From:	Stern, David
To:	Pelton, Jason M (DEC)
Cc:	Edward Hannon (Edward.Hannon@ngc.com); Hesler, Donald (DEC); Jim Sullivan; fred.weber@ngc.com; mrusso@OYSTERBAY-NY.gov; Richard W. Lenz, P.E. (RLenz@oysterbay-ny.gov); Wolfert, Mike; San Giovanni, Carlo; E MAGIN (jbalmat@hsweng.com)
Subject:	WORK PLAN - OU3 Park Soil VOCs - Work Plan Addendum (REVISED)
Date:	Tuesday, June 15, 2021 1:25:33 PM
Attachments:	image001.png image002.png image003.png image004.png image005.png image006.png Attachment 1 Example Angled Drilling Schematic.pdf Figure 1.pdf Table 1.pdf Table 2_060921.pdf

Good afternoon Jason-

On behalf of Northrop Grumman, Arcadis has prepared this Addendum to the New York State Department of Environmental Conservation (NYSDEC)-approved Work Plan for Additional VOC Soil Sampling, dated December 14, 2020 (Work Plan). The purpose of this Addendum is to provide a scope of work for additional characterization and delineation of total volatile organic compound (TVOC) concentrations in the recharge basin, skate park, and former ball field (northern portion) areas.

Northrop Grumman completed drilling/sampling of the ten (10) soil borings proposed in the Work Plan plus two additional soil borings in the recharge basin between March 16 and April 2, 2021. **Table 1** provides the analytical results of soil samples collected from the soil borings completed in 2021. The TVOC results for these soil borings and previous soil borings in the same areas are summarized on **Figure 1**, indicating locations where TVOC concentrations were either greater than or less than 10 milligrams per kilogram (mg/kg). The proposed additional scope of work in this Addendum is intended to further characterize and delineate TVOCs in the low permeability zone (LPZ) near the previous soil borings where TVOC concentrations were greater than 10 mg/kg.

The proposed soil boring locations are shown on **Figure 1**. **Table 2** provides the details of the proposed soil borings. The scope of work involves drilling 14 soil borings that either step out from or collect additional data in the vicinity of the previous soil borings where TVOC concentrations exceeded 10 mg/kg. The work will be performed in the sequence described below:

- **Four (4) soil borings in the skate park**.
- **Four (4) soil borings at the perimeter of the recharge basin and skate park.**
- **Four (4) soil borings in the recharge basin**. The land surface in the recharge basin is sloped around its perimeter and the elevation in the bottom of the recharge basin is approximately 12 to 16 feet lower than the surrounding land surface. Due to drill rig access limitations in the sloped areas, 3 of the 4 proposed soil borings in the recharge basin will use an angled drilling method to collect soil samples. The soil borings that will be drilled on an angle are K-96-21, nL-98-21, and K-1-21. The locations of these 3 soil borings on **Figure 1** are shown along the sloped

area but the drill rig will be positioned in the bottom (flat portion) of the recharge basin and the angled soil borings will be drilled from the west, and beneath the sloped area to intersect the boring locations shown on **Figure 1** to collect soil samples from the target soil sampling interval. An example angled drilling schematic is provided as **Attachment 1**. The actual drilling angle and position of the drill rig required to achieve the target depth at each angled soil boring will be determined after surveying activities and prior to drill rig mobilization. Angled soil borings will be drilled from level locations that can be accessed by the sonic drill rig. Angled drilling will allow collection of TVOC data at locations that would support design of potential future in-situ thermal remediation (ISTR) activities.

- **Two (2) soil borings in the northern portion of the former ball field**. Hot soil sampling protocols will be employed during the drilling of these borings consistent with previous borings drilled near the existing ISTR wells.

The proposed scope of work will be performed consistent with methods and procedures described in the December 14, 2020 Work Plan with the addition of angle drilling in the recharge basin. Additional borings may be drilled, and samples may be collected if warranted by data collected from the proposed borings, consistent with the NYSDEC-approved dynamic approach to delineation included in prior work plans (i.e., letting data developed from the initial borings dictate what additional borings, if any, are required). Soil samples will be analyzed under a 24-hour turnaround time to allow for an evaluation of the data as the work proceeds with the goal of completing the delineation during one mobilization.

Drilling locations may be adjusted in the field based on health and safety considerations, access limitations or presence of utilities.

Provided below is a general schedule for the field activities including site preparation and drilling/soil sampling. Dates/durations are contingent on weather and subsurface conditions.

- **June 10 to June 11, 2021**: Site preparation in the recharge basin (brush clearing and stone placement).
- **June 14, 2021**: Surveying to field locate proposed soil borings (skate park should be closed during these activities).
- **June 15, 2021**: Utility locating and mark outs (skate park should be closed during these activities).
- **June 17 to June 24, 2021**: Drilling of 4 soil borings in the skate park (set up, core drilling through skate park surface, tree removal [1 tree at nM-98-21 location], and skate park surface restoration).
- **June 25 to June 30, 2021**: Drilling of 4 soil borings in the grass area north of the recharge basin and skate park (3 borings), and in the parking lot (1 boring)
- **July 1 to July 7, 2021** (no work on Town Holiday July 5): Drilling of 4 soil borings in the recharge basin (1 vertical boring and 3 angled borings).
- **July 8 to July 9, 2021**: Drilling of 2 soil borings in the former ball field area.

Two new trees will be installed in the skate park at the end of the drilling program to replace the trees that were removed to facilitate drill rig access and the recharge basin fence section will be replaced upon removal of the temporary fencing.

The NYSDEC will be notified at least two days prior to the start of field work. Field work will be performed Monday to Friday from 7 a.m. to 4 p.m.; work will not be conducted on Town holidays. The NYSDEC will be notified if field observations and laboratory results indicate that additional borings are warranted.

Please contact us with any questions or comments.

Regards,

Dave

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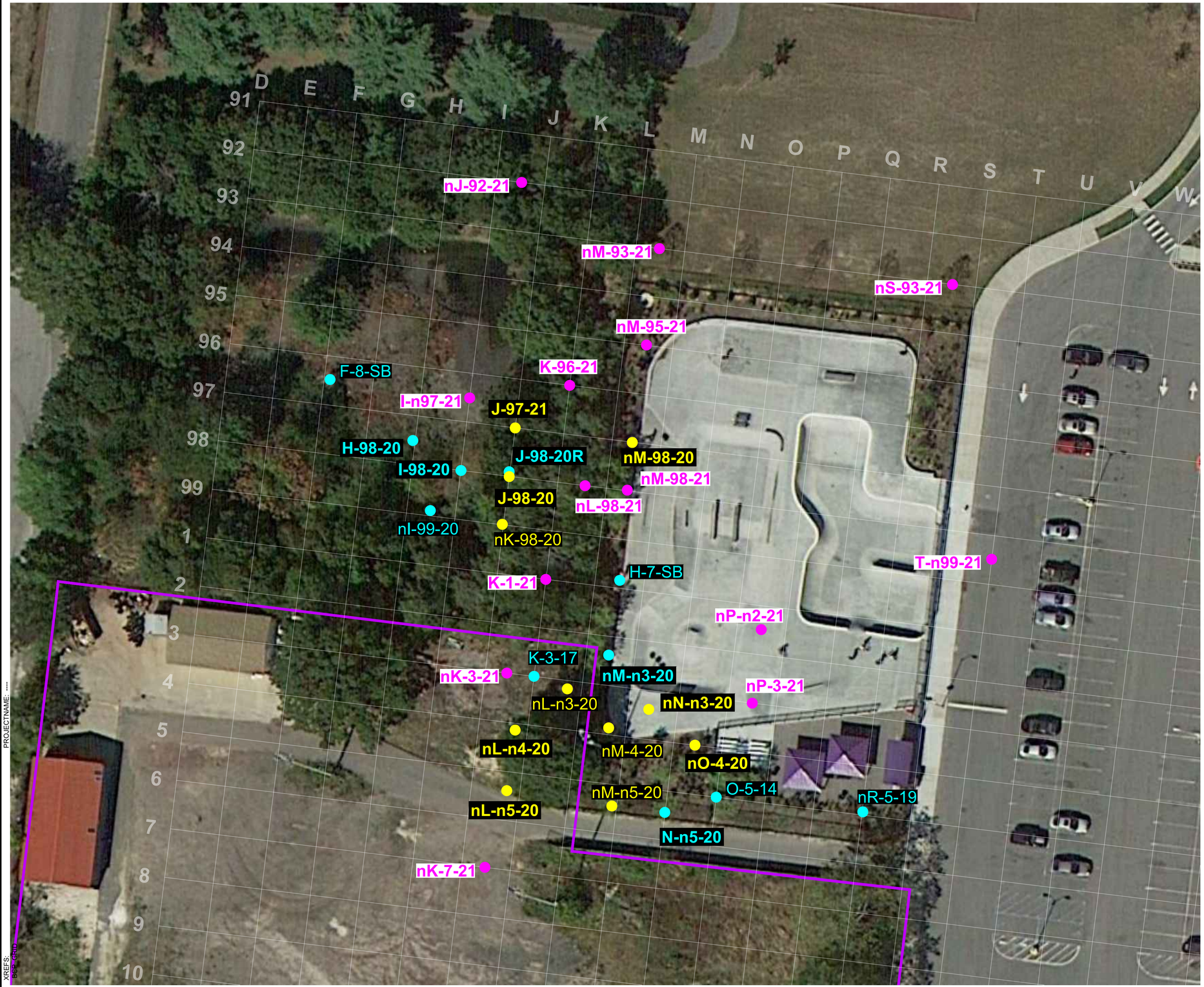


