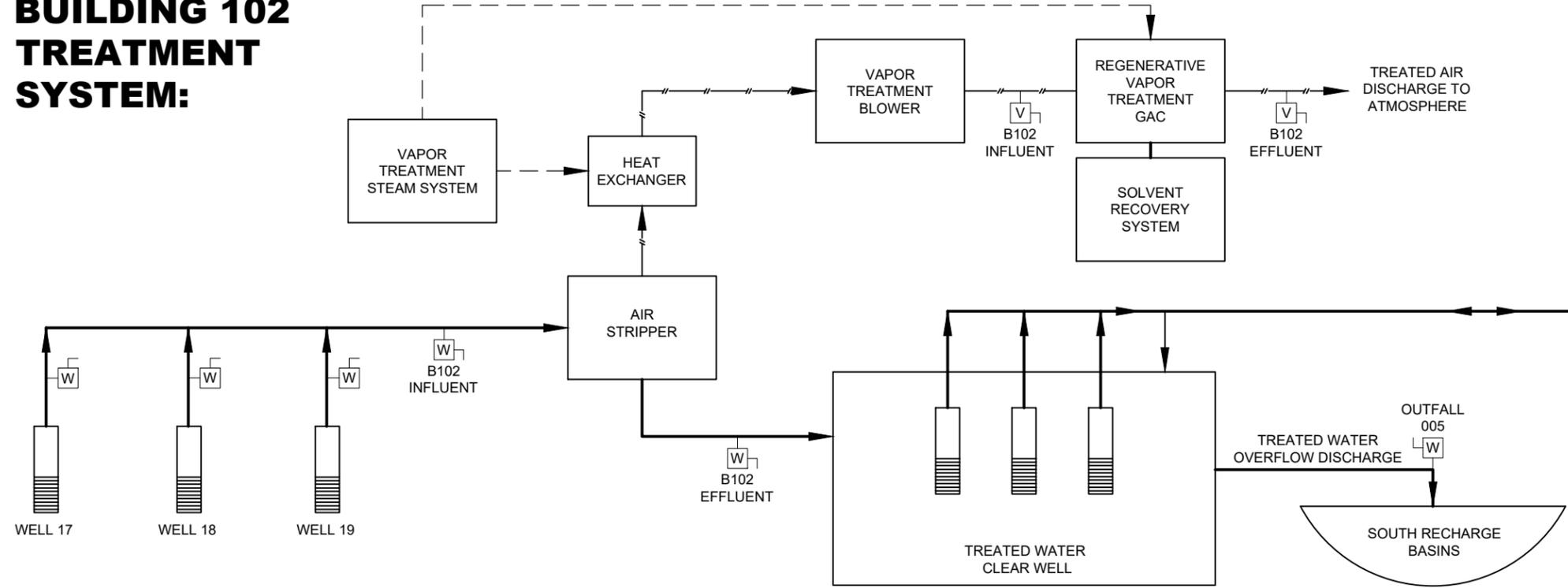
NORTHROP GRUMMAN BETHPAGE, NEW YORK OPERABLE UNIT 2	
ONCT GROUNDWATER EXTRACTION AND TREATMENT SYSTEM SITE PLAN	
	FIGURE 2

CITY: MANCHESTER DIV/GRP: ENV/CAD DB: B.SMALL PM: TM
 C:\Users\BSSMAIL\OneDrive\Documents\ARCADIS\ACC US\AUS-9898989-NOR GRUM_BETHPAGE_NY\Project Files\10_WIP\101_ARC_ENV\202401-DWG\OU2-F03-GWE SYSTEM.dwg LAYOUT: 3
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 XREFS: IMAGES: PROJECTNAME: ---
 PAGES: 24.2S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: PLTFULL.CTB

BUILDING 96 TREATMENT SYSTEM:



BUILDING 102 TREATMENT SYSTEM:



NOTE:
 SCHEMATIC REPRESENTS SYSTEM CONFIGURATIONS
 AT THE TIME OF SAMPLE LOCATION EVENTS, AFTER
 B96 RECONFIGURATION TO BYPASS THE
 REGENERATIVE VAPOR-PHASE GAC COMPONENTS

- LEGEND:
- PROCESS WATER
 - - - PROCESS AIR
 - - - - STEAM
 - W SAMPLE LOCATION
 - W WATER SAMPLE
 - V VAPOR SAMPLE
 - ONCT ON-SITE CONTAMINANT

NORTHROP GRUMMAN
 BETHPAGE, NEW YORK
OPERABLE UNIT 2

**ONCT GROUNDWATER
 EXTRACTION AND TREATMENT
 SYSTEM SCHEMATIC**

ARCADIS

FIGURE
3