Table 5
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, RW-21 Project Area, Northrop Grumman Systems Corporation,
Operable Unit 3 (Former Grumman Settling Ponds),
Bethpage, New York.

Sample Location: / Sample Date: / Sample ID: / Constituent / Units in (ug/L)	NYSDEC SCGs	RW-21_MW-1 12/9/2016 RW-21_MW-1_20161209	RW-21_MW-2 12/9/2016 RW-21_MW-2_20161209	RW-21_MW-3-1 12/7/2016 RW-21_MW-3-1_20161207	RW-21_MW-3-1 12/7/2016 REP120716TD	RW-21_MW-3-2 12/7/2016 RW-21_MW-3-2_20161207	RW-21_MW-4 12/13/2016 RW-21_MW-4_20161213	RW-21_MW-5-1 12/14/2016 RW-21_MW-5-1_20161214	RW-21_MW-5-2 12/14/2016 RW-21_MW-5-2_20161214
1,1,1-Trichloroethane	5	**2.6**	**4.1**	**8.4 J**	< 50	< 25	**0.69 J**	**0.32 J**	< 1.0
1,1,2,2-Tetrachloroethane	5	< 1.0	< 1.0	< 25	< 50	< 25	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane	5	< 5.0	**1.8 J**	< 130	< 250	< 130	< 5.0	< 5.0	< 5.0
1,1,2-Trichloroethane	1	**2.8**	**1.3**	< 25	< 50	< 25	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	5	**6.8**	**10.4**	**29.5**	**25.7 J**	**21.5 J**	**4.6**	**3.3**	< 1.0
1,1-Dichloroethene	5	**7.2**	**13.0**	**28.0**	**31.9 J**	**16.6 J**	**2.3**	**0.98 J**	< 1.0
1,2-Dichloroethane	0.6	**12.2**	**8.6**	**36.9**	**37.5 J**	**30.2**	**1.1**	**1.1**	< 1.0
1,2-Dichloropropane	1	**3.3**	**1.6**	**12.0 J**	< 50	< 25	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)	50	< 10	< 10	< 250	< 500	< 250	< 10	< 10	< 10
4-Methyl-2-Pentanone	NE	< 5.0	< 5.0	< 130	< 250	< 130	< 5.0	< 5.0	< 5.0
Acetone	50	< 10	< 10	< 250	< 500	< 250	< 10	< 10	< 10
Benzene	1	< 0.50	< 0.50	< 13	< 25	< 13	< 0.50	< 0.50	< 0.50
Bromodichloromethane	50	< 1.0	< 1.0	< 25	< 50	< 25	< 1.0	< 1.0	< 1.0
Bromoform	50	< 1.0	< 1.0	< 25	< 50	< 25	< 1.0	< 1.0	< 1.0
Bromomethane	5	< 2.0	< 2.0	< 50	< 100	< 50	< 2.0	< 2.0	< 2.0
Carbon Disulfide	60	< 2.0	< 2.0	< 50	< 100	< 50	< 2.0	< 2.0	< 2.0
Carbon Tetrachloride	5	< 1.0	< 1.0	< 25	< 50	< 25	< 1.0	**0.66 J**	< 1.0
CFC-12	5	< 2.0	< 2.0	< 50	< 100	< 50	< 2.0	< 2.0	< 2.0
Chlorobenzene	5	< 1.0	< 1.0	< 25	< 50	< 25	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	50	< 1.0	< 1.0	< 25	< 50	< 25	< 1.0	< 1.0	< 1.0
Chlorodifluoromethane	5	< 5.0	< 5.0	< 130	< 250	< 130	< 5.0	< 5.0	< 5.0
Chloroethane	5	< 1.0	< 1.0	< 25	< 50	< 25	< 1.0	< 1.0	< 1.0
Chloroform	7	**7.2**	**5.6**	**24.9 J**	**26.4 J**	**20.5 J**	**1.1**	**3.4**	< 1.0
Chloromethane	5	< 1.0	< 1.0	< 25	< 50	< 25	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	5	**272**	**441**	**935**	**956**	**887**	**178**	**5.0**	**0.49 J**
cis-1,3-Dichloropropene	0.4	< 1.0	< 1.0	< 25	< 50	< 25	< 1.0	< 1.0	< 1.0
Dichloromethane	5	< 2.0	< 2.0	< 50	< 100	< 50	< 2.0	< 2.0	< 2.0
Ethylbenzene	5	< 1.0	< 1.0	< 25	< 50	< 25	< 1.0	< 1.0	< 1.0
m,p-Xylene	5	< 1.0	< 1.0	< 25	< 50	< 25	< 1.0	< 1.0	< 1.0
Methyl N-Butyl Ketone (2-Hexanone)	50	< 5.0	< 5.0	< 130	< 250	< 130	< 5.0	< 5.0	< 5.0
o-Xylene	5	< 1.0	< 1.0	< 25	< 50	< 25	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	5	< 1.0	< 1.0	< 25	< 50	< 25	< 1.0	< 1.0	< 1.0
Tetrachloroethene	5	**1.9**	**5.4**	< 25	< 50	< 25	**1.0**	< 1.0	**1.0**
Toluene	5	< 1.0	< 1.0	< 25	< 50	< 25	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	5	**1.2**	**1.5**	< 25	< 50	**9.4 J**	**1.3**	< 1.0	< 1.0
trans-1,3-Dichloropropene	0.4	< 1.0	< 1.0	< 25	< 50	< 25	< 1.0	< 1.0	< 1.0
Trichloroethene	5	**2650**	**1930**	**11200**	**11500**	**6020**	**242**	**12.7**	**37.0**
Vinyl chloride	2	< 1.0	< 1.0	< 25	< 50	< 25	< 1.0	< 1.0	< 1.0
TVOCs	NE	**3000**	**2400**	**12000**	**13000**	**7000**	**430**	**27**	**38**
1,4-Dioxane	NE	**42.4**	**52.6**	**190**	**163**	**151 J**	**8.29**	**9.04**	**4.20**