LEGEND:

	LIMIT OF PARK - BALL FIELD
TVOC	TOTAL VOLATILE ORGANIC COMPOUND
mg/kg	MILLIGRAMS PER KILOGRAM
●	SOIL BORING LOCATION WITH TVOC CONCENTRATION LESS THAN 10 mg/kg
●	SOIL BORING LOCATION WITH TVOC CONCENTRATION GREATER THAN 10 mg/kg
●	PROPOSED SOIL BORING LOCATION

NOTES:

1. BORINGS nI-99-20, nK-98-20, nL-n3-20, nM-4-20, nM-n5-20, AND nR-5-19 WERE SURVEYED BY A LICENSED LAND SURVEYOR.
2. BORINGS K-3-17 AND O-5-14 WERE FIELD LOCATED USING A HAND-HELD GLOBAL POSITIONING SYSTEM (GPS) UNIT.
3. BORINGS H-7-SB AND F-8-SB ARE APPROXIMATE AND ARE BASED ON FIELD MEASUREMENTS.
4. COORDINATES REFER TO NEW YORK STATE PLANE COORDINATE SYSTEM, LONG ISLAND ZONE, NORTH AMERICAN DATUM OF 1983 (NAD 83).
5. THE LOCATIONS OF THE 2021 COMPLETED SOIL BORINGS WILL BE SURVEYED BY A LICENSED LAND SURVEYOR.
6. BORINGS K-96-21, nL-98-21, AND K-1-21 WILL BE DRILLED AS ANGLE BORINGS.

0 40' 80'

NORTHROP GRUMMAN
OPERABLE UNIT 3
BETHPAGE, NEW YORK

LOCATION OF SOIL BORINGS AND PROPOSED SOIL BORINGS

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1

Table 1
Concentrations of Constituents in Soil Samples
Operable Unit 3 (Former Grumman Settling Ponds)
Northrop Grumman
Bethpage, New York

Constituents	Boring ID: Sample ID: Sample Depth (ft bls): Sample Date:	H-98-20 H-98-20(20-22) 20-22 3/18/2021	H-98-20 H-98-20(24-26) 24-26 3/18/2021	H-98-20 H-98-20(26-28) 26-28 3/18/2021	H-98-20 H-98-20(28-30) 28-30 3/18/2021	H-98-20 H-98-20(30-32) 30-32 3/18/2021	H-98-20 H-98-20(32-34) 32-34 3/18/2021	H-98-20 H-98-20(34-36) 34-36 3/18/2021	H-98-20 H-98-20(36-38) 36-38 3/18/2021	H-98-20 H-98-20(38-40) 38-40 3/18/2021	I-98-20 I-98-20(20-22) 20-22 3/17/2021	I-98-20 I-98-20(22-24) 22-24 3/17/2021	I-98-20 I-98-20(24-26) 24-26 3/17/2021
VOCs (mg/kg) [1, 2, 3]													
1,1,1-Trichloroethane		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
1,1,2,2-Tetrachloroethane		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
1,1,2-trichloro-1,2,2-trifluoroethane		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
1,1,2-Trichloroethane		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
1,1-Dichloroethane		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
1,1-Dichloroethene		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
1,2,4-Trichlorobenzene		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
1,2-Dibromo-3-chloropropane		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
1,2-Dibromoethane		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
1,2-Dichlorobenzene		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
1,2-Dichloroethane		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
1,2-Dichloropropane		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
1,3-Dichlorobenzene		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
1,4-Dichlorobenzene		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
2-Butanone (MEK)		< 0.0040	< 0.0035	< 0.0050	< 0.0052	< 0.0046	**0.0031 J**	< 0.0055	< 0.0049	< 0.0045	< 0.0041	< 0.0049	< 0.0034
4-Methyl-2-Pentanone		< 0.0040	< 0.0035	< 0.0050	< 0.0052	< 0.0046	< 0.0041	< 0.0055	< 0.0049	< 0.0045	< 0.0041	< 0.0049	< 0.0034
Acetone		**0.02**	**0.067**	**0.041**	**0.021**	**0.07**	**0.023**	**0.021**	**0.0085**	**0.0058**	**0.0095**	**0.33**	**0.036**
Benzene		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	**0.00048 J**	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
Bromodichloromethane		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
Bromoform		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
Bromomethane		< 0.0016	< 0.0014	< 0.0020	< 0.0021	< 0.0019	< 0.0016	< 0.0022	< 0.0020	< 0.0018	< 0.0016	< 0.0020	< 0.0014
Carbon Disulfide		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
Carbon Tetrachloride		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
CFC-11		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
CFC-12		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
Chlorobenzene		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
Chlorodibromomethane		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
Chloroethane		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
Chloroform		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
Chloromethane		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
cis-1,2-Dichloroethene		< 0.00080	< 0.00069	< 0.00099	< 0.0010	**0.00044 J**	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
cis-1,3-Dichloropropene		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
Cyclohexane		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
Dichloromethane		< 0.0016	< 0.0014	< 0.0020	< 0.0021	< 0.0019	< 0.0016	< 0.0022	< 0.0020	< 0.0018	< 0.0016	< 0.0020	< 0.0014
Ethylbenzene		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
Isopropylbenzene		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
m&p-Xylenes		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
Methyl Acetate		< 0.0040	< 0.0035	< 0.0050	< 0.0052	< 0.0046	< 0.0041	< 0.0055	< 0.0049	< 0.0045	< 0.0041	< 0.0049	< 0.0034
Methyl N-Butyl Ketone (2-Hexanone)		< 0.0040	< 0.0035	< 0.0050	< 0.0052	< 0.0046	< 0.0041	< 0.0055	< 0.0049	< 0.0045	< 0.0041	< 0.0049	< 0.0034
Methylcyclohexane		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
Methyl-tert-butylether		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
o-Xylene		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
Styrene (Monomer)		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
Tetrachloroethene		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
Toluene		**0.0029**	< 0.00069	< 0.00099	< 0.0010	< 0.00093	**0.00053 J**	< 0.0011	< 0.00098	< 0.00090	**0.0012**	**0.00083 J**	**0.0023**
trans-1,2-Dichloroethene		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
trans-1,3-Dichloropropene		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
Trichloroethene		< 0.00080	< 0.00069	< 0.00099	**0.00044 J**	**0.0026**	**0.0011**	**0.00093 J**	**0.00079 J**	< 0.00090	< 0.00082	< 0.00099	< 0.00068
Vinyl chloride		< 0.00080	< 0.00069	< 0.00099	< 0.0010	< 0.00093	< 0.00081	< 0.0011	< 0.00098	< 0.00090	< 0.00082	< 0.00099	< 0.00068
Total VOCs [4]		**0.02**	**0.067**	**0.041**	**0.021**	**0.07**	**0.028**	**0.022**	**0.0093**	**0.0058**	**0.0107**	**0.33**	**0.038**

Footnotes and Abbreviations on last page.

