ARCADIS Design & Consultancy for natural and built assets

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ENVIRONMENT

Subject:
Addendum to Pre-Design Sampling and Remedial Alternative Evaluation Report for PCBs and Metals in Soil, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

Date:
March 2, 2018

Contact:
David Stern

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Our ref:
NY001496.2315

Dear Mr. Pelton:

Arcadis of New York, Inc. (Arcadis) prepared this "Addendum to Pre-Design Sampling and Remedial Alternative Evaluation Report for PCBs and Metals in Soil" (Report Addendum) on behalf of Northrop Grumman Systems Corporation (Northrop Grumman) to provide the results of supplemental soil sampling at the Bethpage Community Park, Bethpage, NY (Park), and the adjoining McKay Field and former Plant 24 access roads (Access Road).

Introduction

The work discussed in this Report Addendum was performed in accordance with the protocols in the following New York State Department of Environmental Conservation (NYSDEC)-approved work plans:

- Pre-Design Sampling Work Plan for PCBs (EMAGIN 2014),
- Work Plan for Collection of Soil Samples for Soil Washing Treatability Study and Additional Delineation of PCBs (Arcadis 2016a), and
- Work Plan Addendum for Collection of PCBs/Metals Soil Samples (Arcadis 2017).

These work plans prescribed a dynamic approach to delineation of polychlorinated biphenyls (PCBs) and selected metals in soil that uses real-time analysis of soil sampling results to guide the installation of additional borings to complete the delineation of impacted soil. The soil sampling results provided herein supplement the results provided to NYSDEC in the Pre-Design Design and Remedial Alternative Evaluation for PCBs and Metals in Soil (Arcadis 2015).

The purpose of the work described in the above-referenced work plans was to complete the vertical and horizontal delineation of total PCBs and selected metals (i.e., cadmium, chromium and arsenic) in soil that exceed the Remedial Action Objectives (RAOs) in the Park ballfield, eastern portion of the Park, and Access Road, as described in the Operable Unit 3 (OU3) Record of Decision (ROD) (NYSDEC 2013). **Figures 1 and 2** depict the Park and Access Road (Site) location and features, respectively.

Supplemental Sampling Scope of Work

The sampling methodology conformed to the NYSDEC-approved work plans. Soil borings were field located using a handheld Global Positioning System (GPS) unit. Soil samples were collected using direct-push drilling equipment with Dual-Tube or Macro-Core ® samplers (depending on sample depth). Soil lithology was continuously logged and sample cores were screened with a photo-ionization detector. Selected soil samples were field-screened using Chlor-N-Soil® test kits to guide the delineation of PCBs. Soil samples were submitted to Pace Analytical of Melville, New York and analyzed for PCBs using USEPA Method 8082 and metals using USEPA Method 6010, as appropriate. Data validation was performed in conformance with the project Quality Assurance Project Plan (QAPP) (Arcadis 2016b).

The supplemental sampling field work was conducted in two phases, the first phase from October 31 to December 30, 2016 and the second phase from September 18 to October 27, 2017. The 2016 scope of work consisted of 142 soil borings to delineate PCBs in the Park and Access Road. The complete 2016 dataset of PCB soil data was entered into an Earth Volumetric Studio (EVS) model to evaluate whether delineation of PCBs had been completed. The EVS model results indicated that additional sampling was warranted to further delineate the PCBs.

The second phase of sampling consisted of additional soil borings in the ballfield and adjacent recharge basin area, Access Road, and eastern section of the Park. Field work began in September 2017, following lengthy negotiations with the Town for access to the Park property. The EVS model was regularly updated as soil data became available, and a total of 111 soil borings were advanced to complete the delineation effort. Following completion of sampling and updates to the EVS model, it was determined that the delineation of PCBs and metals was sufficient for the purposes of the remedial design.

Delineation Sampling Results

Sampling locations, depths, and survey coordinates are presented in **Tables 1** and **2**. Soil borings with samples analyzed for PCBs are shown on **Figures 3A** and **3B.** Soil borings with samples analyzed for metals are shown on **Figures 4A** and **4B.** Analytical results for PCBs and metals are summarized in **Tables 3** and **4**, respectively. Sample/Core Logs are provided in **Attachment A**. Analytical data Category B laboratory reports are provided in **Attachment B** and data usability reports are provided in **Attachment C**.

Please do not hesitate to contact us if you have any questions.

Sincerely,

Arcadis of New York, Inc.

David E. Stern, PG
Senior Hydrogeologist

Carlo San Giovanni, PG
Project Manager

Enclosures:

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1 Summary of Soil Borings - 2016
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3 Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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B Laboratory Data Reports
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Table 1
Summary of Soil Borings 2016
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Location ID	Sample ID	X-Coordinate	Y-Coordinate	Sample Intervals (ft. bls)	Analytical parameters
					PCBs
B-11	B-11-16	1126008.88	214766.71	0-2, 2-4, 4-6, 6-8, 8-10, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28, 28-30	X
B-12	B-12-16	1126006.45	214746.86	16-18, 18-20, 20-22, 22-24, 24-26, 26-28, 28-30	X
B-19	B-19-16	1125989.43	214607.9	0-2	X
C-11	C-11-16	1126028.73	214764.28	0-2	X
C-17	C-17-16	1126014.14	214645.17	0-2	X
D-16	D-16-16	1126036.43	214662.59	10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28, 28-30	X
E-10	E-10-16	1126070.86	214779.27	24-26, 26-28, 28-30, 30-32.5, 32.5-35	X
E-12	E-12-16	1126066	214739.57	0-2, 2-4, 4-6, 6-8, 8-10, 24-26, 26-28, 28-30	X
E-14	E-14-16	1126061.14	214699.87	20-22, 22-24, 24-26	X
E-16	E-16-16	1126056.28	214660.16	20-22, 22-24, 24-26, 26-28, 28-30, 30-32.5, 32.5-35	X
E-21	E-21-16	1126044.12	214560.9	10-12, 12-14, 14-16, 16-18, 18-20	X
E-26	E-26-16	1126031.97	214461.64	0-2	X
E-27	E-27-16	1126029.54	214441.79	0-2	X
E-9	E-9-16	1126073.29	214799.12	10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28, 28-30	X
F-10	F-10-16	1126090.72	214776.84	24-26, 26-28, 28-30	X
G-11	G-11-16	1126108.14	214754.56	24-26, 26-28, 28-30	X
G-22	G-22-16	1126081.39	214536.19	10-12, 12-14, 14-16, 16-18, 18-20	X
G-5	G-5-16	1126122.72	214873.67	2-4, 4-6	X
H-14	H-14-16	1126120.69	214692.57	0-2	X
H-15	H-15-16	1126118.26	214672.72	26-28, 28-30	X
H-17	H-17-16	1126113.4	214633.02	10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28, 28-30	X
H-21	H-21-16	1126103.68	214553.61	10-12, 12-14, 14-16, 16-18, 18-20	X
H-4	H-4-16	1126145.01	214891.09	2-4, 4-6, 6-8, 8-10	X
H-5	H-5-16	1126142.57	214871.24	2-4, 4-6, 6-8, 8-10	X
H-9	H-9-16	1126132.85	214791.83	10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28, 28-30	X
I-16	I-16-16	1126135.68	214650.44	0-2, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28, 28-30	X
I-5	I-5-16	1126162.43	214868.81	2-4, 4-6, 6-8, 8-10	X
J-14	J-14-16	1126160.4	214687.71	0-2, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28, 28-30	X
J-24	J-24-16	1126136.09	214489.19	0-2	X
J-9	J-9-16	1126172.55	214786.97	10-12, 12-14, 14-16, 16-18, 18-20	X
K-10	K-10-16	1126189.97	214764.69	10-12, 12-14, 14-16, 16-18, 18-20	X
K-19	K-19-16	1126168.09	214586.02	0-2	X
K-20	K-20-16	1126165.66	214566.17	10-12, 12-14, 14-16, 16-18, 18-20	X
L-12	L-12-16	1126204.96	214722.55	0-2, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-25	X
L-20	L-20-16	1126185.52	214563.74	16-18, 18-20	X
L-21	L-21-16	1126183.08	214543.89	10-12, 12-14, 14-16,16-18, 18-20	X
L-24	L-24-16	1126175.79	214484.33	0-2	X
M-17	M-17-16	1126212.66	214620.86	0-2	X
N-20	N-20-16	1126225.22	214558.88	10-12, 12-14, 14-16, 16-18, 18-20, 20-22.5, 22.5-25	X
O-12	O-12-16	1126264.52	214715.26	10-12, 12-14, 14-16, 16-18.5, 18.5-21	X
O-13	O-13-16	1126262.09	214695.41	2-4, 4-6, 6-8, 8-10	X
O-14	O-14-16	1126259.66	214675.55	2-4, 4-6, 6-8, 8-10	X
O-21	O-21-16	1126242.64	214536.59	0-2, 2-4, 4-6	X
P-26	P-26-16	1126250.34	214434.9	0-2	X
Q-13	Q-13-16	1126300.744	214691.2421	0-2	X
Q-16	Q-16-16	1126294.5	214630.99	2-4, 4-6, 6-8, 8-10	X
Q-19	Q-19-16	1126287.06	214569	0-2, 2-4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-16, 16-18, 18-20	X
R-22	R-22-16	1126299.76	214509.45	0-2, 2-4, 4-6, 6-8, 8-10	X
R-26	R-26-16	1126290.04	214430.04	0-2	X
S-10	S-10-16	1126348.79	214745.24	0-2	X
U-20	U-20-16	1126364.18	214541.86	2-4, 4-6, 6-8, 8-10	X
U-24	U-24-16	1126354.46	214462.45	0-2	X
X-18	X-18-16	1126428.6	214574.27	2-4, 4-6, 6-8, 8-10	X
Y-24	Y-24-16	1126433.86	214452.73	0-2	X
nAB-25	nAB-25-16	1126500.68	214437.36	2-4, 4-6, 6-8, 8-10	X
nAG-19	nAG-19-16	1126597.79	214528.22	2-4, 4-6, 6-8, 8-10	X
nAH-23	nAH-23-16	1126631.36	214464.33	10-12, 12-14, 14-16	X
nAI-23	nAI-23-16	1126645.9	214456.47	2-4, 4-6, 6-8, 8-10	X
AI-24	AI-24-16	1126632.38	214428.42	2-4, 4-6, 6-8, 8-10	X
AJ-26	AJ-26-16	1126647.37	214386.28	0-2	X
ZZA-13	ZZA-13-16	1125964.31	214731.87	10-12, 12-14, 14-16	X
ZZA-17	ZZA-17-16	1125954.59	214652.47	0-2	X
ZZA-23	ZZA-23-16	1125940	214533.35	2-4, 4-6, 6-8, 8-10	X
nI-7	nI-7-16	1126167.49	214827.885	2-4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-15	X
nG-9	nG-9-16	1126121.71	214783.12	2-4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-15	X
nJ-10	nJ-10-16	1126178.83	214755.975	2-4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-16, 16-18, 20-22, 22-24, 24-26	X
nG-12	nG-12-16	1126114.42	214723.565	2-4, 4-6, 5-6, 6-8, 8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28	X
I-9	I-9-16	1126152.7	214789.4	10-12, 12-14, 14-16, 16-18, 18-20	X
nE-8	nE-8-16	1126074.51	214809.05	0-2, 2-4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28, 28-30	X
D-9	D-9-16	1126053.44	214801.55	0-2, 2-4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28	X
nD-8	nD-8-16	1126054.655	214811.48	0-2, 2-4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28, 28-30	X
J-8	J-8-16	1126174.98	214806.82	10-12, 12-14, 14-16, 16-18, 18-20	X
K-9	K-9-16	1126192.41	214784.54	10-12, 12-14, 14-16, 16-18, 18-20	X
K-8	K-8-16	1126194.84	214804.39	10-12, 12-14, 14-16, 16-18, 18-20	X
nK-10	nK-10-16	1126199.97	214769.69	0-2, 2-4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-16, 16-18, 18-20	X
D-10	D-10-16	1126051.01	214781.7	24-26, 26-28, 28-30	X
D-11	D-11-16	1126048.58	214761.85	24-26, 26-28, 28-30	X
L-9	L-9-16	1126212.26	214782.11	10-12, 12-14, 14-16, 16-18, 18-20	X
L-10	L-10-16	1126209.83	214762.25	10-12, 12-14, 14-16, 16-18, 18-20	X
nH-8	nH-8-16	1126134.065	214801.755	0-2, 2-4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24	X
K-14	K-14-16	1126180.25	214685.28	10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26	X
J-16	J-16-16	1126155.54	214648.01	10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24	X
I-17	I-17-16	1126133.25	214630.59	10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24	X
E-15	E-15-16	1126058.71	214680.01	20-22, 22-24, 24-26, 26-28, 28-30	X
E-17	E-17-16	1126053.85	214640.31	20-22, 22-24, 24-26, 26-28, 28-30	X
N-14	N-14-16	1126239.81	214677.99	2-4, 4-6, 6-8, 8-10	X
P-14	P-14-16	1126279.51	214673.12	2-4, 4-6, 6-8, 8-10	X
P-15	P-15-16	1126277.08	214653.27	2-4, 4-6, 6-8, 8-10, 10-12.5	X
AJ-24	AJ-24-16	1126652.23	214425.99	0-2, 2-4, 4-6	X
AH-24	AH-24-16	1126612.53	214430.85	0-2, 2-4, 4-6	X