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Table 5
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, RW-21 Project Area, Northrop Grumman Systems Corporation,
Operable Unit 3 (Former Grumman Settling Ponds),
Bethpage, New York.

Sample Location: / Sample Date: / Sample ID: / Constituent / Units in (ug/L)		RW-21_MW-6 12/14/2016 RW-21_MW-6_20161214	RW-21_MW-7 12/13/2016 RW-21_MW-7_20161213	RW-21_MW-8 12/8/2016 RW-21_MW-8_20161208	RW-21_MW-9 12/13/2016 RW-21_MW-9_20161213	RW-21_MW-11 12/12/2016 RW-21_MW-11_20161212	RW-21_MW-12-1 12/8/2016 RW-21_MW-12-1_20161208	RW-21_MW-12-2 12/8/2016 RW-21_MW-12-2_20161208
	NYSDEC SCGs							
1,1,1-Trichloroethane	5	**1.6 J**	< 50	**2.6**	**1.6**	< 5.0	**3.1**	< 1.0
1,1,2,2-Tetrachloroethane	5	< 5.0	< 50	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane	5	< 25	< 250	< 5.0	< 5.0	< 25	< 5.0	< 5.0
1,1,2-Trichloroethane	1	**1.9 J**	< 50	**0.37 J**	**0.60 J**	< 5.0	< 1.0	< 1.0
1,1-Dichloroethane	5	**6.5**	**17.0 J**	**14.0**	**9.0**	**1.6 J**	**9.6**	< 1.0
1,1-Dichloroethene	5	**4.1 J**	**13.5 J**	**9.2**	**4.6**	**1.6 J**	**3.7**	< 1.0
1,2-Dichloroethane	0.6	**10.4**	**34.5 J**	**5.4**	**3.9**	**4.7 J**	**1.8**	< 1.0
1,2-Dichloropropane	1	**1.7 J**	< 50	**0.90 J**	< 1.0	**2.6 J**	< 1.0	< 1.0
2-Butanone (MEK)	50	< 50	< 500	< 10	< 10	< 50	< 10	< 10
4-Methyl-2-Pentanone	NE	< 25	< 250	< 5.0	< 5.0	< 25	< 5.0	< 5.0
Acetone	50	< 50	< 500	< 10	< 10	< 50	< 10	< 10
Benzene	1	< 2.5	< 25	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50
Bromodichloromethane	50	< 5.0	< 50	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0
Bromoform	50	< 5.0	< 50	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0
Bromomethane	5	< 10	< 100	< 2.0	< 2.0	< 10	< 2.0	< 2.0
Carbon Disulfide	60	< 10	< 100	< 2.0	< 2.0	< 10	< 2.0	< 2.0
Carbon Tetrachloride	5	< 5.0	< 50	**0.94 J**	< 1.0	< 5.0	< 1.0	< 1.0
CFC-12	5	< 10	< 100	< 2.0	< 2.0	< 10	< 2.0	< 2.0
Chlorobenzene	5	< 5.0	< 50	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0
Chlorodibromomethane	50	< 5.0	< 50	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0
Chlorodifluoromethane	5	< 25	< 250	< 5.0	< 5.0	< 25	< 5.0	< 5.0
Chloroethane	5	< 5.0	< 50	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0
Chloroform	7	**12.1**	**25.8 J**	**3.3**	**11.1**	**5.6**	**1.0**	< 1.0
Chloromethane	5	< 5.0	< 50	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	5	**308**	**601**	**283**	**83.5**	**95.3**	**16.9**	< 1.0
cis-1,3-Dichloropropene	0.4	< 5.0	< 50	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0
Dichloromethane	5	< 10	< 100	< 2.0	< 2.0	< 10	< 2.0	< 2.0
Ethylbenzene	5	< 5.0	< 50	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0
m,p-Xylene	5	< 5.0	< 50	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0
Methyl N-Butyl Ketone (2-Hexanone)	50	< 25	< 250	< 5.0	< 5.0	< 25	< 5.0	< 5.0
o-Xylene	5	< 5.0	< 50	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0
Styrene (Monomer)	5	< 5.0	< 50	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0
Tetrachloroethene	5	**2.0 J**	< 50	**0.39 J**	< 1.0	< 5.0	< 1.0	< 1.0
Toluene	5	< 5.0	< 50	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	5	**5.2**	< 50	**1.7**	< 1.0	< 5.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	0.4	< 5.0	< 50	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0
Trichloroethene	5	**1060**	**7960**	**451**	**206**	**1790**	**81.2**	**0.50 J**
Vinyl chloride	2	< 5.0	< 50	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0
TVOCs	NE	**1400**	**8700**	**770**	**320**	**1900**	**120**	**0.5**
1,4-Dioxane	NE	**21.3**	**154**	**24.9**	**10.8**	**21.1**	**10.5**	< 0.200