Table 1
Concentrations of Constituents in Soil Samples
Operable Unit 3 (Former Grumman Settling Ponds)
Northrop Grumman
Bethpage, New York

Constituents	Boring ID: Sample ID: Sample Depth (ft bls): Sample Date:	I-98-20 I-98-20(26-28) 26-28 3/17/2021	I-98-20 I-98-20(28-30) 28-30 3/17/2021	I-98-20 I-98-20(30-32) 30-32 3/17/2021	I-98-20 I-98-20(32-34) 32-34 3/17/2021	I-98-20 I-98-20(34-36) 34-36 3/17/2021	I-98-20 I-98-20(36-38) 36-38 3/17/2021	I-98-20 REP031721ARH 36-38 3/17/2021	I-98-20 I-98-20(38-40) 38-40 3/17/2021	J-97-21 J-97-21(20-22) 20-22 3/22/2021	J-97-21 J-97-21(22-24) 22-24 3/22/2021	J-97-21 J-97-21(24-26) 24-26 3/22/2021	J-97-21 J-97-21(26-28) 26-28 3/22/2021
VOCs (mg/kg) [1, 2, 3]													
1,1,1-Trichloroethane		< 0.0012	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
1,1,2,2-Tetrachloroethane		< 0.0012	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
1,1,2-trichloro-1,2,2-trifluoroethane		< 0.0012	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
1,1,2-Trichloroethane		< 0.0012	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
1,1-Dichloroethane		< 0.0012	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
1,1-Dichloroethene		< 0.0012	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
1,2,4-Trichlorobenzene		< 0.0012 J	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
1,2-Dibromo-3-chloropropane		< 0.0012 J	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
1,2-Dibromoethane		< 0.0012 J	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
1,2-Dichlorobenzene		< 0.0012 J	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
1,2-Dichloroethane		< 0.0012	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
1,2-Dichloropropane		< 0.0012	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
1,3-Dichlorobenzene		< 0.0012 J	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
1,4-Dichlorobenzene		< 0.0012 J	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
2-Butanone (MEK)		< 0.0059	< 0.0027	< 0.0038	< 0.0047	< 0.0052	< 0.0041	< 0.0039	< 0.0031	< 0.0046	< 0.0044	< 0.0021	< 0.0025
4-Methyl-2-Pentanone		< 0.0059	< 0.0027	< 0.0038	< 0.0047	< 0.0052	< 0.0041	< 0.0039	< 0.0031	< 0.0046	< 0.0044	< 0.0021	< 0.0025
Acetone		**0.06 J**	**0.076**	**0.0086**	**0.081**	**0.057**	**0.012**	**0.018**	**0.0062**	**0.21**	**0.0050 J**	**0.014**	**0.14**
Benzene		< 0.0012	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	**0.00035 J**	< 0.00063	< 0.00091	< 0.00088	**0.00014 J**	< 0.00050
Bromodichloromethane		< 0.0012 J	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
Bromoform		< 0.0012 J	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
Bromomethane		< 0.0024	< 0.0011	< 0.0015	< 0.0019	< 0.0021	< 0.0016	< 0.0016	< 0.0013	< 0.0018	< 0.0018	< 0.00084	< 0.00099
Carbon Disulfide		< 0.0012 J	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
Carbon Tetrachloride		< 0.0012 J	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
CFC-11		< 0.0012	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
CFC-12		< 0.0012 J	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
Chlorobenzene		< 0.0012	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
Chlorodibromomethane		< 0.0012 J	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
Chloroethane		< 0.0012	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
Chloroform		< 0.0012	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
Chloromethane		< 0.0012	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
cis-1,2-Dichloroethene		< 0.0012	< 0.00054	< 0.00077	< 0.00095	< 0.0010	**0.00073 J**	**0.00050 J**	**0.00065**	< 0.00091	< 0.00088	< 0.00042	< 0.00050
cis-1,3-Dichloropropene		< 0.0012 J	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
Cyclohexane		< 0.0012	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
Dichloromethane		< 0.0024	< 0.0011	< 0.0015 B	< 0.0019	< 0.0021	< 0.0016	< 0.0016 B	< 0.0013	< 0.0018	< 0.0018	< 0.00084	< 0.00099
Ethylbenzene		< 0.0012 J	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
Isopropylbenzene		< 0.0012 J	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
m&p-Xylenes		< 0.0012 J	< 0.00054	**0.00016 J**	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	**0.00019 J**	< 0.00042	< 0.00050
Methyl Acetate		< 0.0059 J	< 0.0027	< 0.0038	< 0.0047	< 0.0052	< 0.0041	< 0.0039	< 0.0031	< 0.0046	< 0.0044	< 0.0021	< 0.0025
Methyl N-Butyl Ketone (2-Hexanone)		< 0.0059	< 0.0027	< 0.0038	< 0.0047	< 0.0052	< 0.0041	< 0.0039	< 0.0031	< 0.0046	< 0.0044	< 0.0021	< 0.0025
Methylcyclohexane		< 0.0012	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
Methyl-tert-butylether		< 0.0012	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
o-Xylene		< 0.0012 J	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
Styrene (Monomer)		< 0.0012 J	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
Tetrachloroethene		< 0.0012 J	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	**0.00022 J**	< 0.00091	< 0.00088	< 0.00042	< 0.00050
Toluene		**0.00084 J**	**0.00049 J**	**0.0022**	**0.00065 J**	**0.0012**	**0.00020 J**	**0.0021**	< 0.00063	**0.00034 J**	< 0.00088	**0.0009**	**0.00016 J**
trans-1,2-Dichloroethene		< 0.0012	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
trans-1,3-Dichloropropene		< 0.0012 J	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
Trichloroethene		< 0.0012	< 0.00054	< 0.00077	**0.00055 J**	**0.00037 J**	**0.0015**	**0.0011**	**0.0042**	< 0.00091	< 0.00088	< 0.00042	< 0.00050
Vinyl chloride		< 0.0012	< 0.00054	< 0.00077	< 0.00095	< 0.0010	< 0.00082	< 0.00078	< 0.00063	< 0.00091	< 0.00088	< 0.00042	< 0.00050
Total VOCs [4]		**0.06**	**0.076**	**0.0110**	**0.082**	**0.059**	**0.014**	**0.022**	**0.0113**	**0.21**	**0.005**	**0.015**	**0.14**

Footnotes and Abbreviations on last page.

Table 1
Concentrations of Constituents in Soil Samples
Operable Unit 3 (Former Grumman Settling Ponds)
Northrop Grumman
Bethpage, New York

Constituents	Boring ID: Sample ID: Sample Depth (ft bls): Sample Date:	J-97-21 J-97-21(28-30) 28-30 3/22/2021	J-97-21 J-97-21(30-32) 30-32 3/22/2021	J-97-21 J-97-21(32-34) 32-34 3/22/2021	J-97-21 J-97-21(34-36) 34-36 3/22/2021	J-97-21 J-97-21(36-38) 36-38 3/22/2021	J-97-21 J-97-21(38-40) 38-40 3/22/2021	J-97-21 J-97-21(40-42) 40-42 3/22/2021	J-97-21 J-97-21(42-44) 42-44 3/22/2021	J-98-20 J-98-20(20-22) 20-22 3/16/2021	J-98-20 J-98-20(22-24) 22-24 3/16/2021	J-98-20 J-98-20(24-26) 24-26 3/16/2021	J-98-20 J-98-20(26-28) 26-28 3/16/2021
VOCs (mg/kg) [1, 2, 3]													
1,1,1-Trichloroethane		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
1,1,2,2-Tetrachloroethane		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
1,1,2-trichloro-1,2,2-trifluoroethane		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
1,1,2-Trichloroethane		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
1,1-Dichloroethane		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
1,1-Dichloroethene		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
1,2,4-Trichlorobenzene		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
1,2-Dibromo-3-chloropropane		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
1,2-Dibromoethane		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
1,2-Dichlorobenzene		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
1,2-Dichloroethane		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
1,2-Dichloropropane		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
1,3-Dichlorobenzene		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
1,4-Dichlorobenzene		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
2-Butanone (MEK)		< 0.0023	**0.0023**	< 0.0031	< 0.0032	< 0.0030	< 0.81	< 0.9	< 0.39	< 0.0047	< 0.0054	< 0.0039	< 0.0038
4-Methyl-2-Pentanone		< 0.0023	< 0.0022	< 0.0031	< 0.0032	< 0.0030	< 0.81	< 0.9	< 0.39	< 0.0047	< 0.0054	< 0.0039	< 0.0038
Acetone		**0.069**	**0.037**	**0.079**	**0.18**	**0.025**	< 0.81	< 0.9	< 0.39	**0.053**	**0.3**	**0.0067**	**0.015**
Benzene		< 0.00046	**0.00039 J**	**0.00024 J**	**0.00020 J**	**0.00051 J**	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	**0.00034 J**	**0.00036 J**
Bromodichloromethane		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
Bromoform		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
Bromomethane		< 0.00093	< 0.00090	< 0.0012	< 0.0013	< 0.0012	< 0.16	< 0.18	< 0.078	< 0.0019	< 0.0022	< 0.0016	< 0.0015
Carbon Disulfide		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
Carbon Tetrachloride		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
CFC-11		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
CFC-12		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
Chlorobenzene		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
Chlorodibromomethane		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
Chloroethane		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
Chloroform		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
Chloromethane		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
cis-1,2-Dichloroethene		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	**0.77**	**1**	**0.035 J**	< 0.00094	< 0.0011	< 0.00079	< 0.00076
cis-1,3-Dichloropropene		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
Cyclohexane		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16 J	< 0.18 J	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
Dichloromethane		< 0.00093	< 0.00090	< 0.0012	< 0.0013	< 0.0012 B	< 0.16	< 0.18	< 0.078	< 0.0019	< 0.0022	**0.00097 J**	< 0.0015
Ethylbenzene		< 0.00046	**0.00012 J**	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
Isopropylbenzene		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
m&p-Xylenes		< 0.00046	**0.00014 J**	**0.00012 J**	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	**0.00025 J**	< 0.0011	< 0.00079	**0.00016 J**
Methyl Acetate		< 0.0023	< 0.0022	< 0.0031	< 0.0032	< 0.0030	< 0.81	< 0.9	< 0.39	< 0.0047	**0.0059**	< 0.0039	< 0.0038
Methyl N-Butyl Ketone (2-Hexanone)		< 0.0023	< 0.0022	< 0.0031	< 0.0032	< 0.0030	< 0.81	< 0.9	< 0.39	< 0.0047	< 0.0054	< 0.0039	< 0.0038
Methylcyclohexane		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18 J	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
Methyl-tert-butylether		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
o-Xylene		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
Styrene (Monomer)		< 0.00046	**0.00020 J**	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
Tetrachloroethene		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
Toluene		**0.00026 J**	**0.0016**	**0.0024**	**0.00053 J**	**0.0031**	**0.32**	< 0.18	< 0.078	**0.0028**	**0.00032 J**	**0.0017**	**0.0018**
trans-1,2-Dichloroethene		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
trans-1,3-Dichloropropene		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
Trichloroethene		< 0.00046	< 0.00045	< 0.00061	< 0.00064	**0.015**	**32**	**59**	**1.4**	< 0.00094	< 0.0011	< 0.00079	< 0.00076
Vinyl chloride		< 0.00046	< 0.00045	< 0.00061	< 0.00064	< 0.00059	< 0.16	< 0.18	< 0.078	< 0.00094	< 0.0011	< 0.00079	< 0.00076
Total VOCs [4]		**0.069**	**0.042**	**0.082**	**0.18**	**0.044**	**33**	**60**	**1.4**	**0.056**	**0.3**	**0.0097**	**0.017**