Table 1
Summary of Soil Borings 2016
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Location ID	Sample ID	X-Coordinate	Y-Coordinate	Sample Intervals (ft. bls)	Analytical parameters
					PCBs
nAI-25	nAI-25-16	1126631.165	214418.495	0-2, 2-4, 4-6	X
nF-12	nF-12-16	1126094.56	214725.995	2-4, 4-6, 6-8, 8-10, 10-12.5	X
nF-11	nF-11-16	1126096.995	214745.85	2-4, 4-6, 6-8, 8-10, 10-12.5	X
nG-11	nG-11-16	1126116.85	214743.42	2-4, 4-6, 6-8, 8-10	X
J-20	J-20-16	1126145.81	214568.6	10-12, 12-14	X
nI-20	nI-20-16	1126135.885	214569.815	4-6, 6-8, 8-10, 10-12, 12-14	X
nJ-20	nJ-20-16	1126144.595	214558.675	4-6, 6-8, 8-10, 10-12, 12-14	X
nL-12	nL-12-16	1126214.89	214721.335	10-12, 12-14, 14-16, 16-18	X
nL-13	nL-13-16	1126203.745	214712.625	10-12, 12-14, 14-16, 16-18	X
P-30	P-30-16	1126067.27	214825.77	6-8, 8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28	X
nC-7	nC-7-16	1126047.16	214832.55	6-8, 8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28	X
C-9	C-9-16	1126033.59	214803.99	6-8, 8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28, 28-30.5	X
L-14	L-14-16	1126200.1	214682.85	10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24	X
G3	G3-16	1126161.803	214758.4213	8-10, 10-12, 12-14, 14-16, 16-18, 18-20	X
nH-10	nH-10-16	1126139.13	214760.84	8-10, 10-12, 12-14, 14-16, 16-18, 18-20	X
nH-9	nH-9-16	1126141.56	214780.69	8-10, 10-12, 12-14, 14-16, 16-18, 18-20	X
nI-9	nI-9-16	1126161.41	214778.26	8-10, 10-12, 12-14, 14-16, 16-18, 18-20	X
nL-11	nL-11-16	1126216.105	214731.26	2-4, 4-6, 6-8	X
nL-10	nL-10-16	1126218.54	214751.11	2-4, 4-6, 6-8	X
nM-10	nM-10-16	1126238.39	214748.68	2-4, 4-6, 6-8	X
nO-11	nO-11-16	1126265.735	214725.185	8-10, 10-12, 12-14, 14-16, 16-18	X
nO-10	nO-10-16	1126278.09	214743.82	8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24	X
nN-9	nN-9-16	1126260.67	214766.1	8-10, 10-12, 12-14, 14-16, 16-18	X
nO-9	nO-9-16	1126280.52	214763.67	8-10, 10-12, 12-14, 14-16, 16-18	X
D-12	D-12-16	1126046.15	214742	24-26, 26-28	X
nD-7	nD-7-16	1126068.235	214840.045	6-8, 8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28	X
nF-9	nF-9-16	1126103.075	214795.475	10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28	X
F-12	F-12-16	1126085.85	214737.14	24-26, 26-28	X
F-13	F-13-16	1126083.42	214717.29	24-26, 26-28	X
E-13	E-13-16	1126063.57	214719.72	24-26, 26-28	X
C-12	C-12-16	1126026.3	214744.43	18-20, 20-22, 22-24	X
D-13	D-13-16	1126043.72	214722.15	20-22, 22-24, 24-26	X
D-15	D-15-16	1126038.86	214682.44	10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28, 28-30	X
F-17	F-17-16	1126073.7	214637.88	20-22, 22-24	X
N-19	N-19-16	1126227.65	214578.73	6-8, 8-10	X
nN-18	nN-18-16	1126238.79	214587.44	0-2, 2-4, 4-6, 6-8, 8-10	X
K-13	K-13-16	1126182.68	214705.13	0-2, 2-4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26	X
nG-19	nG-19-16	1126097.4	214584.6	10-12, 12-14, 14-16, 16-18, 18-20	X
G-20	G-20-16	1126086.26	214575.89	10-12, 12-14, 14-16, 16-18, 18-20	X
C-7	C-7-16	1126038.45	214843.69	0-2, 2-4, 4-6	X
C-8	C-8-16	1126036.02	214823.84	6-8, 8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28	X
nP-9	nP-9-16	1126290.445	214762.455	8-10, 10-12, 12-14, 14-16, 16-18, 18-20	X
nP-10	nP-10-16	1126288.015	214742.605	8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24	X
nO-n11	nO-n11-16	1126276.875	214733.895	8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24	X
nP-n10	nP-n10-16	1126299.155	214751.315	8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24	X
nN-10	nN-10-16	1126258.24	214746.25	8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24	X
nO-n9	nO-n9-16	1126281.735	214773.595	8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24	X

Table 2
Summary of Soil Borings 2017
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Location ID	Sample ID	X-Coordinate	Y-Coordinate	Sample Intervals (ft.bls)	Analytical Parameters			
					PCBs	Cadmium	Chromium	Arsenic
A-11	A-11-17	1125989.03	214769.14	0-2, 2-4, 4-6, 6-8, 8-10	X	X	X	X
A-20	A-20-17	1125967.15	214590.48	0-2	X	X	X	X
A-4	A-4-17	1126006.04	214908.11	0-2, 2-4, 4-6, 6-8, 8-10	X	X	X	X
AH-22	AH-22-17	1126619.121	214464.5187	0-2, 2-4, 4-6	X			
AJ.5-21	AJ.5-21-17	1126667	214486	0-2	X			
AJ-17	AJ-17-17	1126669.25	214564.95	0-2	X	X	X	X
AK-19	AK-19-17	1126684.24	214522.81	0-2	X	X	X	X
AM-24	AM-24-17	1126711.79	214418.69	2-4, 4-6, 6-8, 8-10	X			
AQ-22	AQ-22-17	1126797.546	214443.6247	0-2	X			
AQ-24	AQ-24-17	1126791.19	214408.97	2-4, 4-6, 6-8, 8-10	X			
AT-26	AT-26-17	1126845.89	214361.97	0-2	X		X	
AU-25	AU-25-17	1126868.17	214379.39	0-2	X		X	
AX-26	AX-26-17	1126925.29	214352.25	0-2	X		X	
AX-4	AX-4-17	1126978.78	214788.99	0-2	X	X	X	X
AZ-22	AZ-22-17	1126979.592	214429.7535	0-2	X			
B-13	B-13-17	1126004.02	214727.01	0-2, 2-4, 4-6, 6-8, 8-10, 12-14, 14-16, 16-18, 18-20, 22-24, 24-26, 26-28, 28-30	X			
B-17	B-17-17	1125994.29	214647.6	0-2, 2-4, 4-6, 6-8, 8-10	X	X	X	X
B-20	B-20-17	1125987	214588.05	0-2	X	X	X	X
B-23	B-23-17	1125979.71	214528.49	0-2	X		X	
B-25	B-25-17	1125974.84	214488.79	2-4, 4-6, 6-8, 8-10	X			
B-9	B-9-17	1126013.74	214806.42	0-2, 2-4, 4-6, 6-8, 8-10	X	X	X	X
BB-22	BB-22-17	1127009.708	214423.1492	0-2	X			
BE-21	BE-21-17	1127076.41	214434.49	0-2, 2-4, 4-6, 6-8, 8-10	X	X	X	X
C-12	C-12-17	1126026.456	214745.7216	0-2	X			
C-13	C-13-17	1126023.87	214724.58	12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28	X			
C-15	C-15-17	1126019.01	214684.88	10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26	X			
C-19	C-19-17	1126009.28	214605.47	0-2, 2-4, 4-6, 6-8, 8-10	X	X	X	X
C-2	C-2-17	1126050.61	214942.95	0-2	X	X	X	X
C-21	C-21-17	1126004.42	214565.77	0-2	X	X	X	X
C-3.5	C-3.5-17	1126047.838	214911.6771	0-2, 2-4, 4-6, 6-8, 8-10	X			
D-22	D-22-17	1126021.84	214543.48	0-2	X	X	X	X
D-7	D-7-17	1126058.31	214841.26	0-2, 2-4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-16	X			
E-2	E-2-17	1126090.31	214938.09	0-2	X	X	X	X
E-25	E-25-17	1126034.4	214481.5	0-2	X		X	
E-7	E-7-17	1126078.16	214838.83	0-2, 2-4, 4-6, 6-8, 8-10	X			
F.5-12.5	F.5-12.5-17	1126093.505	214727.6443	0-2	X			
F.5-2	F.5-2-17	1126123	214935	0-2	X			
F-16	F-16-17	1126076.13	214657.73	20-22, 22-24, 24-26, 26-28	X			
F-18.5	F-18.5-17	1126072.093	214603.8347	2-4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24	X			
F-21	F-21-17	1126063.97	214558.47	0-2, 2-4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-16, 16-18, 18-20	X			
F-22	F-22-17	1126061.54	214538.62	0-2, 2-4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-16, 16-18, 18-20	X			
F-26	F-26-17	1126051.82	214459.21	0-2	X		X	
G.5-11	G.5-11-17	1126122.1	214755.5816	0-2	X			
G-25	G-25-17	1126074.1	214476.63	0-2	X		X	
H.5-9	H.5-9-17	1126144.778	214783.8477	0-2	X			
H-17	H-17-17	1126121	214630	0-2, 2-4, 4-6, 6-8, 8-10	X			
H-20	H-20-17	1126104.132	214576.2217	2-4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24	X			
H-22	H-22-17	1126101.25	214533.76	0-2	X	X	X	X
H-23	H-23-17	1126098.82	214513.91	0-2	X		X	
H-26	H-26-17	1126091.52	214454.35	0-2	X		X	
H-3	H-3-17	1126147.44	214910.94	0-2, 2-4, 4-6, 6-8, 8-10	X	X	X	X
I-15	I-15-17	1126138	214670	0-2, 2-4, 4-6, 6-8, 8-10	X			
I-2	I-2-17	1126169.72	214928.36	0-2	X	X	X	X
I-21	I-21-17	1126123.53	214551.18	0-2, 2-4, 4-6, 6-8, 8-10, 10-12, 12-14	X			
I-25	I-25-17	1126113.81	214471.77	0-2	X		X	
I-26	I-26-17	1126111.37	214451.92	2-4, 4-6, 6-8, 8-10	X			
J-1.5	J-1.5-17	1126191.457	214933.1608	0-2	X			
J-15	J-15-17	1126158	214667	0-2, 2-4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-16, 16-18, 18-20	X			
J-22	J-22-17	1126140.95	214528.9	0-2, 2-4, 4-6, 6-8, 8-10, 10-12, 12-14	X			

Table 2
Summary of Soil Borings 2017
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Location ID	Sample ID	X-Coordinate	Y-Coordinate	Sample Intervals (ft.bls)	Analytical Parameters			
					PCBs	Cadmium	Chromium	Arsenic
J-6	J-6-17	1126175.5	214844.1097	0-2, 2-4, 4-6, 6-8, 8-10, 10-12	X			
K.5-4	K.5-4-17	1126215.954	214883.2171	0-2, 2-4, 4-6, 6-8, 8-10	X			
K.5-5	K.5-5-17	1126216.189	214862.5398	2-4, 4-6, 6-8, 8-10	X			
K.5-6.5	K.5-6.5-17	1126204.869	214832.6776	2-4, 4-6, 6-8, 8-10	X			
K-13	K-13-17	1126182.68	214705.13	20-22, 22-24, 24-26	X			
K-17	K-17-17	1126172.663	214624.7853	2-4, 4-6, 6-8	X			
K-2	K-2-17	1126208.713	214921.6573	0-2	X			
K-22	K-22-17	1126160.8	214526.47	0-2	X	X	X	X
K-23	K-23-17	1126158.37	214506.61	0-2	X		X	
L-17	L-17-17	1126193.87	214621.6	4-6, 6-8, 8-10, 10-12	X			
L-25	L-25-17	1126173.36	214464.48	0-2	X		X	
M.5-21	M.5-21-17	1126213	214538	0-2	X			
M.5-9	M.5-9-17	1126240.094	214773.6588	0-2	X			
N-10	N-10-17	1126249.53	214757.39	22-24, 24-26, 26-28, 28-30, 30-32, 32-34, 35	X			
N-9	N-9-17	1126260.13	214779.4	20-22, 22-24, 24-26, 26-28, 28-30	X			
nD-7	nD-7-17	1126068.235	214840.045	0-2, 2-4, 4-6	X			
nD-n6	nD-n6-17	1126069.45	214849.97	0-2, 2-4, 4-6, 6-8, 8-10	X			
nE-16	nE-16-17	1126066.205	214658.945	8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24	X			
nE-n6	nE-n6-17	1126084	214849	0-2, 2-4, 4-6, 6-8, 8-10, 10-12	X			
nF-16	nF-16-17	1126086.055	214656.515	8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28	X			
nF-17	nF-17-17	1126074.915	214647.805	8-10, 10-12, 12-14, 14-16	X			
nN-11	nN-11-17	1126255.81	214726.4	0-2, 2-4, 4-6, 6-8, 8-10, 10-12	X			
nN-9	nN-9-17	1126260.67	214766.1	18-20, 20-22, 22-24, 24-26, 26-28, 28-30	X			
nN-9.5	nN-9.5-17	1126260.67	214776.1	0-2, 2-4, 4-6, 6-8, 8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28, 28-30	X			
nO-8.5	nO-8.5-17	1126288.92	214783.05	10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24, 24-26, 26-28, 28-30	X			
nP-9	nP-9-17	1126290.445	214762.455	20-22, 22-24, 24-26, 26-28, 28-30	X			
nP-n9	nP-n9-17	1126281.735	214773.595	8-10, 10-12, 12-14, 14-16, 16-18, 18-20, 20-22, 22-24	X			
O.5-18	O.5-18-17	1126260	214594	2-4, 4-6, 6-8, 8-10	X			
O-17	O-17-17	1126252.36	214616	0-2, 2-4, 4-6, 6-8, 8-10	X	X	X	X
O-6.5	O-6.5-17	1126272.733	214824.5211	2-4, 4-6, 6-8, 8-10	X			
P.5-20.5	P.5-20.5-17	1126275.518	214538.5953	2-4, 4-6	X			
P-13	P-13-17	1126281.94	214692.98	0-2	X	X	X	X
P-22	P-22-17	1126260.06	214514.31	0-2, 2-4, 4-6, 6-8, 8-10	X	X	X	X
Q-10	Q-10-17	1126306.527	214751.6051	8-10	X			
Q-14	Q-14-17	1126299.36	214670.69	0-2, 2-4, 4-6, 6-8, 8-10	X	X	X	X
Q-18	Q-18-17	1126295	214593	2-4, 4-6, 6-8, 8-10	X			
Q-6.5	Q-6.5-17	1126320.788	214819.1254	2-4, 4-6, 6-8, 8-10	X			
R.5-14.5	R.5-14.5-17	1126324.831	214657.3238	2-4, 4-6, 6-8, 8-10	X			
R.5-16	R.5-16-17	1126323.144	214629.8397	2-4, 4-6, 6-8, 8-10	X			
R.5-19.5	R.5-19.5-17	1126318.515	214559.391	4-6	X			
R-11	R-11-17	1126326.5	214727.82	0-2	X	X	X	X
R-13	R-13-17	1126321.64	214688.11	0-2	X	X	X	X
R-15	R-15-17	1126316.78	214648.41	0-2, 2-4, 4-6, 6-8, 8-10	X	X	X	X
R-17	R-17-17	1126311.92	214608.71	0-2, 2-4, 4-6, 6-8, 8-10	X	X	X	X
R-21	R-21-17	1126302.19	214529.3	0-2, 2-4, 4-6, 6-8, 8-10	X	X	X	X
R-24	R-24-17	1126192.41	214784.54	0-2			X	
S-12	S-12-17	1126343.93	214705.53	0-2	X	X	X	X
S-14	S-14-17	1126339.06	214665.83	0-2	X	X	X	X
S-16	S-16-17	1126334.2	214626.13	0-2	X	X	X	X
Z-24	Z-24-17	1126453.71	214450.3	2-4, 4-6, 6-8, 8-10	X			
ZZA-22	ZZA-22-17	1125942.43	214553.21	0-2	X		X	
ZZA-26	ZZA-26-17	1125932.71	214473.8	0-2	X		X	