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Table 5
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, RW-21 Project Area, Northrop Grumman Systems Corporation,
Operable Unit 3 (Former Grumman Settling Ponds),
Bethpage, New York.

Constituent / Units in (ug/L)	NYSDEC SCGs	RW-21_MW-13 12/12/2016 RW-21_MW-13_20161212	RW-21_MW-14 12/6/2016 RW-21_MW-14_20161206	RW-21_MW-15 12/6/2016 RW-21_MW-15_20161206	RW-21_MW-16 12/5/2016 RW-21_MW-16_20161205
1,1,1-Trichloroethane	5	< 1.0	**0.36 J**	< 1.0	**0.57 J**
1,1,2,2-Tetrachloroethane	5	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane	5	< 5.0	< 5.0	< 5.0	< 5.0
1,1,2-Trichloroethane	1	< 1.0	**0.35 J**	< 1.0	**1.3**
1,1-Dichloroethane	5	< 1.0	**0.96 J**	**0.23 J**	**2.0**
1,1-Dichloroethene	5	< 1.0	**0.92 J**	< 1.0	**2.0**
1,2-Dichloroethane	0.6	**0.50 J**	**1.4**	**0.71 J**	**6.3**
1,2-Dichloropropane	1	< 1.0	**0.49 J**	< 1.0	**1.3**
2-Butanone (MEK)	50	< 10	< 10	< 10	< 10
4-Methyl-2-Pentanone	NE	< 5.0	< 5.0	< 5.0	< 5.0
Acetone	50	< 10	< 10	< 10	< 10
Benzene	1	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane	50	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	50	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	5	< 2.0	< 2.0	< 2.0	< 2.0
Carbon Disulfide	60	< 2.0	< 2.0	< 2.0	< 2.0
Carbon Tetrachloride	5	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12	5	< 2.0	< 2.0	< 2.0	< 2.0
Chlorobenzene	5	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	50	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodifluoromethane	5	< 5.0	< 5.0	< 5.0	< 5.0
Chloroethane	5	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	7	**2.2**	**1.2**	**1.9**	**17.4**
Chloromethane	5	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	5	**10.1**	**20.7**	**16.6**	**123**
cis-1,3-Dichloropropene	0.4	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane	5	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	5	< 1.0	< 1.0	< 1.0	< 1.0
m,p-Xylene	5	< 1.0	< 1.0	< 1.0	< 1.0
Methyl N-Butyl Ketone (2-Hexanone)	50	< 5.0	< 5.0	< 5.0	< 5.0
o-Xylene	5	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	5	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	5	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	5	< 1.0	< 1.0	< 1.0	**0.29 J**
trans-1,2-Dichloroethene	5	< 1.0	< 1.0	< 1.0	**0.69 J**
trans-1,3-Dichloropropene	0.4	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	5	**16.9**	**423**	**42.3**	**593**
Vinyl chloride	2	< 1.0	< 1.0	< 1.0	< 1.0
TVOCs	NE	**30**	**450**	**62**	**750**
1,4-Dioxane	NE	**1.17**	**14.6**	**1.89 B**	**9.25 B**

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Table 5
Concentrations of Volatile Organic Compounds and 1,4-Dioxane in Groundwater Samples Collected from Monitoring Wells, RW-21 Project Area, Northrop Grumman Systems Corporation,
Operable Unit 3 (Former Grumman Settling Ponds),
Bethpage, New York.

Notes and Abbreviations:

1. Results validated following protocols specified in May 2014 Pre-Design Work Plan for Groundwater Hotspot (ARCADIS, 2014).
2. Samples analyzed for the TCL VOCs using USEPA Method 8260 and for 1,4-Dioxane using USEPA Method 522.
3. TVOCs represent sum of VOCs and are rounded to two significant figures. 1,4-dioxane not included in sum of VOCs.

Bold value indicates a detection

	Indicates an exceedance of an SCG
NYSDEC	New York State Department of Environmental Conservation
USEPA	United States Enviromental Protection Agency
TCL	Target compound list
VOCs	Volatile organic compounds
SCGs	Standard, criteria, and guidance values
ft bls	Feet below land surface
ug/L	Micrograms per liter
TVOCs	Total volatile organic compounds
NE	Not established
REP	Field replicate
J	Value is estimated
D	Value from a secondary dilution
B	Compound detected in associated blank sample
<10.0	Compound not detected above its laboratory quantification limit