Footnotes and Abbreviations on last page.

Table 1
Concentrations of Constituents in Soil Samples
Operable Unit 3 (Former Grumman Settling Ponds)
Northrop Grumman
Bethpage, New York

Constituents	Boring ID: Sample ID: Sample Depth (ft bls): Sample Date:	J-98-20 J-98-20(28-30) 28-30 3/16/2021	J-98-20 J-98-20(30-32) 30-32 3/16/2021	J-98-20 J-98-20(32-34) 32-34 3/16/2021	J-98-20 J-98-20(34-36) 34-36 3/16/2021	J-98-20 J-98-20(36-38) 36-38 3/16/2021	J-98-20 J-98-20(38-40) 38-40 3/16/2021	J-98-20R J-98-20R(20-22) 20-22 3/19/2021	J-98-20R J-98-20R(24-26) 24-26 3/19/2021	J-98-20R J-98-20R(26-28) 26-28 3/19/2021	J-98-20R J-98-20R(28-30) 28-30 3/19/2021	J-98-20R J-98-20R(30-32) 30-32 3/19/2021	J-98-20R J-98-20R(32-34) 32-34 3/19/2021
VOCs (mg/kg) [1, 2, 3]													
1,1,1-Trichloroethane		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	**0.31**	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
1,1,2,2-Tetrachloroethane		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
1,1,2-trichloro-1,2,2-trifluoroethane		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
1,1,2-Trichloroethane		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
1,1-Dichloroethane		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	**0.21 J**	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
1,1-Dichloroethene		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	**0.17 J**	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
1,2,4-Trichlorobenzene		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
1,2-Dibromo-3-chloropropane		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
1,2-Dibromoethane		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
1,2-Dichlorobenzene		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
1,2-Dichloroethane		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
1,2-Dichloropropane		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
1,3-Dichlorobenzene		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
1,4-Dichlorobenzene		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
2-Butanone (MEK)		< 0.0049	< 0.0047	< 0.0080	< 0.0042	< 0.57	< 1.4	< 0.0025	< 0.0038	< 0.0042	< 0.0042	< 0.0039	< 0.0034
4-Methyl-2-Pentanone		< 0.0049	< 0.0047	< 0.0080	< 0.0042	< 0.57	< 1.4	< 0.0025	< 0.0038	< 0.0042	< 0.0042	< 0.0039	< 0.0034
Acetone		**0.023**	**0.0064**	**0.14**	**0.15**	**0.76**	**2.2**	**0.0049**	**0.18**	**0.024**	**0.082**	**0.2**	**0.05**
Benzene		**0.00032 J**	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
Bromodichloromethane		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
Bromoform		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
Bromomethane		< 0.0020	< 0.0019	< 0.0032	< 0.0017	< 0.11	< 0.27	< 0.0010	< 0.0015	< 0.0017	< 0.0017	< 0.0016	< 0.0014
Carbon Disulfide		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
Carbon Tetrachloride		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
CFC-11		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
CFC-12		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
Chlorobenzene		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
Chlorodibromomethane		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
Chloroethane		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
Chloroform		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	**0.094 J**	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
Chloromethane		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
cis-1,2-Dichloroethene		< 0.00098	< 0.00095	< 0.0016	< 0.00085	**0.26**	**14**	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
cis-1,3-Dichloropropene		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
Cyclohexane		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
Dichloromethane		**0.0016 J**	< 0.0019	< 0.0032	< 0.0017	**0.081 J**	**0.23 J**	**0.001**	< 0.0015	< 0.0017	< 0.0017	< 0.0016	< 0.0014
Ethylbenzene		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
Isopropylbenzene		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
m&p-Xylenes		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	**0.00016 J**	< 0.00078	< 0.00068
Methyl Acetate		< 0.0049	< 0.0047	< 0.0080	< 0.0042	< 0.57	< 1.4	< 0.0025	< 0.0038	< 0.0042	< 0.0042	< 0.0039	< 0.0034
Methyl N-Butyl Ketone (2-Hexanone)		< 0.0049	< 0.0047	< 0.0080	< 0.0042	< 0.57	< 1.4	< 0.0025	< 0.0038	< 0.0042	< 0.0042	< 0.0039	< 0.0034
Methylcyclohexane		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
Methyl-tert-butylether		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
o-Xylene		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
Styrene (Monomer)		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
Tetrachloroethene		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
Toluene		**0.002**	**0.0012**	**0.00038 J**	**0.00022 J**	< 0.11	< 0.27	**0.00078**	**0.00045 J**	**0.00022 J**	**0.0012**	**0.00023 J**	**0.00045 J**
trans-1,2-Dichloroethene		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
trans-1,3-Dichloropropene		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
Trichloroethene		< 0.00098	< 0.00095	< 0.0016	**0.0049**	**2.6**	**77**	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
Vinyl chloride		< 0.00098	< 0.00095	< 0.0016	< 0.00085	< 0.11	< 0.27	< 0.00051	< 0.00077	< 0.00084	< 0.00085	< 0.00078	< 0.00068
Total VOCs [4]		**0.027**	**0.0076**	**0.14**	**0.16**	**3.7**	**94**	**0.007**	**0.18**	**0.024**	**0.083**	**0.2**	**0.05**

Footnotes and Abbreviations on last page.

Table 1
Concentrations of Constituents in Soil Samples
Operable Unit 3 (Former Grumman Settling Ponds)
Northrop Grumman
Bethpage, New York