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	A-11-17 0 9/29/2017 A-11-17 (0-2)	A-11-17 2 9/29/2017 A-11-17 (2-4)	A-11-17 4 9/29/2017 A-11-17 (4-6)	A-11-17 6 9/29/2017 A-11-17 (6-8)	A-11-17 8 9/29/2017 A-11-17 (8-10)	A-20-17 0 9/29/2017 A-20-17 (0-2)	A-4-17 0 9/28/2017 A-4-17 (0-2)	A-4-17 2 9/28/2017 A-4-17 (2-4)	A-4-17 4 9/28/2017 A-4-17 (4-6)	A-4-17 6 9/28/2017 A-4-17 (6-8)	A-4-17 8 9/28/2017 A-4-17 (8-10)	AH-22-17 0 10/27/2017 AH-22-17 (0-2)	AH-22-17 2 10/27/2017 AH-22-17 (2-4)	AH-22-17 4 10/27/2017 AH-22-17 (4-6)
	CAS														
Aroclor 1016	12674-11-2	< 0.0674	< 0.697	< 0.687	< 0.351	< 0.0707	-- R	< 0.707 M1R1	< 0.35	< 1.39	< 1.36	< 0.0668	< 0.0741	< 0.0692	< 1.41
Aroclor 1221	11104-28-2	< 0.137	< 1.42	< 1.4	< 0.712	< 0.144	-- R	< 1.44	< 0.711	< 2.82	< 2.76	< 0.136	< 0.15	< 0.141	< 2.87
Aroclor 1232	11141-16-5	< 0.0674	< 0.697	< 0.687	< 0.351	< 0.0707	-- R	< 0.707	< 0.35	< 1.39	< 1.36	< 0.0668	< 0.0741	< 0.0692	< 1.41
Aroclor 1242	53469-21-9	**0.187**	**5.39**	**6.45**	**2.42**	**0.249**	**0.0737 J**	**4.1**	**2.98**	**8.31**	**5.25**	< 0.0668	**0.683**	**0.534**	**13.2**
Aroclor 1248	12672-29-6	< 0.0674	< 0.697	< 0.687	< 0.351	< 0.0707	-- R	< 0.707	< 0.35	< 1.39	< 1.36	< 0.0668	< 0.0741	< 0.0692	< 1.41
Aroclor 1254	11097-69-1	< 0.0674	< 0.697	< 0.687	< 0.351	< 0.0707	-- R	< 0.707	< 0.35	< 1.39	< 1.36	< 0.0668	**0.408**	**0.441**	**5.26**
Aroclor 1260	11096-82-5	< 0.0674	< 0.697	< 0.687	< 0.351	< 0.0707	-- R	< 0.707 M1	< 0.35	< 1.39	< 1.36	< 0.0668	< 0.0741	< 0.0692	< 1.41
Sum of Detections		**0.187**	**5.39**	**6.45**	**2.42**	**0.249**	**0.0737**	**4.1**	**2.98**	**8.31**	**5.25**	0	**1.091**	**0.975**	**18.46**

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Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	AH-24-16 0 11/30/2016 AH-24-16 (0-2)	AH-24-16 2 11/30/2016 AH-24-16 (2-4)	AH-24-16 4 11/30/2016 AH-24-16 (4-6)	AI-24-16 2 11/16/2016 AI-24-16 (2-4)	AI-24-16 4 11/16/2016 AI-24-16 (4-6)	AI-24-16 6 11/16/2016 AI-24-16 (6-8)	AI-24-16 8 11/16/2016 AI-24-16 (8-10)	AJ.5-21-17 0 10/27/2017 AJ.5-21-17 (0-2)	AJ-17-17 0 9/27/2017 AJ-17-17 (0-2)	AJ-24-16 0 11/30/2016 AJ-24-16 (0-2)	AJ-24-16 2 11/30/2016 AJ-24-16 (2-4)	AJ-24-16 4 11/30/2016 AJ-24-16 (4-6)	AJ-26-16 0 11/16/2016 AJ-26-16 (0-2)
	CAS													
Aroclor 1016	12674-11-2	< 0.321	< 0.108	< 0.106	< 11.2	< 5.01	< 0.1	< 0.1	< 0.368	< 0.0693	< 0.328	< 0.118	< 0.117	< 0.108
Aroclor 1221	11104-28-2	< 0.652	< 0.218	< 0.215	< 22.8	< 10.2	< 0.204	< 0.204	< 0.746	< 0.141	< 0.665	< 0.241	< 0.237	< 0.219
Aroclor 1232	11141-16-5	< 0.321	< 0.108	< 0.106	< 11.2	< 5.01	< 0.1	< 0.1	< 0.368	< 0.0693	< 0.328	< 0.118	< 0.117	< 0.108
Aroclor 1242	53469-21-9	**2.32**	< 0.108	**0.519**	**159**	**36.9**	**0.272**	**0.11**	**1.41**	**0.196 J**	**2.83**	**0.445**	**0.432**	**1.06**
Aroclor 1248	12672-29-6	< 0.321	< 0.108	< 0.106	< 11.2	< 5.01	< 0.1	< 0.1	< 0.368	< 0.0693	< 0.328	< 0.118	< 0.117	< 0.108
Aroclor 1254	11097-69-1	< 0.321	< 0.108	< 0.106	< 11.2	< 5.01	< 0.1	< 0.1	**0.781**	**0.254 J**	< 0.328	< 0.118	< 0.117	< 0.108
Aroclor 1260	11096-82-5	< 0.321	< 0.108	< 0.106	< 11.2	< 5.01	< 0.1	< 0.1	< 0.368	< 0.0693	< 0.328	< 0.118	< 0.117	< 0.108
Sum of Detections		**2.32**	0	**0.519**	**159**	**36.9**	**0.272**	**0.11**	**2.191**	**0.45**	**2.83**	**0.445**	**0.432**	**1.06**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	AK-19-17 0 9/27/2017 AK-19-17 (0-2)	AM-24-17 2 10/2/2017 AM-24-17 (2-4)	AM-24-17 4 10/2/2017 AM-24-17 (4-6)	AM-24-17 6 10/2/2017 AM-24-17 (6-8)	AM-24-17 8 10/2/2017 AM-24-17 (8-10)	AQ-22-17 0 10/27/2017 AQ-22-17 (0-2)	AQ-24-17 2 10/2/2017 AQ-24-17 (2-4)	AQ-24-17 4 10/2/2017 AQ-24-17 (4-6)	AQ-24-17 6 10/2/2017 AQ-24-17 (6-8)	AQ-24-17 8 10/2/2017 AQ-24-17 (8-10)	AT-26-17 0 10/3/2017 AT-26-17 (0-2)	AU-25-17 0 10/3/2017 AU-25-17 (0-2)	AX-26-17 0 10/3/2017 AX-26-17 (0-2)
	CAS													
Aroclor 1016	12674-11-2	< 0.0675	< 7.26	< 0.673	< 0.0666	< 0.0668	< 0.0697	< 1.46	< 0.357	< 0.0672	< 0.0667	< 0.0687	< 0.0698	< 0.0704
Aroclor 1221	11104-28-2	< 0.137	< 14.7	< 1.37	< 0.135	< 0.136	< 0.142	< 2.96	< 0.725	< 0.136	< 0.135	< 0.139	< 0.142	< 0.143
Aroclor 1232	11141-16-5	< 0.0675	< 7.26	< 0.673	< 0.0666	< 0.0668	< 0.0697	< 1.46	< 0.357	< 0.0672	< 0.0667	< 0.0687	< 0.0698	< 0.0704
Aroclor 1242	53469-21-9	< 0.0675	**61.9**	**3.92**	< 0.0666	< 0.0668	**0.0723**	**7.63**	**2.62**	**0.122**	< 0.0667	< 0.0687	**0.939**	< 0.0704
Aroclor 1248	12672-29-6	< 0.0675	< 7.26	< 0.673	< 0.0666	< 0.0668	< 0.0697	< 1.46	< 0.357	< 0.0672	< 0.0667	< 0.0687	< 0.0698	< 0.0704
Aroclor 1254	11097-69-1	**0.195**	< 7.26	< 0.673	< 0.0666	< 0.0668	**0.147 J**	< 1.46	< 0.357	**0.162**	< 0.0667	< 0.0687	**1.02**	< 0.0704
Aroclor 1260	11096-82-5	< 0.0675	< 7.26	< 0.673	< 0.0666	< 0.0668	< 0.0697	< 1.46	< 0.357	< 0.0672	< 0.0667	< 0.0687	< 0.0698	< 0.0704
Sum of Detections		**0.195**	**61.9**	**3.92**	0	0	**0.2193**	**7.63**	**2.62**	**0.284**	0	0	**1.959**	0

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	AX-4-17 0 9/27/2017 AX-4-17 (0-2)	AZ-22-17 0 10/27/2017 AZ-22-17 (0-2)	B-11-16 0 11/3/2016 B-11-16 (0-2)	B-11-16 2 11/3/2016 B-11-16 (2-4)	B-11-16 4 11/3/2016 B-11-16 (4-6)	B-11-16 6 11/3/2016 B-11-16 (6-8)	B-11-16 8 11/3/2016 B-11-16 (8-10)	B-11-16 14 11/3/2016 B-11-16 (14-16)	B-11-16 16 11/3/2016 B-11-16 (16-18)	B-11-16 18 11/3/2016 B-11-16 (18-20)	B-11-16 20 11/3/2016 B-11-16 (20-22)	B-11-16 22 11/3/2016 B-11-16 (22-24)	B-11-16 24 11/3/2016 B-11-16 (24-26)
	CAS													
Aroclor 1016	12674-11-2	< 0.0676	< 0.0693	< 0.272	< 0.265	< 5.29	< 0.269	< 5.4	< 5.45	< 1.08	< 5.83	< 5.32	< 0.102	< 0.102
Aroclor 1221	11104-28-2	< 0.137	< 0.141	< 0.552	< 0.538	< 10.7	< 0.546	< 11	< 11.1	< 2.19	< 11.8	< 10.8	< 0.207	< 0.207
Aroclor 1232	11141-16-5	< 0.0676	< 0.0693	< 0.272	< 0.265	< 5.29	< 0.269	< 5.4	< 5.45	< 1.08	< 5.83	< 5.32	< 0.102	< 0.102
Aroclor 1242	53469-21-9	< 0.0676	< 0.0693	**0.66**	**1.38**	**18.6**	**0.294**	**25.5**	**23.5**	**2.5**	**8.54**	**6.23**	**0.225**	**0.161 J**
Aroclor 1248	12672-29-6	< 0.0676	< 0.0693	< 0.272	< 0.265	< 5.29	< 0.269	< 5.4	< 5.45	< 1.08	< 5.83	< 5.32	< 0.102	< 0.102
Aroclor 1254	11097-69-1	**0.122 J**	< 0.0693	< 0.272	< 0.265	< 5.29	< 0.269	< 5.4	< 5.45	< 1.08	< 5.83	< 5.32	< 0.102	< 0.102
Aroclor 1260	11096-82-5	< 0.0676	< 0.0693	< 0.272	< 0.265	< 5.29	**0.543 J**	< 5.4	< 5.45	< 1.08	< 5.83	< 5.32	< 0.102	< 0.102
Sum of Detections		**0.122**	0	**0.66**	**1.38**	**18.6**	**0.837**	**25.5**	**23.5**	**2.5**	**8.54**	**6.23**	**0.225**	**0.161**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	B-11-16 26 11/3/2016 B-11-16 (26-28)	B-11-16 28 11/3/2016 B-11-16 (28-30)	B-12-16 16 10/31/2016 REP (103116)	B-12-16 16 11/3/2016 REP (110316)-A	B-12-16 16 11/3/2016 B-12-16 (16-18)	B-12-16 18 11/3/2016 B-12-16 (18-20)	B-12-16 20 11/3/2016 B-12-16 (20-22)	B-12-16 22 11/3/2016 B-12-16 (22-24)	B-12-16 24 11/3/2016 B-12-16 (24-26)	B-12-16 26 11/3/2016 B-12-16 (26-28)	B-12-16 28 11/3/2016 B-12-16 (28-30)	B-13-17 0 10/5/2017 B-13-17 (0-2)	B-13-17 2 10/5/2017 B-13-17 (2-4)
	CAS													
Aroclor 1016	12674-11-2	< 1.03	< 0.101	< 0.207	< 0.258	< 0.103	< 0.104 J	< 5.55	< 0.52	< 0.256	< 0.545	< 0.103	< 0.0813	< 0.339
Aroclor 1221	11104-28-2	< 2.1	< 0.206	< 0.421	< 0.523	< 0.21	< 0.212 J	< 11.3	< 1.06	< 0.519	< 1.11	< 0.209	< 0.165	< 0.689
Aroclor 1232	11141-16-5	< 1.03	< 0.101	< 0.207	< 0.258	< 0.103	< 0.104 J	< 5.55	< 0.52	< 0.256	< 0.545	< 0.103	< 0.0813	< 0.339
Aroclor 1242	53469-21-9	**5.78 J**	**0.116**	< 0.207	**0.406**	**0.181**	**0.254**	**9.75**	**0.847**	**0.658**	**0.981**	< 0.103	**0.403**	**2.95**
Aroclor 1248	12672-29-6	< 1.03	< 0.101	< 0.207	< 0.258	< 0.103	< 0.104	< 5.55	< 0.52	< 0.256	< 0.545	< 0.103	< 0.0813	< 0.339
Aroclor 1254	11097-69-1	< 1.03	< 0.101	< 0.207	< 0.258 J	**1.06 J**	< 0.104	< 5.55	< 0.52	< 0.256	< 0.545	< 0.103	< 0.0813	< 0.339
Aroclor 1260	11096-82-5	< 1.03	< 0.101	< 0.207	< 0.258	**0.243 J**	< 0.104	< 5.55	< 0.52	< 0.256	< 0.545	< 0.103	< 0.0813	< 0.339
Sum of Detections		**5.78**	**0.116**	0	**0.406**	**1.484**	**0.254**	**9.75**	**0.847**	**0.658**	**0.981**	0	**0.403**	**2.95**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	B-13-17 4 10/5/2017 B-13-17 (4-6)	B-13-17 6 10/5/2017 B-13-17 (6-8)	B-13-17 8 10/5/2017 B-13-17 (8-10)	B-13-17 12 10/5/2017 B-13-17 (12-14)	B-13-17 14 10/5/2017 B-13-17 (14-16)	B-13-17 16 10/5/2017 B-13-17 (16-18)	B-13-17 18 10/5/2017 B-13-17 (18-20)	B-13-17 20 10/5/2017 B-13-17 (20-22)	B-13-17 22 10/5/2017 B-13-17 (22-24)	B-13-17 24 10/5/2017 B-13-17 (24-26)	B-13-17 26 10/5/2017 B-13-17 (26-28)	B-13-17 28 10/5/2017 B-13-17 (28-30)	B-17-17 0 9/21/2017 B-17-17 (0-2)
	CAS													
Aroclor 1016	12674-11-2	< 1.38	< 0.556	< 3.55	< 7.67	< 1.44	< 1.18	< 0.386	< 0.239	< 0.377	< 0.0782	< 0.4	< 0.0692	< 0.0731
Aroclor 1221	11104-28-2	< 2.8	< 1.13	< 7.2	< 15.6	< 2.91	< 2.4	< 0.784	< 0.484	< 0.765	< 0.159	< 0.813	< 0.14	< 0.148
Aroclor 1232	11141-16-5	< 1.38	< 0.556	< 3.55	< 7.67	< 1.44	< 1.18	< 0.386	< 0.239	< 0.377	< 0.0782	< 0.4	< 0.0692	< 0.0731
Aroclor 1242	53469-21-9	**13.2**	**4.6**	**30.7**	**73.6**	**14.5**	**11.8**	**4.11**	**2.44**	**3.22**	< 0.0782	**2.8**	< 0.0692	**0.359**
Aroclor 1248	12672-29-6	< 1.38	< 0.556	< 3.55	< 7.67	< 1.44	< 1.18	< 0.386	< 0.239	< 0.377	< 0.0782	< 0.4	< 0.0692	< 0.0731
Aroclor 1254	11097-69-1	< 1.38	< 0.556	< 3.55	< 7.67	< 1.44	< 1.18	**1.48**	**0.766**	**1.11**	< 0.0782	**1.25**	< 0.0692	**0.387**
Aroclor 1260	11096-82-5	< 1.38	< 0.556	< 3.55	< 7.67	< 1.44	< 1.18	< 0.386	< 0.239	< 0.377	< 0.0782	< 0.4	< 0.0692	< 0.0731
Sum of Detections		**13.2**	**4.6**	**30.7**	**73.6**	**14.5**	**11.8**	**5.59**	**3.206**	**4.33**	0	**4.05**	0	**0.746**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	B-17-17 2 9/21/2017 B-17-17 (2-4)	B-17-17 4 9/21/2017 B-17-17 (4-6)	B-17-17 6 9/21/2017 B-17-17 (6-8)	B-17-17 8 9/21/2017 B-17-17 (8-10)	B-19-16 0 11/14/2016 B-19-16 (0-2)	B-20-17 0 9/21/2017 B-20-17 (0-2)	B-23-17 0 10/3/2017 B-23-17 (0-2)	B-25-17 2 10/3/2017 B-25-17 (2-4)	B-25-17 4 10/3/2017 B-25-17 (4-6)	B-25-17 6 10/3/2017 B-25-17 (6-8)	B-25-17 8 10/3/2017 B-25-17 (8-10)	B-9-17 0 9/21/2017 B-9-17 (0-2)	B-9-17 2 9/21/2017 B-9-17 (2-4)	B-9-17 4 9/21/2017 B-9-17 (4-6)	B-9-17 6 9/21/2017 B-9-17 (6-8)
	CAS															
Aroclor 1016	12674-11-2	< 0.0701	< 0.0705	< 0.0715	< 0.363	< 0.108	< 0.0720	< 0.0687	< 0.0761	< 0.0720	< 0.0678	< 0.0670	< 0.0726	< 0.0705	< 0.731	< 0.357
Aroclor 1221	11104-28-2	< 0.142	< 0.143	< 0.145	< 0.738	< 0.219	< 0.146	< 0.139	< 0.155	< 0.146	< 0.138	< 0.136	< 0.147	< 0.143	< 1.48	< 0.725
Aroclor 1232	11141-16-5	< 0.0701	< 0.0705	< 0.0715	< 0.363	< 0.108	< 0.0720	< 0.0687	< 0.0761	< 0.0720	< 0.0678	< 0.0670	< 0.0726	< 0.0705	< 0.731	< 0.357
Aroclor 1242	53469-21-9	**0.965**	**0.715**	**0.179**	**3.29**	**0.542**	**0.203**	**0.211**	**0.372**	< 0.0720	< 0.0678	< 0.0670	**0.655**	**0.565**	**4.9**	**2.26**
Aroclor 1248	12672-29-6	< 0.0701	< 0.0705	< 0.0715	< 0.363	< 0.108	< 0.0720	< 0.0687	< 0.0761	< 0.0720	< 0.0678	< 0.0670	< 0.0726	< 0.0705	< 0.731	< 0.357
Aroclor 1254	11097-69-1	**0.238**	**0.192**	< 0.0715	< 0.363	< 0.108	**0.18**	**0.375**	< 0.0761	< 0.0720	< 0.0678	< 0.0670	**0.55**	**0.177**	< 0.731	**0.573**
Aroclor 1260	11096-82-5	< 0.0701	< 0.0705	**0.6**	< 0.363	< 0.108	< 0.0720	< 0.0687	< 0.0761	< 0.0720	< 0.0678	< 0.0670	< 0.0726	< 0.0705	< 0.731	< 0.357
Sum of Detections		**1.203**	**0.907**	**0.779**	**3.29**	**0.542**	**0.383**	**0.586**	**0.372**	0	0	0	**1.205**	**0.742**	**4.9**	**2.833**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	B-9-17 8 9/21/2017 B-9-17 (8-10)	BB-22-17 0 10/27/2017 BB-22-17 (0-2)	BE-21-17 0 9/26/2017 BE-21-17 (0-2)	BE-21-17 2 9/26/2017 BE-21-17 (2-4)	BE-21-17 4 9/26/2017 BE-21-17 (4-6)	BE-21-17 6 9/26/2017 BE-21-17 (6-8)	BE-21-17 6 9/26/2017 REP092617AD1	BE-21-17 8 9/26/2017 BE-21-17 (8-10)	C-11-16 0 11/10/2016 C-11-16 (0-2)	C-12-16 18 12/14/2016 C-12-16 (18-20)	C-12-16 20 12/14/2016 C-12-16 (20-22)	C-12-16 22 12/14/2016 C-12-16 (22-24)	C-12-17 0 10/25/2017 C-12-17 (0-2)
	CAS													
Aroclor 1016	12674-11-2	< 3.6	< 0.0708	< 0.0671	< 0.0688	< 0.0693	< 0.0676	< 0.0673	< 0.0674	< 1.04	< 0.101	< 2.67	< 0.323	< 0.355
Aroclor 1221	11104-28-2	< 7.3	< 0.144	< 0.136	< 0.14	< 0.141	< 0.137	< 0.137	< 0.137	< 2.12	< 0.206	< 5.43	< 0.656	< 0.721
Aroclor 1232	11141-16-5	< 3.6	< 0.0708	< 0.0671	< 0.0688	< 0.0693	< 0.0676	< 0.0673	< 0.0674	< 1.04	< 0.101	< 2.67	< 0.323	< 0.355
Aroclor 1242	53469-21-9	**43.2**	< 0.0708	< 0.0671	< 0.0688	< 0.0693	< 0.0676	< 0.0673	< 0.0674	**1.3**	**0.47**	**17.7**	**3.37**	**2.93**
Aroclor 1248	12672-29-6	< 3.6	< 0.0708	< 0.0671	< 0.0688	< 0.0693	< 0.0676	< 0.0673	< 0.0674	< 1.04	< 0.101	< 2.67	< 0.323	< 0.355
Aroclor 1254	11097-69-1	< 3.6	**0.0779 J**	**0.136**	**0.0700**	< 0.0693	< 0.0676	< 0.0673	< 0.0674	< 1.04	< 0.101	< 2.67	< 0.323	< 0.355
Aroclor 1260	11096-82-5	< 3.6	< 0.0708	< 0.0671	**0.138**	< 0.0693	< 0.0676	< 0.0673	< 0.0674	< 1.04	< 0.101	< 2.67	**0.805**	< 0.355
Sum of Detections		**43.2**	**0.0779**	**0.136**	**0.208**	0	0	0	0	**1.3**	**0.47**	**17.7**	**4.175**	**2.93**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	C-13-17 12 9/21/2017 C-13-17 (12-14)	C-13-17 14 9/21/2017 C-13-17 (14-16)	C-13-17 16 9/21/2017 C-13-17 (16-18)	C-13-17 18 9/21/2017 C-13-17 (18-20)	C-13-17 20 9/21/2017 C-13-17 (20-22)	C-13-17 22 9/21/2017 C-13-17 (22-24)	C-13-17 24 9/21/2017 C-13-17 (24-26)	C-13-17 26 10/4/2017 C-13-17 (26-28)	C-15-17 10 9/21/2017 C-15-17 (10-12)	C-15-17 12 9/21/2017 C-15-17 (12-14)	C-15-17 12 9/21/2017 REP092117AD1	C-15-17 14 9/21/2017 C-15-17 (14-16)
	CAS												
Aroclor 1016	12674-11-2	< 3.54	< 3.65	< 1.79	< 3.43	< 3.71	< 7.29	< 7.09	< 0.0678	< 3.55 M1	< 3.52	< 7.25	< 3.68
Aroclor 1221	11104-28-2	< 7.19	< 7.41	< 3.63	< 6.96	< 7.54	< 14.8	< 14.4	< 0.138	< 7.22	< 7.16	< 14.7	< 7.46
Aroclor 1232	11141-16-5	< 3.54	< 3.65	< 1.79	< 3.43	< 3.71	< 7.29	< 7.09	< 0.0678	< 3.55	< 3.52	< 7.25	< 3.68
Aroclor 1242	53469-21-9	**42.7**	**26.9**	**19.2**	**27.9**	**32**	**59.5**	**54.7**	< 0.0678	**24.6**	**33.9**	**39**	**27.6**
Aroclor 1248	12672-29-6	< 3.54	< 3.65	< 1.79	< 3.43	< 3.71	< 7.29	< 7.09	< 0.0678	< 3.55	< 3.52	< 7.25	< 3.68
Aroclor 1254	11097-69-1	< 3.54	< 3.65	< 1.79	< 3.43	< 3.71	< 7.29	< 7.09	< 0.0678	< 3.55	< 3.52	< 7.25	< 3.68
Aroclor 1260	11096-82-5	< 3.54	< 3.65	< 1.79	< 3.43	< 3.71	< 7.29	< 7.09	< 0.0678 CH	< 3.55 M1	< 3.52	< 7.25	< 3.68
Sum of Detections		**42.7**	**26.9**	**19.2**	**27.9**	**32**	**59.5**	**54.7**	0	**24.6**	**33.9**	**39**	**27.6**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	C-15-17 16 9/21/2017 C-15-17 (16-18)	C-15-17 18 9/21/2017 C-15-17 (18-20)	C-15-17 20 9/21/2017 C-15-17 (20-22)	C-15-17 22 9/21/2017 C-15-17 (22-24)	C-15-17 24 9/21/2017 C-15-17 (24-26)	C-17-16 0 11/9/2016 C-17-16 (0-2)	C-19-17 0 9/29/2017 REP092917A01	C-19-17 0 9/29/2017 C-19-17 (0-2)	C-19-17 2 9/29/2017 C-19-17 (2-4)	C-19-17 4 9/29/2017 C-19-17 (4-6)	C-19-17 6 9/29/2017 C-19-17 (6-8)	C-19-17 8 9/29/2017 C-19-17 (8-10)	C-21-17 0 9/21/2017 C-21-17 (0-2)	C-2-17 0 10/2/2017 C-2-17 (0-2)
	CAS														
Aroclor 1016	12674-11-2	< 3.64	< 0.34	< 3.61	< 3.66	< 3.69	< 0.105	-- R	< 0.0686	< 0.0688	< 0.0684	< 0.0701	< 0.0714	< 0.0689	< 0.0668
Aroclor 1221	11104-28-2	< 7.39	< 0.69	< 7.33	< 7.44	< 7.49	< 0.214	-- R	< 0.139	< 0.14	< 0.139	< 0.142	< 0.145	< 0.14	< 0.136
Aroclor 1232	11141-16-5	< 3.64	< 0.34	< 3.61	< 3.66	< 3.69	< 0.105	-- R	< 0.0686	< 0.0688	< 0.0684	< 0.0701	< 0.0714	< 0.0689	< 0.0668
Aroclor 1242	53469-21-9	**25.8**	**2.66**	**24.2**	**33.5**	**29.1**	**0.311**	**0.175 J**	**0.296**	**0.132**	**0.138**	< 0.0701	< 0.0714	**0.222**	< 0.0668
Aroclor 1248	12672-29-6	< 3.64	< 0.34	< 3.61	< 3.66	< 3.69	< 0.105	-- R	< 0.0686	< 0.0688	< 0.0684	< 0.0701	< 0.0714	< 0.0689	< 0.0668
Aroclor 1254	11097-69-1	< 3.64	< 0.34	< 3.61	< 3.66	< 3.69	< 0.105	-- R	< 0.0686	< 0.0688	< 0.0684	< 0.0701	< 0.0714	< 0.0689	< 0.0668
Aroclor 1260	11096-82-5	< 3.64	< 0.34	< 3.61	< 3.66	< 3.69	< 0.105	-- R	< 0.0686	< 0.0688	**0.0686 JN**	< 0.0701	**0.21 JN**	< 0.0689	< 0.0668
Sum of Detections		**25.8**	**2.66**	**24.2**	**33.5**	**29.1**	**0.311**	**0.175**	**0.296**	**0.132**	**0.2066**	0	**0.21**	**0.222**	0