Constituents	Boring ID: Sample ID: Sample Depth (ft bls): Sample Date:	J-98-20R J-98-20R(34-36) 34-36 3/19/2021	J-98-20R J-98-20R(36-38) 36-38 3/19/2021	J-98-20R J-98-20R(38-40) 38-40 3/19/2021	J-98-20R J-98-20R(40-42) 40-42 3/19/2021	J-98-20R REP031921DC 40-42 3/19/2021	nL-n4-20 nL-n4-20(38-40) 38-40 4/1/2021	nL-n4-20 nL-n4-20(42-44) 42-44 4/1/2021	nL-n4-20 nL-n4-20(44-46) 44-46 4/1/2021	nL-n4-20 nL-n4-20(46-48) 46-48 4/1/2021	nL-n4-20 nL-n4-20(48-50) 48-50 4/1/2021	nL-n4-20 nL-n4-20(50-52) 50-52 4/1/2021	nL-n5-20 nL-n5-20(38-40) 38-40 4/2/2021
VOCs (mg/kg) [1, 2, 3]													
1,1,1-Trichloroethane		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
1,1,2,2-Tetrachloroethane		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
1,1,2-trichloro-1,2,2-trifluoroethane		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
1,1,2-Trichloroethane		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
1,1-Dichloroethane		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
1,1-Dichloroethene		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
1,2,4-Trichlorobenzene		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058 J
1,2-Dibromo-3-chloropropane		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
1,2-Dibromoethane		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
1,2-Dichlorobenzene		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058 J
1,2-Dichloroethane		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
1,2-Dichloropropane		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
1,3-Dichlorobenzene		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058 J
1,4-Dichlorobenzene		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058 J
2-Butanone (MEK)		< 0.0047	< 0.0027	< 0.0023	< 0.0027	< 0.0027	< 0.0047	< 4.9	< 2.5	< 0.39	< 0.47	**0.014**	< 0.0029
4-Methyl-2-Pentanone		< 0.0047	< 0.0027	< 0.0023	< 0.0027	< 0.0027	< 0.0047	< 4.9	< 2.5	< 0.39	< 0.47	< 0.0033	< 0.0029 J
Acetone		**0.019**	**0.041**	**0.0032**	**0.0079**	**0.043**	< 0.0056	< 4.9	< 2.5	< 0.39	< 0.47	**0.12**	< 0.0035
Benzene		< 0.00093	< 0.00053	< 0.00045	**0.00025 J**	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	**0.00050 J**	< 0.00058
Bromodichloromethane		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
Bromoform		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	**0.00060 J**	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
Bromomethane		< 0.0019	< 0.0011	< 0.00090	< 0.0011	< 0.0011	< 0.0019	< 0.97	< 0.49	< 0.078	< 0.094	< 0.0013	< 0.0012
Carbon Disulfide		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
Carbon Tetrachloride		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
CFC-11		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
CFC-12		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
Chlorobenzene		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058 J
Chlorodibromomethane		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	**0.00030 J**	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
Chloroethane		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
Chloroform		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
Chloromethane		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
cis-1,2-Dichloroethene		< 0.00093	< 0.00053	< 0.00045	**0.0024**	**0.0022**	< 0.00093	**28**	**13**	**1.3**	**0.57**	**0.022**	< 0.00058
cis-1,3-Dichloropropene		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
Cyclohexane		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058 J
Dichloromethane		< 0.0019	< 0.0011	< 0.00090	**0.00066 J**	< 0.0011	< 0.0019	< 0.97	**0.32 J**	**0.11**	< 0.094	< 0.0013	< 0.0012
Ethylbenzene		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	**1.8**	**0.27 J**	**0.18**	**0.061 J**	**0.00035 J**	< 0.00058 J
Isopropylbenzene		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058 J
m&p-Xylenes		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	**5.8**	**0.52**	**0.94**	**0.61**	**0.0019**	**0.00018 J**
Methyl Acetate		< 0.0047	< 0.0027	< 0.0023	< 0.0027	< 0.0027	< 0.0047	< 4.9	< 2.5	< 0.39	< 0.47	< 0.0033	< 0.0029 J
Methyl N-Butyl Ketone (2-Hexanone)		< 0.0047	< 0.0027	< 0.0023	< 0.0027	< 0.0027	< 0.0047	< 4.9	< 2.5	< 0.39	< 0.47	< 0.0033	< 0.0029 J
Methylcyclohexane		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058 J
Methyl-tert-butylether		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058 J
o-Xylene		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	**2.9**	**0.3 J**	**0.35**	**0.4**	**0.0014**	< 0.00058 J
Styrene (Monomer)		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058 J
Tetrachloroethene		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058 J
Toluene		< 0.00093	**0.00052 J**	**0.00031 J**	**0.0019**	**0.00014 J**	< 0.00093	**89**	**51**	**8**	**2.4**	**0.019**	**0.00051 J**
trans-1,2-Dichloroethene		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	**0.57 J**	**0.13 J**	**0.03 J**	< 0.094	**0.00051 J**	< 0.00058
trans-1,3-Dichloropropene		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	< 0.97	< 0.49	< 0.078	< 0.094	< 0.00065	< 0.00058
Trichloroethene		< 0.00093	**0.0039**	**0.0026**	**0.048**	**0.041**	< 0.00093	**210**	**99**	**8.6**	**3.2**	**0.083**	< 0.00058
Vinyl chloride		< 0.00093	< 0.00053	< 0.00045	< 0.00055	< 0.00054	< 0.00093	**0.5 J**	**0.44 J**	**0.046 J**	< 0.094	< 0.00065	< 0.00058
Total VOCs [4]		**0.019**	**0.045**	**0.0061**	**0.061**	**0.086**	**0.0009**	**339**	**165**	**20**	**7.2**	**0.26**	**0.00069**

Footnotes and Abbreviations on last page.

Table 1
Concentrations of Constituents in Soil Samples
Operable Unit 3 (Former Grumman Settling Ponds)
Northrop Grumman
Bethpage, New York

Constituents	Boring ID: Sample ID: Sample Depth (ft bls): Sample Date:	nL-n5-20 nL-n5-20(40-42) 40-42 4/2/2021	nL-n5-20 nL-n5-20(42-44) 42-44 4/2/2021	nL-n5-20 nL-n5-20(44-46) 44-46 4/2/2021	nL-n5-20 REP040221PQ 44-46 4/2/2021	nL-n5-20 nL-n5-20(46-48) 46-48 4/2/2021	nL-n5-20 nL-n5-20(48-50) 48-50 4/2/2021	nL-n5-20 nL-n5-20(50-52) 50-52 4/2/2021	nM-98-20 nM-98-20(38-40) 38-40 3/23/2021	nM-98-20 nM-98-20(40-42) 40-42 3/23/2021	nM-98-20 nM-98-20(42-44) 42-44 3/23/2021	nM-98-20 nM-98-20(44-46) 44-46 3/23/2021	nM-98-20 nM-98-20(46-48) 46-48 3/23/2021
VOCs (mg/kg) [1, 2, 3]													
1,1,1-Trichloroethane		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
1,1,2,2-Tetrachloroethane		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
1,1,2-trichloro-1,2,2-trifluoroethane		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
1,1,2-Trichloroethane		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
1,1-Dichloroethane		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
1,1-Dichloroethene		< 0.0010	**0.011 J**	**0.13 J**	**0.061 J**	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
1,2,4-Trichlorobenzene		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
1,2-Dibromo-3-chloropropane		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
1,2-Dibromoethane		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
1,2-Dichlorobenzene		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
1,2-Dichloroethane		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
1,2-Dichloropropane		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
1,3-Dichlorobenzene		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
1,4-Dichlorobenzene		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
2-Butanone (MEK)		< 0.0050	< 0.21	< 2.3	< 0.83	< 0.28	< 0.41	< 0.3	< 0.0030	< 0.0029	< 0.0031	< 0.0040	< 0.0031
4-Methyl-2-Pentanone		< 0.0050	< 0.21	< 2.3	< 0.83	< 0.28	< 0.41	< 0.3	< 0.0030	< 0.0029	< 0.0031	< 0.0040	< 0.0031
Acetone		< 0.0060	< 0.21	< 2.3	< 0.83	< 0.28	< 0.41	< 0.3	**0.037 J**	**0.11 J**	**0.02 J**	**0.045 J**	**0.025 J**
Benzene		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
Bromodichloromethane		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
Bromoform		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
Bromomethane		< 0.0020	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.0012	< 0.0012	< 0.0013	< 0.0016	< 0.0012
Carbon Disulfide		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
Carbon Tetrachloride		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
CFC-11		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
CFC-12		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
Chlorobenzene		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
Chlorodibromomethane		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
Chloroethane		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060 J	< 0.00058 J	< 0.00063	< 0.00080	< 0.00062 J
Chloroform		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
Chloromethane		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
cis-1,2-Dichloroethene		< 0.0010	**1.1**	**16 J**	**7.4 J**	**1.9**	**1.4**	**1.8**	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
cis-1,3-Dichloropropene		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
Cyclohexane		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
Dichloromethane		< 0.0039 B	< 0.043	< 0.46 B	< 0.17 B	< 0.056	< 0.082	< 0.06	< 0.0012	< 0.0012	< 0.0013	< 0.0016	< 0.0012
Ethylbenzene		< 0.0010	**0.048**	**1 J**	**0.52**	**0.041 J**	< 0.082	**0.024 J**	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
Isopropylbenzene		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
m&p-Xylenes		< 0.0010	**0.28**	**1.8 J**	**1**	**0.39**	**0.23**	**0.18**	< 0.00060	< 0.00058	< 0.00063	**0.00015 J**	< 0.00062
Methyl Acetate		< 0.0050 J	< 0.21	< 2.3	< 0.83	< 0.28	< 0.41	< 0.3	< 0.0030	< 0.0029	< 0.0031	< 0.0040	< 0.0031
Methyl N-Butyl Ketone (2-Hexanone)		< 0.0050	< 0.21	< 2.3	< 0.83	< 0.28	< 0.41	< 0.3	< 0.0030	< 0.0029	< 0.0031	< 0.0040	< 0.0031
Methylcyclohexane		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
Methyl-tert-butylether		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
o-Xylene		< 0.0010	**0.13**	**0.9 J**	**0.51**	**0.36**	**0.23**	**0.16**	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
Styrene (Monomer)		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
Tetrachloroethene		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	**0.00042 J**
Toluene		**0.00085 J**	**0.26**	**110 J**	**56 J**	**1.8**	**1.2**	**1.3**	**0.0007**	**0.00032 J**	**0.00020 J**	**0.002**	**0.00052 J**
trans-1,2-Dichloroethene		< 0.0010	**0.018 J**	**0.2 J**	**0.077 J**	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
trans-1,3-Dichloropropene		< 0.0010	< 0.043	< 0.46	< 0.17	< 0.056	< 0.082	< 0.06	< 0.00060	< 0.00058	< 0.00063	< 0.00080	< 0.00062
Trichloroethene		< 0.0010	**1.9**	**170 J**	**78 J**	**4.4**	**2.9**	**3.7**	< 0.00060	< 0.00058	< 0.00063	< 0.00080	**0.0099**
Vinyl chloride		< 0.0010	**0.02 J**	**0.42 J**	**0.24**	**0.027 J**	< 0.082	< 0.06	< 0.00060 J	< 0.00058 J	< 0.00063	< 0.00080	< 0.00062 J
Total VOCs [4]		**0.00085**	**3.8**	**300**	**144**	**8.9**	**6.0**	**7.2**	**0.038**	**0.11**	**0.02**	**0.047**	**0.036**

Footnotes and Abbreviations on last page.