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	C-3.5-17 0 10/26/2017 C-3.5-17 (0-2)	C-3.5-17 2 10/26/2017 C-3.5-17 (2-4)	C-3.5-17 4 10/26/2017 C-3.5-17 (4-6)	C-3.5-17 6 10/26/2017 C-3.5-17 (6-8)	C-3.5-17 8 10/26/2017 C-3.5-17 (8-10)	C-7-16 0 12/19/2016 C-7-16 (0-2)	C-7-16 2 12/19/2016 C-7-16 (2-4)	C-7-16 4 12/19/2016 C-7-16 (4-6)	C-8-16 6 12/19/2016 C-8-16 (6-8)	C-8-16 8 12/19/2016 C-8-16 (8-10)	C-8-16 10 12/19/2016 C-8-16 (10-12)	C-8-16 12 12/19/2016 C-8-16 (12-14)	C-8-16 14 12/19/2016 C-8-16 (14-16)	C-8-16 16 12/19/2016 C-8-16 (16-18)
	CAS														
Aroclor 1016	12674-11-2	< 1.43	< 0.737	< 0.241	< 0.222	< 0.737	< 2.13	< 0.324	< 1.09	< 1.07	< 1.08	< 2.22	< 11.3	< 5.43	< 0.557
Aroclor 1221	11104-28-2	< 2.9	< 1.5	< 0.49	< 0.45	< 1.5	< 4.32	< 0.658	< 2.22	< 2.17	< 2.2	< 4.5	< 22.9	< 11	< 1.13
Aroclor 1232	11141-16-5	< 1.43	< 0.737	< 0.241	< 0.222	< 0.737	< 2.13	< 0.324	< 1.09	< 1.07	< 1.08	< 2.22	< 11.3	< 5.43	< 0.557
Aroclor 1242	53469-21-9	**9.24**	**4.56**	**1.93**	**1.81**	**7.39**	**14.9**	**4.08**	**8.21**	**9.14**	**6.07**	**31**	**85.7**	**39.5**	**6.49**
Aroclor 1248	12672-29-6	< 1.43	< 0.737	< 0.241	< 0.222	< 0.737	< 2.13	< 0.324	< 1.09	< 1.07	< 1.08	< 2.22	< 11.3	< 5.43	< 0.557
Aroclor 1254	11097-69-1	< 1.43	< 0.737	**0.638**	< 0.222	**3.09**	< 2.13	< 0.324	< 1.09	< 1.07	< 1.08	< 2.22	< 11.3	< 5.43	< 0.557
Aroclor 1260	11096-82-5	< 1.43	< 0.737	< 0.241	< 0.222	< 0.737	< 2.13	< 0.324	< 1.09	< 1.07	< 1.08	< 2.22	< 11.3	< 5.43	< 0.557
Sum of Detections		**9.24**	**4.56**	**2.568**	**1.81**	**10.48**	**14.9**	**4.08**	**8.21**	**9.14**	**6.07**	**31**	**85.7**	**39.5**	**6.49**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	C-8-16 18 12/19/2016 C-8-16 (18-20)	C-8-16 20 12/19/2016 C-8-16 (20-22)	C-8-16 22 12/19/2016 C-8-16 (22-24)	C-8-16 24 12/19/2016 C-8-16 (24-26)	C-8-16 26 12/19/2016 C-8-16 (26-28)	C-9-16 6 12/7/2016 C-9-16 (6-8)	C-9-16 8 12/7/2016 C-9-16 (8-10)	C-9-16 10 12/7/2016 C-9-16 (10-12)	C-9-16 12 12/7/2016 C-9-16 (12-14)	C-9-16 14 12/7/2016 C-9-16 (14-16)	C-9-16 16 12/7/2016 C-9-16 (16-18)	C-9-16 18 12/7/2016 C-9-16 (18-20)	C-9-16 20 12/7/2016 C-9-16 (20-22)	C-9-16 22 12/7/2016 C-9-16 (22-24)
	CAS														
Aroclor 1016	12674-11-2	< 0.111	< 0.581	< 0.107	< 0.534	< 0.103	< 1.07	< 2.69	< 5.43	< 5.37	< 0.107	< 1.08	< 1.08	< 1.21	< 0.106
Aroclor 1221	11104-28-2	< 0.226	< 1.18	< 0.217	< 1.08	< 0.208	< 2.17	< 5.46	< 11	< 10.9	< 0.217	< 2.19	< 2.2	< 2.46	< 0.215
Aroclor 1232	11141-16-5	< 0.111	< 0.581	< 0.107	< 0.534	< 0.103	< 1.07	< 2.69	< 5.43	< 5.37	< 0.107	< 1.08	< 1.08	< 1.21	< 0.106
Aroclor 1242	53469-21-9	**0.361**	**7.19**	**0.284**	**3.76**	< 0.103	**10.7**	**16.2**	**24.9**	**35.9**	**1.02**	**7.19**	**6.4**	**18**	**1.66**
Aroclor 1248	12672-29-6	< 0.111	< 0.581	< 0.107	< 0.534	< 0.103	< 1.07	< 2.69	< 5.43	< 5.37	< 0.107	< 1.08	< 1.08	< 1.21	< 0.106
Aroclor 1254	11097-69-1	< 0.111	< 0.581	< 0.107	< 0.534	< 0.103	< 1.07	< 2.69	< 5.43	< 5.37	< 0.107	< 1.08	< 1.08	< 1.21	< 0.106
Aroclor 1260	11096-82-5	**0.864**	**0.735**	**0.276**	**0.688**	< 0.103	< 1.07	< 2.69	< 5.43	< 5.37	< 0.107	< 1.08	< 1.08	**3.06**	**0.258**
Sum of Detections		**1.225**	**7.925**	**0.56**	**4.448**	0	**10.7**	**16.2**	**24.9**	**35.9**	**1.02**	**7.19**	**6.4**	**21.06**	**1.918**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	C-9-16 24 12/7/2016 C-9-16 (24-26)	C-9-16 26 12/7/2016 C-9-16 (26-28)	C-9-16 28 12/7/2016 C-9-16 (28-30.5)	D-10-16 24 11/17/2016 D-10-16 (24-26)_111716	D-10-16 26 11/17/2016 D-10-16 (26-28)_111716	D-10-16 28 11/17/2016 D-10-16 (28-30)_111716	D-11-16 24 11/17/2016 D-11-16 (24-26)_111716	D-11-16 26 11/17/2016 D-11-16 (26-28)_111716	D-11-16 28 11/17/2016 D-11-16 (28-30)_111716	D-12-16 24 12/9/2016 D-12-16 (24-26)
	CAS										
Aroclor 1016	12674-11-2	< 0.536	< 0.0992	< 0.506	< 5.72	< 1.06	< 0.102	< 5.47	< 2.08	< 0.102	< 0.103
Aroclor 1221	11104-28-2	< 1.09	< 0.201	< 1.03	< 11.6	< 2.15	< 0.206	< 11.1	< 4.23	< 0.207	< 0.21
Aroclor 1232	11141-16-5	< 0.536	< 0.0992	< 0.506	< 5.72	< 1.06	< 0.102	< 5.47	< 2.08	< 0.102	< 0.103
Aroclor 1242	53469-21-9	**4.67**	< 0.0992	**3.01**	**44.1**	**3.17**	< 0.102	**57.1**	**22.5**	< 0.102	**0.595**
Aroclor 1248	12672-29-6	< 0.536	< 0.0992	< 0.506	< 5.72	< 1.06	< 0.102	< 5.47	< 2.08	< 0.102	< 0.103
Aroclor 1254	11097-69-1	< 0.536	< 0.0992	< 0.506	< 5.72	< 1.06	< 0.102	< 5.47	< 2.08	< 0.102	< 0.103
Aroclor 1260	11096-82-5	**1.12**	< 0.0992	**0.321**	< 5.72	< 1.06	< 0.102	< 5.47	< 2.08	< 0.102	**0.134**
Sum of Detections		**5.79**	0	**3.331**	**44.1**	**3.17**	0	**57.1**	**22.5**	0	**0.729**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	D-12-16 26 12/9/2016 D-12-16 (26-28)	D-13-16 20 12/15/2016 D-13-16 (20-22)	D-13-16 24 12/15/2016 D-13-16 (24-26)	D-15-16 10 12/14/2016 D-15-16 (10-12)	D-15-16 12 12/14/2016 D-15-16 (12-14)	D-15-16 14 12/14/2016 D-15-16 (14-16)	D-15-16 16 12/14/2016 D-15-16 (16-18)	D-15-16 18 12/14/2016 D-15-16 (18-20)	D-15-16 20 12/14/2016 D-15-16 (20-22)	D-15-16 22 12/14/2016 D-15-16 (22-24)	D-15-16 24 12/14/2016 D-15-16 (24-26)	D-15-16 26 12/14/2016 D-15-16 (26-28)
	CAS												
Aroclor 1016	12674-11-2	< 0.102	< 10.7	< 0.0992	< 5.3	< 5.19	< 10.7	< 10.7	< 5.29	< 20.2	< 20.9	< 10.7	< 0.0934
Aroclor 1221	11104-28-2	< 0.207	< 21.8	< 0.201	< 10.8	< 10.5	< 21.7	< 21.6	< 10.7	< 41.1	< 42.5	< 21.7	< 0.19
Aroclor 1232	11141-16-5	< 0.102	< 10.7	< 0.0992	< 5.3	< 5.19	< 10.7	< 10.7	< 5.29	< 20.2	< 20.9	< 10.7	< 0.0934
Aroclor 1242	53469-21-9	**0.289**	**124**	**1.35**	**34.8**	**51.1**	**56**	**56.8**	**41.3**	**167**	**77.1**	**20.9**	**0.272**
Aroclor 1248	12672-29-6	< 0.102	< 10.7	< 0.0992	< 5.3	< 5.19	< 10.7	< 10.7	< 5.29	< 20.2	< 20.9	< 10.7	< 0.0934
Aroclor 1254	11097-69-1	< 0.102	< 10.7	< 0.0992	< 5.3	< 5.19	< 10.7	< 10.7	< 5.29	< 20.2	< 20.9	< 10.7	< 0.0934
Aroclor 1260	11096-82-5	< 0.102	< 10.7	< 0.0992	< 5.3	< 5.19	< 10.7	< 10.7	< 5.29	< 20.2	< 20.9	< 10.7	< 0.0934
Sum of Detections		**0.289**	**124**	**1.35**	**34.8**	**51.1**	**56**	**56.8**	**41.3**	**167**	**77.1**	**20.9**	**0.272**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	D-16-16 10 11/2/2016 D-16-16 (10-12)	D-16-16 12 11/2/2016 D-16-16 (12-14)	D-16-16 14 11/2/2016 D-16-16 (14-16)	D-16-16 16 11/2/2016 D-16-16 (16-18)	D-16-16 18 11/2/2016 D-16-16 (18-20)	D-16-16 20 11/2/2016 D-16-16 (20-22)	D-16-16 22 11/2/2016 D-16-16 (22-24)	D-16-16 24 11/2/2016 D-16-16 (24-26)	D-16-16 26 11/2/2016 D-16-16 (26-28)	D-16-16 28 11/2/2016 D-16-16 (28-30)	D-22-17 0 9/21/2017 D-22-17 (0-2)	D-7-17 0 9/18/2017 D-7-17 (0-2)	D-7-17 2 9/18/2017 D-7-17 (2-4)
	CAS													
Aroclor 1016	12674-11-2	< 2.75	< 5.53	< 2.67	< 5.51	< 5.52	< 5.5	< 5.47	< 5.54	< 0.103	< 0.101	< 0.0703	< 0.21	< 0.702
Aroclor 1221	11104-28-2	< 5.58	< 11.2	< 5.41	< 11.2	< 11.2	< 11.2	< 11.1	< 11.2	< 0.209	< 0.205	< 0.143	< 0.426	< 1.43
Aroclor 1232	11141-16-5	< 2.75	< 5.53	< 2.67	< 5.51	< 5.52	< 5.5	< 5.47	< 5.54	< 0.103	< 0.101	< 0.0703	< 0.21	< 0.702
Aroclor 1242	53469-21-9	**26.1**	**41.4**	**19.8**	**37.6**	**48.8**	**24.6**	**28.7**	**27.9**	**0.721**	< 0.101	**0.291**	**1.56 J**	**7.33**
Aroclor 1248	12672-29-6	< 2.75	< 5.53	< 2.67	< 5.51	< 5.52	< 5.5	< 5.47	< 5.54	< 0.103	< 0.101	< 0.0703	< 0.21	< 0.702
Aroclor 1254	11097-69-1	< 2.75	< 5.53	< 2.67	< 5.51	< 5.52	< 5.5	< 5.47	< 5.54	< 0.103	< 0.101	**0.187**	< 0.21	< 0.702
Aroclor 1260	11096-82-5	< 2.75	< 5.53	< 2.67	< 5.51	< 5.52	< 5.5	< 5.47	< 5.54	< 0.103	< 0.101	< 0.0703	< 0.21	< 0.702
Sum of Detections		**26.1**	**41.4**	**19.8**	**37.6**	**48.8**	**24.6**	**28.7**	**27.9**	**0.721**	0	**0.478**	**1.56**	**7.33**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Alternative Evaluation Report for PCBs and Metals in Soil
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Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	D-7-17 4 9/18/2017 D-7-17 (4-6)	D-7-17 6 9/18/2017 D-7-17 (6-8)	D-7-17 6 9/18/2017 REP091817AD1	D-7-17 8 9/18/2017 D-7-17 (8-10)	D-7-17 10 9/18/2017 D-7-17 (10-12)	D-7-17 12 9/18/2017 D-7-17 (12-14)	D-7-17 14 9/18/2017 D-7-17 (14-16)	D-9-16 0 11/18/2016 D-9-16 (0-2)_111816	D-9-16 2 11/18/2016 D-9-16 (2-4)_111816	D-9-16 4 11/18/2016 D-9-16 (4-6)_111816	D-9-16 6 11/18/2016 D-9-16 (6-8)_111816	D-9-16 8 11/18/2016 D-9-16 (8-10)_111816
	CAS												
Aroclor 1016	12674-11-2	< 0.211	< 0.717	< 0.722	< 1.49	< 0.362	< 3.49	< 0.205 J	< 0.106	< 0.105	< 2.64	< 1.07	< 2.68
Aroclor 1221	11104-28-2	< 0.428	< 1.45	< 1.47	< 3.02	< 0.735	< 7.08	< 0.416 J	< 0.215	< 0.214	< 5.36	< 2.17	< 5.45
Aroclor 1232	11141-16-5	< 0.211	< 0.717	< 0.722	< 1.49	< 0.362	< 3.49	< 0.205 J	< 0.106	< 0.105	< 2.64	< 1.07	< 2.68
Aroclor 1242	53469-21-9	**2.08**	**5.95**	**7.22 J**	**9.9**	**2.51 J**	**25.8**	**1.66 J**	**0.353**	**1.01**	**24.1**	**5.54**	**33.8**
Aroclor 1248	12672-29-6	< 0.211	< 0.717	< 0.722	< 1.49	< 0.362	< 3.49	< 0.205	< 0.106	< 0.105	< 2.64	< 1.07	< 2.68
Aroclor 1254	11097-69-1	< 0.211	< 0.717	< 0.722	< 1.49	< 0.362	< 3.49	< 0.205	< 0.106	< 0.105	< 2.64	< 1.07	< 2.68
Aroclor 1260	11096-82-5	< 0.211	< 0.717	< 0.722	< 1.49	< 0.362	< 3.49	0	< 0.106	< 0.105	< 2.64	< 1.07	< 2.68
Sum of Detections		**2.08**	**5.95**	**7.22**	**9.9**	**2.51**	**25.8**	**1.66**	**0.353**	**1.01**	**24.1**	**5.54**	**33.8**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	D-9-16 10 11/18/2016 D-9-16 (10-12)_111816	D-9-16 12 11/18/2016 D-9-16 (12-14)_111816	D-9-16 14 11/18/2016 D-9-16 (14-16)_111816	D-9-16 16 11/18/2016 D-9-16 (16-18)_111816	D-9-16 18 11/18/2016 D-9-16 (18-20)_111816	D-9-16 20 11/18/2016 D-9-16 (20-22)_111816	D-9-16 22 11/18/2016 D-9-16 (22-24)_111816	D-9-16 24 11/18/2016 DUP-111816 (02)	D-9-16 24 11/18/2016 9-16 (24-26)_1118
	CAS									
Aroclor 1016	12674-11-2	< 2.73	< 5.44	< 5.62	< 0.332	< 0.579	< 5.54	< 1.07	< 1.11	< 1.19
Aroclor 1221	11104-28-2	< 5.55	< 11.1	< 11.4	< 0.674	< 1.17	< 11.2	< 2.17	< 2.26	< 2.42
Aroclor 1232	11141-16-5	< 2.73	< 5.44	< 5.62	< 0.332	< 0.579	< 5.54	< 1.07	< 1.11	< 1.19
Aroclor 1242	53469-21-9	**29**	**75.6**	**52.3**	**3.52**	**5.53**	**52.2**	**4.16**	**6.67**	**9.12**
Aroclor 1248	12672-29-6	< 2.73	< 5.44	< 5.62	< 0.332	< 0.579	< 5.54	< 1.07	< 1.11	< 1.19
Aroclor 1254	11097-69-1	< 2.73	< 5.44	< 5.62	< 0.332	< 0.579	< 5.54	< 1.07	< 1.11	< 1.19
Aroclor 1260	11096-82-5	< 2.73	< 5.44	< 5.62	**0.812**	**0.883**	< 5.54	< 1.07	< 1.11	< 1.19
Sum of Detections		**29**	**75.6**	**52.3**	**4.332**	**6.413**	**52.2**	**4.16**	**6.67**	**9.12**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	D-9-16 26 11/18/2016 D-9-16 (26-28)_111816	E-10-16 24 10/31/2016 E-10-16 (24-26)	E-10-16 26 10/31/2016 E-10-16 (26-28)	E-10-16 28 10/31/2016 E-10-16 (28-30)	E-10-16 30 10/31/2016 E-10-16 (30-32.5)	E-10-16 32.5 10/31/2016 E-10-16 (32.5-35)	E-12-16 0 11/1/2016 E-12-16 (0-2)	E-12-16 2 11/1/2016 E-12-16 (2-4)	E-12-16 4 11/1/2016 E-12-16 (4-6)	E-12-16 6 11/1/2016 E-12-16 (6-8)	E-12-16 8 11/1/2016 E-12-16 (8-10)	E-12-16 24 11/1/2016 E-12-16 (24-26)	E-12-16 26 11/1/2016 E-12-16 (26-28)
	CAS													
Aroclor 1016	12674-11-2	< 0.101	< 5.81	< 0.204	< 0.203	< 5.52	< 0.205	< 0.105 J	< 0.0970 J	< 1.02	< 10.2	< 10.2	< 1.03	< 0.0989
Aroclor 1221	11104-28-2	< 0.206	< 11.8	< 0.415	< 0.412	< 11.2	< 0.416	< 0.212	< 0.197	< 2.07	< 20.7	< 20.8	< 2.08	< 0.201
Aroclor 1232	11141-16-5	< 0.101	< 5.81	< 0.204	< 0.203	< 5.52	< 0.205	< 0.105 J	< 0.0970 J	< 1.02	< 10.2	< 10.2	< 1.03	< 0.0989
Aroclor 1242	53469-21-9	**0.622**	**18.7**	**2.33**	< 0.203	**31.7**	< 0.205	**1.01**	**0.978**	**8.79**	**53.3**	**56.4**	**6.01**	< 0.0989
Aroclor 1248	12672-29-6	< 0.101	< 5.81	< 0.204	< 0.203	< 5.52	< 0.205	< 0.105 J	< 0.0970 J	< 1.02	< 10.2	< 10.2	< 1.03	< 0.0989
Aroclor 1254	11097-69-1	< 0.101	< 5.81	< 0.204	< 0.203	< 5.52	< 0.205	< 0.105 J	< 0.0970 J	< 1.02	**3.14 J**	< 10.2	< 1.03	< 0.0989
Aroclor 1260	11096-82-5	< 0.101	< 5.81	< 0.204	< 0.203	< 5.52	< 0.205	< 0.105 J	< 0.0970 J	< 1.02	< 10.2	< 10.2	< 1.03	< 0.0989
Sum of Detections		**0.622**	**18.7**	**2.33**	0	**31.7**	0	**1.01**	**0.978**	**8.79**	**56.44**	**56.4**	**6.01**	0