Table 1
Concentrations of Constituents in Soil Samples
Operable Unit 3 (Former Grumman Settling Ponds)
Northrop Grumman
Bethpage, New York

Constituents	Boring ID: Sample ID: Sample Depth (ft bls): Sample Date:	nM-98-20 nM-98-20(48-50) 48-50 3/23/2021	nM-98-20 nM-98-20(50-52) 50-52 3/24/2021	nM-n3-20 nM-n3-20(38-40) 38-40 3/25/2021	nM-n3-20 nM-n3-20(40-42) 40-42 3/25/2021	nM-n3-20 nM-n3-20(42-44) 42-44 3/25/2021	nM-n3-20 nM-n3-20(44-46) 44-46 3/25/2021	nM-n3-20 REP032521ARH 44-46 3/25/2021	nM-n3-20 nM-n3-20(46-48) 46-48 3/25/2021	nM-n3-20 nM-n3-20(48-50) 48-50 3/25/2021	nM-n3-20 nM-n3-20(50-52) 50-52 3/25/2021	N-n5-20 N-n5-20(38-40) 38-40 3/31/2021	N-n5-20 N-n5-20(40-42) 40-42 3/31/2021
VOCs (mg/kg) [1, 2, 3]													
1,1,1-Trichloroethane		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
1,1,2,2-Tetrachloroethane		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
1,1,2-trichloro-1,2,2-trifluoroethane		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
1,1,2-Trichloroethane		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	**0.00035 J**	< 0.00084	< 0.0011
1,1-Dichloroethane		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	**0.0008**	< 0.00084	< 0.0011
1,1-Dichloroethene		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	**0.0025**	< 0.00084	< 0.0011
1,2,4-Trichlorobenzene		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
1,2-Dibromo-3-chloropropane		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
1,2-Dibromoethane		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
1,2-Dichlorobenzene		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
1,2-Dichloroethane		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
1,2-Dichloropropane		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	**0.0014**	< 0.00084	< 0.0011
1,3-Dichlorobenzene		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
1,4-Dichlorobenzene		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
2-Butanone (MEK)		< 0.28	< 0.0042	< 0.0045	**0.0072**	**0.0074**	**0.0035**	**0.0047**	< 0.0031	**0.0040 J**	< 0.0024	< 0.0042	< 0.0056
4-Methyl-2-Pentanone		< 0.28	< 0.0042	< 0.0045	< 0.0033	< 0.0034	< 0.0032	< 0.0023	< 0.0031	< 0.0047	< 0.0024	< 0.0042	< 0.0056
Acetone		< 0.28	**0.0091 J**	**0.009**	**0.17**	**0.075**	**0.037**	**0.092**	**0.015**	**0.081**	**0.02**	< 0.0050	**0.012**
Benzene		< 0.056	< 0.00083	< 0.00090	**0.00037 J**	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	**0.00055**	< 0.00084	< 0.0011
Bromodichloromethane		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
Bromoform		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
Bromomethane		< 0.056	< 0.0017	< 0.0018	< 0.0013	< 0.0014	< 0.0013	< 0.00093	< 0.0013	< 0.0019	< 0.00097	< 0.0017	< 0.0023
Carbon Disulfide		< 0.056	< 0.00083	< 0.00090	**0.00031 J**	**0.0041**	**0.0016**	**0.0029**	**0.00073**	**0.001**	**0.00021 J**	< 0.00084	< 0.0011
Carbon Tetrachloride		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
CFC-11		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
CFC-12		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
Chlorobenzene		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
Chlorodibromomethane		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
Chloroethane		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
Chloroform		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
Chloromethane		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
cis-1,2-Dichloroethene		**0.13**	< 0.00083	< 0.00090	< 0.00066	**0.00092**	**0.00033 J**	**0.00085**	**0.00042 J**	< 0.00094	**0.2**	< 0.00084	< 0.0011
cis-1,3-Dichloropropene		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
Cyclohexane		< 0.056 J	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	**0.00037 J**	**0.00030 J**	**0.00036 J**
Dichloromethane		< 0.056	< 0.0017	< 0.0018	< 0.0013	< 0.0014	**0.0011 J**	< 0.00093	< 0.0013	< 0.0019	< 0.00097	< 0.0017	< 0.0023
Ethylbenzene		< 0.056	< 0.00083	< 0.00090	< 0.00066	**0.00099**	**0.00086**	**0.00085**	**0.0011**	**0.00041 J**	**0.0047**	< 0.00084	< 0.0011
Isopropylbenzene		< 0.056	< 0.00083	< 0.00090	< 0.00066	**0.019**	**0.013**	**0.014**	**0.001**	**0.0021**	**0.00093**	< 0.00084	< 0.0011
m&p-Xylenes		< 0.056	< 0.00083	< 0.00090	< 0.00066	**0.0042**	**0.0036**	**0.0038**	**0.0012**	**0.0011**	**0.039**	< 0.00084	< 0.0011
Methyl Acetate		< 0.28	< 0.0042	< 0.0045	< 0.0033	< 0.0034	< 0.0032	< 0.0023	< 0.0031	< 0.0047	< 0.0024	< 0.0042	< 0.0056
Methyl N-Butyl Ketone (2-Hexanone)		< 0.28	< 0.0042	< 0.0045	< 0.0033	< 0.0034	< 0.0032	< 0.0023	< 0.0031	< 0.0047	< 0.0024	< 0.0042	< 0.0056
Methylcyclohexane		< 0.056 J	< 0.00083	< 0.00090	< 0.00066	**0.079**	< 0.00064	< 0.00047	< 0.00063	< 0.00094	**0.0025**	**0.0086**	**0.0099**
Methyl-tert-butylether		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
o-Xylene		< 0.056	< 0.00083	< 0.00090	< 0.00066	**0.0014**	**0.0011**	**0.0012**	**0.00025 J**	**0.00051 J**	**0.04**	< 0.00084	< 0.0011
Styrene (Monomer)		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
Tetrachloroethene		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	**0.0013**	< 0.00084	< 0.0011
Toluene		**0.041 J**	**0.00039 J**	**0.0014**	**0.00066**	**0.0014**	**0.0012**	**0.0008**	**0.00087**	**0.00086 J**	**0.0043**	**0.00040 J**	**0.00066 J**
trans-1,2-Dichloroethene		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	**0.0034**	< 0.00084	< 0.0011
trans-1,3-Dichloropropene		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	< 0.00048	< 0.00084	< 0.0011
Trichloroethene		**13**	**0.0033**	< 0.00090	**0.00068**	**0.0014**	**0.001**	**0.001**	**0.00061 J**	**0.00035 J**	**2.8 D**	**0.0022**	**0.003**
Vinyl chloride		< 0.056	< 0.00083	< 0.00090	< 0.00066	< 0.00068	< 0.00064	< 0.00047	< 0.00063	< 0.00094	**0.013**	**0.0052**	**0.0036**
Total VOCs [4]		**13**	**0.0128**	**0.010**	**0.18**	**0.195**	**0.064**	**0.122**	**0.021**	**0.091**	**3.1**	**0.0167**	**0.030**

Footnotes and Abbreviations on last page.