Table 3
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Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	E-12-16 28 11/1/2016 E-12-16 (28-30)	E-13-16 26 12/14/2016 E-13-16 (26-28)	e-14-16 20 11/15/2016 e-14-16 (20-22)	e-14-16 22 11/15/2016 e-14-16 (22-24)	e-14-16 24 11/15/2016 e-14-16 (24-26)	E-15-16 20 11/18/2016 E-15-16 (20-22)_111816	E-15-16 22 11/18/2016 E-15-16 (22-24)_111816	E-15-16 24 11/18/2016 E-15-16 (24-26)_111816	E-15-16 26 11/18/2016 E-15-16 (26-28)_111816	E-15-16 28 11/18/2016 E-15-16 (28-30)_111816
	CAS										
Aroclor 1016	12674-11-2	< 0.0967	< 0.0961	< 11	< 5.42 J	< 1.08	< 2.16	< 10.8	< 26.8	< 1.14	< 0.102
Aroclor 1221	11104-28-2	< 0.196	< 0.195	< 22.3	< 11 J	< 2.2	< 4.39	< 22	< 54.3	< 2.31	< 0.207
Aroclor 1232	11141-16-5	< 0.0967	< 0.0961	< 11	< 5.42 J	< 1.08	< 2.16	< 10.8	< 26.8	< 1.14	< 0.102
Aroclor 1242	53469-21-9	< 0.0967	< 0.0961	**134**	**60.1 J**	**11.4**	**25.5**	**141**	**215**	**15.1**	**0.661**
Aroclor 1248	12672-29-6	< 0.0967	< 0.0961	< 11	< 5.42 J	< 1.08	< 2.16	< 10.8	< 26.8	< 1.14	< 0.102
Aroclor 1254	11097-69-1	< 0.0967	< 0.0961	< 11	< 5.42 J	< 1.08	< 2.16	< 10.8	< 26.8	< 1.14	< 0.102
Aroclor 1260	11096-82-5	< 0.0967	< 0.0961	< 11	< 5.42 J	< 1.08	< 2.16	< 10.8	< 26.8	< 1.14	**0.182**
Sum of Detections		0	0	**134**	**60.1**	**11.4**	**25.5**	**141**	**215**	**15.1**	**0.843**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	E-16-16 20 11/1/2016 E-16-16 (20-22)	E-16-16 22 11/1/2016 E-16-16 (22-24)	E-16-16 24 11/1/2016 E-16-16 (24-26)	E-16-16 26 11/1/2016 E-16-16 (26-28)	E-16-16 28 11/1/2016 E-16-16 (28-30)	E-16-16 30 11/1/2016 E-16-16 (30-32.5)	E-16-16 32.5 11/1/2016 E-16-16 (32.5-35)	E-17-16 20 11/18/2016 E-17-16 (20-22)_111816	E-17-16 22 11/18/2016 E-17-16 (22-24)_111816	E-17-16 24 11/18/2016 E-17-16 (24-26)_111816
	CAS										
Aroclor 1016	12674-11-2	< 5.42	< 5.42	< 5.44	< 5.52	< 5.44	< 5.62	< 0.102	< 2.69	< 2.71	< 1.09
Aroclor 1221	11104-28-2	< 11	< 11	< 11	< 11.2	< 11	< 11.4	< 0.207	< 5.46	< 5.51	< 2.21
Aroclor 1232	11141-16-5	< 5.42	< 5.42	< 5.44	< 5.52	< 5.44	< 5.62	< 0.102	< 2.69	< 2.71	< 1.09
Aroclor 1242	53469-21-9	**63.7**	**30.7**	**29.4**	**62.7**	**38.5**	**33.2**	**0.134**	**31.2**	**24.8**	**15.2**
Aroclor 1248	12672-29-6	< 5.42	< 5.42	< 5.44	< 5.52	< 5.44	< 5.62	< 0.102	< 2.69	< 2.71	< 1.09
Aroclor 1254	11097-69-1	< 5.42	< 5.42	< 5.44	< 5.52	< 5.44	< 5.62	< 0.102	< 2.69	< 2.71	< 1.09
Aroclor 1260	11096-82-5	< 5.42	< 5.42	< 5.44	< 5.52	< 5.44	< 5.62	< 0.102	< 2.69	< 2.71	< 1.09
Sum of Detections		**63.7**	**30.7**	**29.4**	**62.7**	**38.5**	**33.2**	**0.134**	**31.2**	**24.8**	**15.2**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	E-17-16 26 11/18/2016 E-17-16 (26-28)_111816	E-17-16 28 11/18/2016 E-17-16 (28-30)_111816	E-21-16 10 11/10/2016 E-21-16 (10-12)	E-21-16 12 11/10/2016 E-21-16 (12-14)	E-21-16 14 11/10/2016 E-21-16 (14-16)	E-21-16 16 11/10/2016 E-21-16 (16-18)	E-21-16 18 11/10/2016 E-21-16 (18-20)	E-2-17 0 10/2/2017 E-2-17 (0-2)	E-25-17 0 10/3/2017 E-25-17 (0-2)	E-26-16 0 11/8/2016 E-26-16 (0-2)	E-27-16 0 11/8/2016 E-27-16 (0-2)	E-7-17 0 9/18/2017 E-7-17 (0-2)	E-7-17 2 9/18/2017 E-7-17 (2-4)
	CAS													
Aroclor 1016	12674-11-2	< 2.16	< 0.102	< 0.105	< 1.08	< 1.06	< 0.101	< 0.101	< 0.0675	< 0.0744	< 0.525	< 0.103	< 0.713 M1	< 1.77
Aroclor 1221	11104-28-2	< 4.38	< 0.207	< 0.213	< 2.2	< 2.16	< 0.206	< 0.205	< 0.137	< 0.151	< 1.07	< 0.209	< 1.45	< 3.59
Aroclor 1232	11141-16-5	< 2.16	< 0.102	< 0.105	< 1.08	< 1.06	< 0.101	< 0.101	< 0.0675	< 0.0744	< 0.525	< 0.103	< 0.713	< 1.77
Aroclor 1242	53469-21-9	**22.4**	**0.253**	**1.3**	**10.9 J**	**12 J**	< 0.101	< 0.101	**0.124**	**0.232**	**1.22**	**0.121**	**4.13**	**14.7**
Aroclor 1248	12672-29-6	< 2.16	< 0.102	< 0.105	< 1.08	< 1.06	< 0.101	< 0.101	< 0.0675	< 0.0744	< 0.525	< 0.103	< 0.713	< 1.77
Aroclor 1254	11097-69-1	< 2.16	< 0.102	< 0.105	< 1.08	< 1.06	< 0.101	< 0.101	**0.157**	< 0.0744	< 0.525	< 0.103	< 0.713	< 1.77
Aroclor 1260	11096-82-5	< 2.16	< 0.102	< 0.105	< 1.08	< 1.06	< 0.101	< 0.101	< 0.0675	< 0.0744	< 0.525	< 0.103	< 0.713 M1	< 1.77
Sum of Detections		**22.4**	**0.253**	**1.3**	**10.9**	**12**	0	0	**0.281**	**0.232**	**1.22**	**0.121**	**4.13**	**14.7**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	E-7-17 4 9/18/2017 E-7-17 (4-6)	E-7-17 6 9/18/2017 E-7-17 (6-8)	E-7-17 8 9/18/2017 E-7-17 (8-10)	E-9-16 10 10/31/2016 E-9-16 (10-12)	E-9-16 12 10/31/2016 E-9-16 (12-14)	E-9-16 14 10/31/2016 E-9-16 (14-16)	E-9-16 16 10/31/2016 E-9-16 (16-18)	E-9-16 18 10/31/2016 E-9-16 (18-20)	E-9-16 20 10/31/2016 E-9-16 (20-22)	E-9-16 22 10/31/2016 E-9-16 (22-24)	E-9-16 24 10/31/2016 E-9-16 (24-26)	E-9-16 26 10/31/2016 E-9-16 (26-28)	E-9-16 28 10/31/2016 E-9-16 (28-30)	F.5-12.5-17 0 10/25/2017 F.5-12.5-17 (0-2)
	CAS														
Aroclor 1016	12674-11-2	< 1.42	< 3.72	< 7.2	< 5.26	< 5.3	< 5.45	< 5.49	< 5.44	< 5.51	< 5.39	< 5.44	< 0.207	< 0.204	< 0.0723
Aroclor 1221	11104-28-2	< 2.89	< 7.56	< 14.6	< 10.7	< 10.8	< 11.1	< 11.1	< 11	< 11.2	< 10.9	< 11	< 0.42	< 0.413	< 0.147
Aroclor 1232	11141-16-5	< 1.42	< 3.72	< 7.2	< 5.26	< 5.3	< 5.45	< 5.49	< 5.44	< 5.51	< 5.39	< 5.44	< 0.207	< 0.204	< 0.0723
Aroclor 1242	53469-21-9	**9.51**	**22.1**	**57.5**	**29.8**	**85.1**	**61.2**	**71**	**86.6**	**47**	**40.6**	**57.1**	< 0.207	< 0.204	**0.564**
Aroclor 1248	12672-29-6	< 1.42	< 3.72	< 7.2	< 5.26	< 5.3	< 5.45	< 5.49	< 5.44	< 5.51	< 5.39	< 5.44	< 0.207	< 0.204	< 0.0723
Aroclor 1254	11097-69-1	< 1.42	< 3.72	< 7.2	< 5.26	< 5.3	< 5.45	< 5.49	< 5.44	< 5.51	< 5.39	< 5.44	< 0.207	< 0.204	< 0.0723
Aroclor 1260	11096-82-5	< 1.42	< 3.72	< 7.2	< 5.26	< 5.3	< 5.45	< 5.49	< 5.44	< 5.51	< 5.39	< 5.44	< 0.207	< 0.204	< 0.0723
Sum of Detections		**9.51**	**22.1**	**57.5**	**29.8**	**85.1**	**61.2**	**71**	**86.6**	**47**	**40.6**	**57.1**	0	0	**0.564**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	F.5-2-17 / 0 / 10/25/2017 / F.5-2-17 (0-2)	F-10-16 / 24 / 11/1/2016 / F-10-16 (24-26)	F-10-16 / 26 / 11/1/2016 / F-10-16 (26-28)	F-10-16 / 28 / 11/1/2016 / F-10-16 (28-30)	F-12-16 / 24 / 12/15/2016 / F-12-16 (24-26)	F-13-16 / 24 / 12/14/2016 / F-13-16 (24-26)	F-16-17 / 20 / 9/18/2017 / F-16-17 (20-22)	F-16-17 / 22 / 9/18/2017 / F-16-17 (22-24)	F-16-17 / 24 / 9/18/2017 / F-16-17 (24-26)	F-16-17 / 26 / 9/18/2017 / F-16-17 (26-28)	F-17-16 / 20 / 12/13/2016 / F-17-16 (20-22)	F-18.5-17 / 2 / 10/26/2017 / F-18.5-17 (2-4)	F-18.5-17 / 4 / 10/26/2017 / F-18.5-17 (4-6)
	CAS													
Aroclor 1016	12674-11-2	< 0.0718	< 2.78	< 0.0959	< 0.0956	< 5.15	< 0.983	< 7.35	< 7.43	< 14.9 J	< 3.51	< 1.03	< 0.0725	< 0.695
Aroclor 1221	11104-28-2	< 0.146	< 5.65	< 0.195	< 0.194	< 10.5	< 2	< 14.9	< 15.1	< 30.3 J	< 7.12	< 2.1	< 0.147	< 1.41
Aroclor 1232	11141-16-5	< 0.0718	< 2.78	< 0.0959	< 0.0956	< 5.15	< 0.983	< 7.35	< 7.43	< 14.9 J	< 3.51	< 1.03	< 0.0725	< 0.695
Aroclor 1242	53469-21-9	**0.225**	**22.5**	**0.292**	**0.347**	**39.4**	**6.17**	**59**	**25.4**	**38.4 J**	**23.7**	**9.53**	**0.197**	**9.6**
Aroclor 1248	12672-29-6	< 0.0718	< 2.78	< 0.0959	< 0.0956	< 5.15	< 0.983	< 7.35	< 7.43	< 14.9 J	< 3.51	< 1.03	< 0.0725	< 0.695
Aroclor 1254	11097-69-1	**0.139**	< 2.78	< 0.0959	< 0.0956	< 5.15	< 0.983	< 7.35	< 7.43	< 14.9 J	< 3.51	< 1.03	**0.204**	< 0.695
Aroclor 1260	11096-82-5	< 0.0718	< 2.78	< 0.0959	< 0.0956	< 5.15	< 0.983	< 7.35	< 7.43	< 14.9 J	< 3.51	< 1.03	< 0.0725	< 0.695
Sum of Detections		**0.364**	**22.5**	**0.292**	**0.347**	**39.4**	**6.17**	**59**	**25.4**	**38.4**	**23.7**	**9.53**	**0.401**	**9.6**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	F-18.5-17 6 10/26/2017 F-18.5-17 (6-8)	F-18.5-17 8 10/26/2017 F-18.5-17 (8-10)	F-18.5-17 10 10/26/2017 F-18.5-17 (10-12)	F-18.5-17 12 10/26/2017 F-18.5-17 (12-14)	F-18.5-17 14 10/26/2017 F-18.5-17 (14-16)	F-18.5-17 16 10/26/2017 F-18.5-17 (16-18)	F-18.5-17 18 10/26/2017 F-18.5-17 (18-20)	F-18.5-17 20 10/26/2017 F-18.5-17 (20-22)	F-18.5-17 22 10/26/2017 F-18.5-17 (22-24)	F-21-17 0 9/22/2017 F-21-17 (0-2)	F-21-17 2 9/22/2017 F-21-17 (2-4)	F-21-17 4 9/22/2017 F-21-17 (4-6)
	CAS												
Aroclor 1016	12674-11-2	< 3.53	< 3.57	< 1.79	< 3.62	< 1.45	< 3.63	< 1.45	< 0.739	< 3.67	< 0.0349	< 0.172	< 0.0349
Aroclor 1221	11104-28-2	< 7.17	< 7.24	< 3.64	< 7.35	< 2.94	< 7.38	< 2.95	< 1.5	< 7.44	< 0.0708	< 0.349	< 0.0708
Aroclor 1232	11141-16-5	< 3.53	< 3.57	< 1.79	< 3.62	< 1.45	< 3.63	< 1.45	< 0.739	< 3.67	< 0.0349	< 0.172	< 0.0349
Aroclor 1242	53469-21-9	**47.1**	**55.1**	**27.1**	**47**	**16.3**	**45.3**	**19.9**	**7.51**	**41.2**	**0.542**	**0.879**	**0.134**
Aroclor 1248	12672-29-6	< 3.53	< 3.57	< 1.79	< 3.62	< 1.45	< 3.63	< 1.45	< 0.739	< 3.67	< 0.0349	< 0.172	< 0.0349
Aroclor 1254	11097-69-1	< 3.53	< 3.57	< 1.79	< 3.62	< 1.45	< 3.63	< 1.45	< 0.739	< 3.67	< 0.0349	< 0.172	< 0.0349
Aroclor 1260	11096-82-5	< 3.53	< 3.57	< 1.79	< 3.62	< 1.45	< 3.63	< 1.45	< 0.739	< 3.67	< 0.0349	< 0.172	**0.11**
Sum of Detections		**47.1**	**55.1**	**27.1**	**47**	**16.3**	**45.3**	**19.9**	**7.51**	**41.2**	**0.542**	**0.879**	**0.244**