Table 1
Concentrations of Constituents in Soil Samples
Operable Unit 3 (Former Grumman Settling Ponds)
Northrop Grumman
Bethpage, New York

Constituents	Boring ID: Sample ID: Sample Depth (ft bls): Sample Date:	N-n5-20 N-n5-20(42-44) 42-44 3/31/2021	N-n5-20 N-n5-20(44-46) 44-46 3/31/2021	N-n5-20 REP033121PQ 44-46 3/31/2021	N-n5-20 N-n5-20(46-48) 46-48 3/31/2021	N-n5-20 N-n5-20(48-50) 48-50 3/31/2021	N-n5-20 N-n5-20(50-52) 50-52 3/31/2021	nN-n3-20 nN-n3-20(38-40) 38-40 3/29/2021	nN-n3-20 nN-n3-20(42-44) 42-44 3/29/2021	nN-n3-20 nN-n3-20(44-46) 44-46 3/29/2021	nN-n3-20 nN-n3-20(46-48) 46-48 3/29/2021	nN-n3-20 nN-n3-20(48-50) 48-50 3/29/2021	nN-n3-20 nN-n3-20(50-52) 50-52 3/29/2021
VOCs (mg/kg) [1, 2, 3]													
1,1,1-Trichloroethane		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
1,1,2,2-Tetrachloroethane		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
1,1,2-trichloro-1,2,2-trifluoroethane		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
1,1,2-Trichloroethane		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
1,1-Dichloroethane		< 0.074	< 0.11	< 0.056	< 0.058	**0.0016**	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	**0.023**	< 0.072
1,1-Dichloroethene		< 0.074	< 0.11	< 0.056	**0.027 J**	**0.0017**	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
1,2,4-Trichlorobenzene		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
1,2-Dibromo-3-chloropropane		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
1,2-Dibromoethane		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
1,2-Dichlorobenzene		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
1,2-Dichloroethane		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
1,2-Dichloropropane		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
1,3-Dichlorobenzene		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
1,4-Dichlorobenzene		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
2-Butanone (MEK)		< 0.37	< 0.56	< 0.28	< 0.29	< 0.0040	< 0.38	< 0.0046	< 0.0031	< 2.6	< 2.1	**0.025**	< 0.36
4-Methyl-2-Pentanone		< 0.37	< 0.56	< 0.28	< 0.29	< 0.0040	< 0.38	< 0.0046	< 0.0031	< 2.6	< 2.1	**0.012 J**	< 0.36
Acetone		< 0.37	< 0.56	< 0.28	< 0.29	**0.0065**	< 0.38	< 0.0056 J	< 0.0038 J	< 2.6	< 2.1	**0.0079 J**	< 0.36
Benzene		< 0.074	< 0.11	< 0.056	< 0.058	**0.00099**	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
Bromodichloromethane		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
Bromoform		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
Bromomethane		< 0.074	< 0.11	< 0.056	< 0.058	< 0.0016	< 0.075	< 0.0019	< 0.0013	< 0.51	< 0.41	< 0.0019	< 0.072
Carbon Disulfide		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	**0.00040 J**	< 0.072
Carbon Tetrachloride		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
CFC-11		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
CFC-12		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
Chlorobenzene		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
Chlorodibromomethane		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
Chloroethane		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093 J	< 0.00063 J	< 0.51	< 0.41	< 0.00097 J	< 0.072
Chloroform		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
Chloromethane		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
cis-1,2-Dichloroethene		< 0.074	**0.055 J**	**0.22**	**0.14**	**0.11**	**0.51**	< 0.00093	< 0.00063	**5.7**	**6.9**	< 0.00097	**0.69**
cis-1,3-Dichloropropene		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
Cyclohexane		**0.029 J**	**0.076 J**	< 0.056	< 0.058	**0.00036 J**	< 0.075	< 0.00093	< 0.00063	< 0.51 J	< 0.41 J	< 0.00097	< 0.072 J
Dichloromethane		< 0.074	< 0.11	< 0.056	< 0.058	< 0.0016	< 0.075	< 0.0034 B	< 0.0013	< 0.51	< 0.41	**0.051**	< 0.072
Ethylbenzene		< 0.074	< 0.11	< 0.056	< 0.058	**0.00073 J**	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
Isopropylbenzene		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
m&p-Xylenes		< 0.074	< 0.11	< 0.056	< 0.058	**0.00031 J**	< 0.075	**0.00028 J**	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
Methyl Acetate		< 0.37	< 0.56	< 0.28	< 0.29	< 0.0040	< 0.38	< 0.0046	< 0.0031	< 2.6	< 2.1	< 0.0049	< 0.36
Methyl N-Butyl Ketone (2-Hexanone)		< 0.37	< 0.56	< 0.28	< 0.29	< 0.0040	< 0.38	< 0.0046	< 0.0031	< 2.6	< 2.1	< 0.0049	< 0.36
Methylcyclohexane		**0.63**	**3.7**	**0.041 J**	**0.13**	**0.0048**	< 0.075	< 0.00093	< 0.00063	< 0.51 J	< 0.41 J	< 0.00097	< 0.072 J
Methyl-tert-butylether		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
o-Xylene		< 0.074	< 0.11	< 0.056	< 0.058	**0.00060 J**	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
Styrene (Monomer)		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
Tetrachloroethene		**0.036 J**	< 0.11	< 0.056	< 0.058	**0.00099**	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
Toluene		**0.18**	**1.1**	**0.06**	< 0.058	**0.019**	< 0.075	< 0.00093	< 0.00063	**2.7**	**1.7**	< 0.00097	< 0.072
trans-1,2-Dichloroethene		< 0.074	< 0.11	< 0.056	< 0.058	**0.00081**	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
trans-1,3-Dichloropropene		< 0.074	< 0.11	< 0.056	< 0.058	< 0.00081	< 0.075	< 0.00093	< 0.00063	< 0.51	< 0.41	< 0.00097	< 0.072
Trichloroethene		**0.65**	**0.26**	**0.76**	**2.4**	**0.37**	**3.7**	< 0.00093	**0.00032 J**	**170**	**180**	< 0.00097	**4.7**
Vinyl chloride		**0.63**	**0.12**	< 0.056	**0.19**	**0.0075**	< 0.075	< 0.00093 J	< 0.00063 J	< 0.51	< 0.41	**0.0024 J**	< 0.072
Total VOCs [4]		**2.16**	**5.3**	**1.08**	**2.9**	**0.53**	**4.2**	**0.00028**	**0.00032**	**178**	**189**	**0.122**	**5.4**

Footnotes and Abbreviations on last page.

Table 1
Concentrations of Constituents in Soil Samples
Operable Unit 3 (Former Grumman Settling Ponds)
Northrop Grumman
Bethpage, New York

Constituents	Boring ID: Sample ID: Sample Depth (ft bls): Sample Date:	nO-4-20 nO-4-20(38-40) 38-40 3/26/2021	nO-4-20 nO-4-20(42-44) 42-44 3/26/2021	nO-4-20 nO-4-20(44-46) 44-46 3/26/2021	nO-4-20 nO-4-20(46-48) 46-48 3/26/2021	nO-4-20 nO-4-20(48-50) 48-50 3/26/2021	nO-4-20 nO-4-20(50-52) 50-52 3/26/2021
VOCs (mg/kg) [1, 2, 3]							
1,1,1-Trichloroethane		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
1,1,2,2-Tetrachloroethane		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
1,1,2-trichloro-1,2,2-trifluoroethane		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
1,1,2-Trichloroethane		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
1,1-Dichloroethane		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
1,1-Dichloroethene		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
1,2,4-Trichlorobenzene		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
1,2-Dibromo-3-chloropropane		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
1,2-Dibromoethane		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
1,2-Dichlorobenzene		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
1,2-Dichloroethane		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
1,2-Dichloropropane		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
1,3-Dichlorobenzene		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
1,4-Dichlorobenzene		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
2-Butanone (MEK)		< 0.0039	< 0.0024	< 0.11	< 0.32	< 0.42	< 0.27
4-Methyl-2-Pentanone		< 0.0039	< 0.0024	< 0.11	< 0.32	< 0.42	< 0.27
Acetone		< 0.0046	< 0.0029	< 0.13	< 0.32	< 0.42	< 0.27
Benzene		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
Bromodichloromethane		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
Bromoform		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
Bromomethane		< 0.0015	< 0.00098	< 0.044	< 0.065	< 0.084	< 0.053
Carbon Disulfide		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
Carbon Tetrachloride		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
CFC-11		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
CFC-12		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
Chlorobenzene		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
Chlorodibromomethane		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
Chloroethane		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
Chloroform		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
Chloromethane		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
cis-1,2-Dichloroethene		< 0.00077	**0.0023**	**0.086**	**1**	**0.23**	**0.4**
cis-1,3-Dichloropropene		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
Cyclohexane		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
Dichloromethane		< 0.0015	< 0.00098	< 0.044	< 0.065	< 0.084	< 0.053
Ethylbenzene		< 0.00077	< 0.00049	< 0.022	**0.021 J**	< 0.084	< 0.053
Isopropylbenzene		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
m&p-Xylenes		< 0.00077	**0.001**	**0.015 J**	**0.18**	**0.028 J**	< 0.053
Methyl Acetate		< 0.0039	< 0.0024	< 0.11	< 0.32	< 0.42	< 0.27
Methyl N-Butyl Ketone (2-Hexanone)		< 0.0039	< 0.0024	< 0.11	< 0.32	< 0.42	< 0.27
Methylcyclohexane		< 0.00077	**0.0008**	**0.014 J**	< 0.065	< 0.084	< 0.053
Methyl-tert-butylether		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
o-Xylene		< 0.00077	**0.00034 J**	**0.0091 J**	**0.094**	< 0.084	< 0.053
Styrene (Monomer)		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
Tetrachloroethene		< 0.00077	**0.0031**	< 0.022	**0.041 J**	< 0.084	< 0.053
Toluene		< 0.00077	< 0.00049	**0.059**	**0.84**	**0.12**	< 0.053
trans-1,2-Dichloroethene		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
trans-1,3-Dichloropropene		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
Trichloroethene		< 0.00077	**0.037**	**1.6**	**16**	**2.9**	**0.74**
Vinyl chloride		< 0.00077	< 0.00049	< 0.022	< 0.065	< 0.084	< 0.053
Total VOCs [4]		**0**	**0.045**	**1.8**	**18**	**3.3**	**1.1**

Footnotes and Abbreviations on last page.