Table 3
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	F-21-17 6 9/22/2017 F-21-17 (6-8)	F-21-17 8 9/22/2017 F-21-17 (8-10)	F-21-17 10 9/22/2017 F-21-17 (10-12)	F-21-17 12 9/22/2017 F-21-17 (12-14)	F-21-17 14 9/22/2017 F-21-17 (14-16)	F-21-17 16 9/22/2017 F-21-17 (16-18)	F-21-17 18 9/22/2017 F-21-17 (18-20)	F-22-17 0 9/22/2017 F-22-17 (0-2)	F-22-17 2 9/22/2017 F-22-17 (2-4)	F-22-17 4 9/22/2017 F-22-17 (4-6)	F-22-17 4 9/22/2017 REP092217AD1	F-22-17 6 9/22/2017 F-22-17 (6-8)	F-22-17 8 9/22/2017 F-22-17 (8-10)
	CAS													
Aroclor 1016	12674-11-2	< 0.0347	< 0.0354	< 0.173	< 0.7	< 0.356	< 0.357	< 0.0673	< 0.173	< 0.0346	< 0.0348	< 0.0349	< 0.0355	< 0.181
Aroclor 1221	11104-28-2	< 0.0705	< 0.0719	< 0.352	< 1.42	< 0.722	< 0.725	< 0.137	< 0.351	< 0.0703	< 0.0707	< 0.0708	< 0.0720	< 0.367
Aroclor 1232	11141-16-5	< 0.0347	< 0.0354	< 0.173	< 0.7	< 0.356	< 0.357	< 0.0673	< 0.173	< 0.0346	< 0.0348	< 0.0349	< 0.0355	< 0.181
Aroclor 1242	53469-21-9	**0.0679**	**0.398**	**1.1**	**8.2**	**3.71**	**3.76**	**0.418**	**1.12**	**0.0465**	< 0.0348	**0.0611**	< 0.0355	**1.14**
Aroclor 1248	12672-29-6	< 0.0347	< 0.0354	< 0.173	< 0.7	< 0.356	< 0.357	< 0.0673	< 0.173	< 0.0346	< 0.0348	< 0.0349	< 0.0355	< 0.181
Aroclor 1254	11097-69-1	< 0.0347	< 0.0354	< 0.173	< 0.7	< 0.356	< 0.357	< 0.0673	< 0.173	< 0.0346	< 0.0348	< 0.0349	< 0.0355	< 0.181
Aroclor 1260	11096-82-5	**0.0709**	**0.0501**	< 0.173	< 0.7	< 0.356	< 0.357	< 0.0673	< 0.173	**0.11**	**0.184**	**0.16**	**0.274**	< 0.181
Sum of Detections		**0.1388**	**0.4481**	**1.1**	**8.2**	**3.71**	**3.76**	**0.418**	**1.12**	**0.1565**	**0.184**	**0.2211**	**0.274**	**1.14**