Table 1
Concentrations of Constituents in Soil Samples
Operable Unit 3 (Former Grumman Settling Ponds)
Northrop Grumman
Bethpage, New York

Notes and Abbreviations:

1.	Results validated following protocols specified in March 2006 RI/FS Work Plan (ARCADIS G&M, Inc. 2006).
2.	Results are reported on a dry weight basis.
3.	Samples were analyzed for VOCs using USEPA Method 8260C.
4.	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.
	The site-specific cleanup standard is 10 mg/kg.
ft bls	feet below land surface
Bold	Constituent detected
B	Constituent considered non-detect at the listed value due to associated blank contamination
D	Concentration is based on a diluted sample analysis
J	Constituent value is estimated
REP	Blind Duplicate Sample
mg/kg	milligrams per kilogram
VOCs	volatile organic compounds
<0.0010	Constituent not detected above its laboratory reporting limit.
CFC	Chlorofluorocarbon

Table 2
Summary of Proposed Soil Borings and Sampling Intervals,
Operable Unit 3 (Former Grumman Settling Ponds)
Bethpage, New York

Previous Nearby Boring(s) > 10 mg/kg	Soil Sampling Interval Elevation in Previous Nearby Boring(s) With TVOC Concentrations Above 10 mg/kg (ft NAVD 1988)	Proposed Soil Boring ID	Soil Sampling Interval Elevation (ft NAVD 1988)	Number of Samples (2-foot sample interval)
J-97-21	J-97-21 (73 to 69) (1)	I-n97-21	74.5 to 66.5	4
J-97-21, nM-98-20	J-97-21 (73 to 69) (1) nM-98-20 (76.78 to 74.78)	K-96-21 (2)	78.5 to 66.5	6
J-98-20, nM-98-20	J-98-20 (73.03 to 71.03) nM-98-20 (76.78 to 74.78)	nL-98-21 (2)	79 to 69	5
nL-n3-20, nK-98-20	nL-n3-20 (84.67 to 82.67; 80.67 to 74.67) nK-98-20 (84.11 to 80.11)	K-1-21 (2)	87 to 73	7
nN-n3-20	nN-n3-20 (80.01 to 76.01)	nP-n2-21	82 to 74	4
nO-4-20	nO-4-20 (77.62 to 75.62)	nP-3-21	79.5 to 73.5	3
nL-n3-20, nL-n4-20	nL-n3-20 (84.67 to 82.67; 80.67 to 74.67) nL-n4-20 (82.5 to 76.5)	nK-3-21	86.5 to 72.5	7
nL-n5-20	nL-n5-20 (80.1 to 78.1)	nK-7-21	82 to 76	3
N/A	N/A	nJ-92-21 (3)	87 to 69 (3)	9
N/A	N/A	nM-93-21 (3)	87 to 71 (3)	8
N/A	N/A	nS-93-21 (3)	87 to 71 (3)	8
N/A	N/A	T-n99-21 (3)	85 to 71 (3)	7
nM-98-20	nM-98-20 (76.78 to 74.78)	nM-95-21 (3)	87 to 71 (3)	8
J-98-20, nM-98-20	J-98-20 (73.03 to 71.03) nM-98-20 (76.78 to 74.78)	nM-98-21 (3)	87 to 71 (3)	8

Notes and Abbreviations

(1) Estimated elevation. Land surface elevation to be surveyed at these boring locations; others already surveyed.

(2) Angled soil boring location.

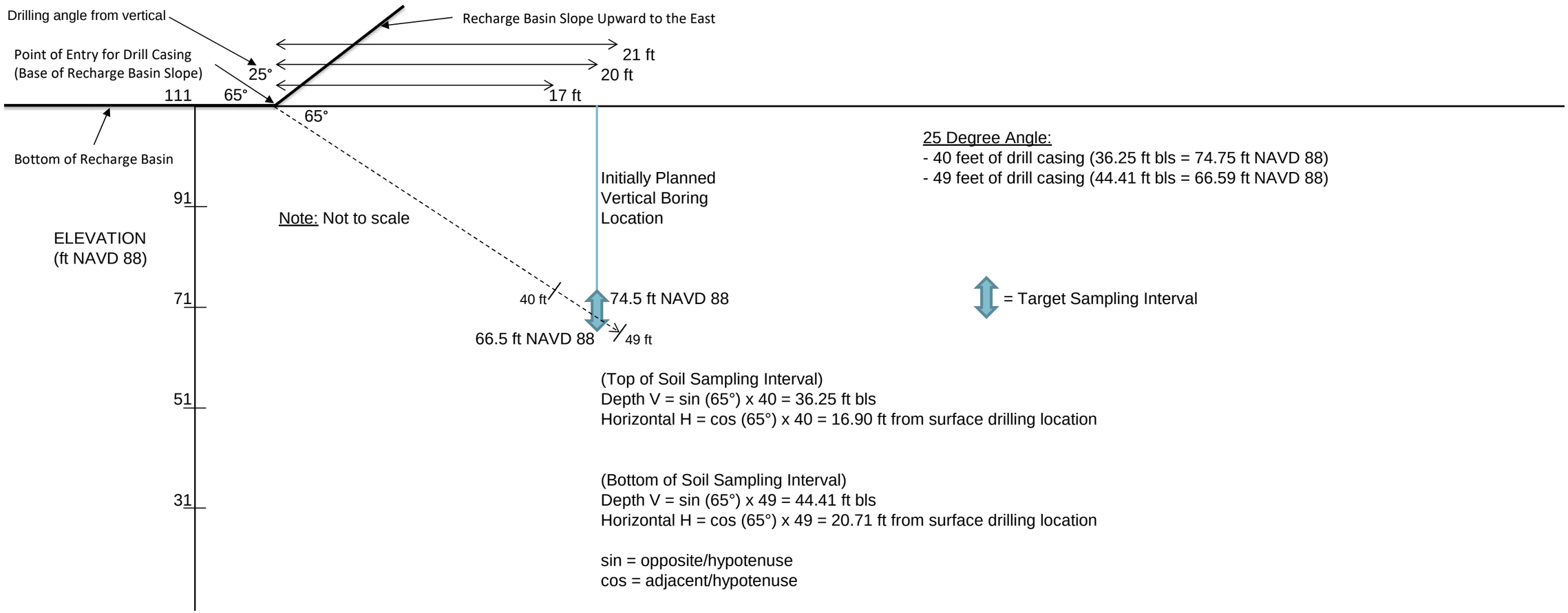
(3) The depths and soil sampling intervals of these soil borings will be similar to previous delineation soil borings (e.g., soil borings drilled in 2020 and 2021).

ft feet.

mg/kg milligrams per kilogram.

NAVD 88 North American Vertical Datum of 1988.

ATTACHMENT 1
EXAMPLE ANGLED DRILLING SCHEMATIC



25 Degree Angle:
- 40 feet of drill casing (36.25 ft bls = 74.75 ft NAVD 88)
- 49 feet of drill casing (44.41 ft bls = 66.59 ft NAVD 88)

(Top of Soil Sampling Interval)
Depth V = sin (65°) x 40 = 36.25 ft bls
Horizontal H = cos (65°) x 40 = 16.90 ft from surface drilling location

(Bottom of Soil Sampling Interval)
Depth V = sin (65°) x 49 = 44.41 ft bls
Horizontal H = cos (65°) x 49 = 20.71 ft from surface drilling location

sin = opposite/hypotenuse
cos = adjacent/hypotenuse

Note: Values provided are for illustrative purposes only. The actual drilling angle and position of the drill rig required to achieve the target depth at each angled soil boring will be determined after surveying activities and prior to drill rig mobilization.