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Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	F-22-17 10 9/22/2017 F-22-17 (10-12)	F-22-17 12 9/22/2017 F-22-17 (12-14)	F-22-17 14 9/22/2017 F-22-17 (14-16)	F-22-17 16 9/22/2017 F-22-17 (16-18)	F-22-17 18 9/22/2017 F-22-17 (18-20)	F-26-17 0 10/3/2017 F-26-17 (0-2)	G.5-11-17 0 10/25/2017 G.5-11-17 (0-2)	G-11-16 24 11/3/2016 G-11-16 (24-26)	G-11-16 26 11/3/2016 G-11-16 (26-28)	G-11-16 28 11/3/2016 G-11-16 (28-30)	G-20-16 10 12/13/2016 G-20-16 (10-12)	G-20-16 12 12/13/2016 G-20-16 (12-14)	G-20-16 14 12/13/2016 G-20-16 (14-16)
	CAS													
Aroclor 1016	12674-11-2	< 0.179	< 0.0351	< 0.0343	< 0.0345	< 0.0338	< 0.0708	< 0.361	< 5.44	< 0.101	< 0.102	< 10.5	< 5.13	< 5.06
Aroclor 1221	11104-28-2	< 0.363	< 0.0713	< 0.0696	< 0.0701	< 0.0687	< 0.144	< 0.734	< 11	< 0.206	< 0.207	< 21.4	< 10.4	< 10.3
Aroclor 1232	11141-16-5	< 0.179	< 0.0351	< 0.0343	< 0.0345	< 0.0338	< 0.0708	< 0.361	< 5.44	< 0.101	< 0.102	< 10.5	< 5.13	< 5.06
Aroclor 1242	53469-21-9	**1.11**	**0.552**	**0.421**	**0.12**	< 0.0338	**0.477**	**2.75**	**78.7**	**0.104**	< 0.102	**44.6**	**75.6**	**49.8**
Aroclor 1248	12672-29-6	< 0.179	< 0.0351	< 0.0343	< 0.0345	< 0.0338	< 0.0708	< 0.361	< 5.44	< 0.101	< 0.102	< 10.5	< 5.13	< 5.06
Aroclor 1254	11097-69-1	< 0.179	< 0.0351	< 0.0343	< 0.0345	< 0.0338	< 0.0708	< 0.361	< 5.44	< 0.101	< 0.102	< 10.5	< 5.13	< 5.06
Aroclor 1260	11096-82-5	**0.187**	**0.0802**	< 0.0343	**0.0718**	< 0.0338	< 0.0708	< 0.361	< 5.44	< 0.101	< 0.102	< 10.5	< 5.13	< 5.06
Sum of Detections		**1.297**	**0.6322**	**0.421**	**0.1918**	0	**0.477**	**2.75**	**78.7**	**0.104**	0	**44.6**	**75.6**	**49.8**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	G-20-16 16 12/13/2016 G-20-16 (16-18)	G-20-16 18 12/13/2016 G-20-16 (18-20)	G-22-16 10 11/15/2016 G-22-16 (10-12)	G-22-16 12 11/15/2016 G-22-16 (12-14)	G-22-16 14 11/15/2016 G-22-16 (14-16)	G-22-16 16 11/15/2016 G-22-16 (16-18)	G-22-16 18 11/15/2016 G-22-16 (18-20)	G-25-17 0 10/3/2017 G-25-17 (0-2)	G3-16 10 12/8/2016 G3-16 (10-12)	G3-16 12 12/8/2016 G3-16 (12-14)	G3-16 14 12/8/2016 G3-16 (14-16)	G3-16 16 12/8/2016 G3-16 (16-18)	G3-16 18 12/8/2016 G3-16 (18-20)
	CAS													
Aroclor 1016	12674-11-2	< 5.16	< 0.0998	< 1.06	< 2.67	< 0.518	< 0.102	< 0.101	< 0.0769	< 1.08	< 1.06	< 5.44	< 5.5	< 11.2
Aroclor 1221	11104-28-2	< 10.5	< 0.203	< 2.16	< 5.42	< 1.05	< 0.208	< 0.205	< 0.156	< 2.19	< 2.16	< 11	< 11.2	< 22.7
Aroclor 1232	11141-16-5	< 5.16	< 0.0998	< 1.06	< 2.67	< 0.518	< 0.102	< 0.101	< 0.0769	< 1.08	< 1.06	< 5.44	< 5.5	< 11.2
Aroclor 1242	53469-21-9	**47.1**	**0.349**	**7.75**	**24.1**	**4**	**0.25**	< 0.101	< 0.0769	**4.72 J**	**10.7**	**50.1**	**52**	**82.7**
Aroclor 1248	12672-29-6	< 5.16	< 0.0998	< 1.06	< 2.67	< 0.518	< 0.102	< 0.101	< 0.0769	< 1.08 J	< 1.06	< 5.44	< 5.5	< 11.2
Aroclor 1254	11097-69-1	< 5.16	< 0.0998	< 1.06	< 2.67	< 0.518	< 0.102	< 0.101	< 0.0769	< 1.08 J	< 1.06	< 5.44	< 5.5	< 11.2
Aroclor 1260	11096-82-5	< 5.16	< 0.0998	< 1.06	< 2.67	< 0.518	< 0.102	< 0.101	< 0.0769	< 1.08 J	< 1.06	< 5.44	< 5.5	< 11.2
Sum of Detections		**47.1**	**0.349**	**7.75**	**24.1**	**4**	**0.25**	0	0	**4.72**	**10.7**	**50.1**	**52**	**82.7**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	G-5-16 2 11/7/2016 G-5-16 (2-4)	G-5-16 4 11/7/2016 G-5-16 (4-6)	H.5-9-17 0 10/25/2017 H.5-9-17 (0-2)	H-14-16 0 11/10/2016 H-14-16 (0-2)	H-15-16 26 11/2/2016 H-15-16 (26-28)	H-15-16 28 11/2/2016 H-15-16 (28-30)	H-17-16 10 11/2/2016 H-17-16 (10-12)	H-17-16 12 11/2/2016 H-17-16 (12-14)	H-17-16 14 11/2/2016 H-17-16 (14-16)	H-17-16 16 11/2/2016 H-17-16 (16-18)	H-17-16 18 11/2/2016 H-17-16 (18-20)	H-17-16 20 11/2/2016 REP (110216)	H-17-16 20 11/2/2016 H-17-16 (20-22
	CAS													
Aroclor 1016	12674-11-2	< 5.32	< 27	< 0.36	< 0.105	< 2.68	< 0.103	< 10.9	< 11	< 11.1	< 5.47	< 0.539	< 5.52	< 5.54
Aroclor 1221	11104-28-2	< 10.8	< 54.8	< 0.732	< 0.213	< 5.45	< 0.21	< 22.2	< 22.3	< 22.6	< 11.1	< 1.09	< 11.2	< 11.3
Aroclor 1232	11141-16-5	< 5.32	< 27	< 0.36	< 0.105	< 2.68	< 0.103	< 10.9	< 11	< 11.1	< 5.47	< 0.539	< 5.52	< 5.54
Aroclor 1242	53469-21-9	**42.5**	**109**	**3.22**	**0.871**	**19.2**	**0.215**	**67.6**	**82.5**	**87.5**	**35.1**	**3.71**	**38**	**52.7**
Aroclor 1248	12672-29-6	< 5.32	< 27	< 0.36	< 0.105	< 2.68	< 0.103	< 10.9	< 11	< 11.1	< 5.47	< 0.539	< 5.52	< 5.54
Aroclor 1254	11097-69-1	< 5.32	< 27	< 0.36	< 0.105	< 2.68	< 0.103	< 10.9	< 11	< 11.1	< 5.47	< 0.539	< 5.52	< 5.54
Aroclor 1260	11096-82-5	< 5.32	< 27	< 0.36	< 0.105	< 2.68	< 0.103	< 10.9	< 11	< 11.1	< 5.47	< 0.539	< 5.52	< 5.54
Sum of Detections		**42.5**	**109**	**3.22**	**0.871**	**19.2**	**0.215**	**67.6**	**82.5**	**87.5**	**35.1**	**3.71**	**38**	**52.7**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	H-17-16 22 11/2/2016 H-17-16 (22-24)	H-17-16 24 11/2/2016 H-17-16 (24-26)	H-17-16 26 11/2/2016 H-17-16 (26-28)	H-17-16 28 11/2/2016 H-17-16 (28-30)	H-17-17 0 10/6/2017 H-17-17 (0-2)	H-17-17 2 10/6/2017 H-17-17 (2-4)	H-17-17 4 10/6/2017 H-17-17 (4-6)	H-17-17 6 10/6/2017 H-17-17 (6-8)	H-17-17 8 10/6/2017 H-17-17 (8-10)	H-20-17 2 10/26/2017 H-20-17 (2-4)	H-20-17 4 10/26/2017 H-20-17 (4-6)	H-20-17 6 10/26/2017 H-20-17 (6-8)	H-20-17 8 10/26/2017 H-20-17 (8-10)	H-20-17 10 10/26/2017 H-20-17 (10-12)
	CAS														
Aroclor 1016	12674-11-2	< 2.71	< 2.75	< 5.6	< 0.102	< 0.0684	< 0.0699	< 1.42	< 3.48	< 1.42	< 0.0710	< 0.212	< 2.2	< 1.84	< 2.14
Aroclor 1221	11104-28-2	< 5.5	< 5.58	< 11.4	< 0.208	< 0.139	< 0.142	< 2.87	< 7.07	< 2.89	< 0.144	< 0.431	< 4.47	< 3.73	< 4.35
Aroclor 1232	11141-16-5	< 2.71	< 2.75	< 5.6	< 0.102	< 0.0684	< 0.0699	< 1.42	< 3.48	< 1.42	< 0.0710	< 0.212	< 2.2	< 1.84	< 2.14
Aroclor 1242	53469-21-9	**15.8**	**17.8**	**42.9**	**1.2**	**0.227**	**0.25**	**12.4**	**37.6**	**16.6**	**0.624**	**2.16**	**15.9**	**24.2**	**16.7**
Aroclor 1248	12672-29-6	< 2.71	< 2.75	< 5.6	< 0.102	< 0.0684	< 0.0699	< 1.42	< 3.48	< 1.42	< 0.0710	< 0.212	< 2.2	< 1.84	< 2.14
Aroclor 1254	11097-69-1	< 2.71	< 2.75	< 5.6	< 0.102	**0.162**	**0.12**	< 1.42	< 3.48	**6.54**	< 0.0710	< 0.212	< 2.2	< 1.84	< 2.14
Aroclor 1260	11096-82-5	< 2.71	< 2.75	< 5.6	< 0.102	< 0.0684	< 0.0699	< 1.42	< 3.48	< 1.42	< 0.0710	< 0.212	< 2.2	< 1.84	< 2.14
Sum of Detections		**15.8**	**17.8**	**42.9**	**1.2**	**0.389**	**0.37**	**12.4**	**37.6**	**23.14**	**0.624**	**2.16**	**15.9**	**24.2**	**16.7**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	H-20-17 12 10/26/2017 H-20-17 (12-14)	H-20-17 14 10/26/2017 H-20-17 (14-16)	H-20-17 16 10/26/2017 H-20-17 (16-18)	H-20-17 18 10/26/2017 H-20-17 (18-20)	H-20-17 20 10/26/2017 H-20-17 (20-22)	H-20-17 22 10/26/2017 H-20-17 (22-24)	H-21-16 10 11/9/2016 H-21-16 (10-12)	H-21-16 12 11/9/2016 H-21-16 (12-14)	H-21-16 14 11/9/2016 H-21-16 (14-16)	H-21-16 16 11/9/2016 H-21-16 (16-18)	H-21-16 18 11/9/2016 H-21-16 (18-20)	H-22-17 0 9/22/2017 H-22-17 (0-2)	H-23-17 0 10/3/2017 H-23-17 (0-2)
	CAS													
Aroclor 1016	12674-11-2	< 2.11	< 5.43	< 0.71	< 2.11	< 1.44	< 0.696	< 0.103	< 0.102	< 0.102	< 0.103	< 0.103	< 0.0692	< 0.0684
Aroclor 1221	11104-28-2	< 4.29	< 11	< 1.44	< 4.28	< 2.92	< 1.41	< 0.21	< 0.207	< 0.208	< 0.21	< 0.209	< 0.141	< 0.139
Aroclor 1232	11141-16-5	< 2.11	< 5.43	< 0.71	< 2.11	< 1.44	< 0.696	< 0.103	< 0.102	< 0.102	< 0.103	< 0.103	< 0.0692	< 0.0684
Aroclor 1242	53469-21-9	**17.5**	**36.3**	**11.2**	**14.3**	**19.2**	**5.95**	**0.154**	< 0.102	< 0.102	< 0.103	< 0.103	**0.178**	**0.543**
Aroclor 1248	12672-29-6	< 2.11	< 5.43	< 0.71	< 2.11	< 1.44	< 0.696	< 0.103	< 0.102	< 0.102	< 0.103	< 0.103	< 0.0692	< 0.0684
Aroclor 1254	11097-69-1	< 2.11	< 5.43	**8.31**	**7.44**	< 1.44	< 0.696	< 0.103	< 0.102	< 0.102	< 0.103	< 0.103	**0.255**	**0.356**
Aroclor 1260	11096-82-5	< 2.11	< 5.43	< 0.71	< 2.11	< 1.44	< 0.696	< 0.103	< 0.102	< 0.102	< 0.103	< 0.103	< 0.0692	**0.188**
Sum of Detections		**17.5**	**36.3**	**19.51**	**21.74**	**19.2**	**5.95**	**0.154**	0	0	0	0	**0.433**	**1.087**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	H-26-17 0 10/3/2017 H-26-17 (0-2)	H-3-17 0 9/26/2017 H-3-17 (0-2)	H-3-17 2 9/26/2017 H-3-17 (2-4)	H-3-17 4 9/26/2017 H-3-17 (4-6)	H-3-17 6 9/26/2017 H-3-17 (6-8)	H-3-17 8 9/26/2017 H-3-17 (8-10)	H-4-16 2 11/7/2016 H-4-16 (2-4)	H-4-16 4 11/7/2016 H-4-16 (4-6)	H-4-16 6 11/7/2016 H-4-16 (6-8)	H-4-16 8 11/7/2016 H-4-16 (8-10)	H-5-16 2 11/7/2016 H-5-16 (2-4)	H-5-16 4 11/7/2016 H-5-16 (4-6)	H-5-16 6 11/7/2016 H-5-16 (6-8)	H-5-16 8 11/7/2016 H-5-16 (8-10)	H-9-16 10 11/3/2016 H-9-16 (10-12)
	CAS															
Aroclor 1016	12674-11-2	< 0.0711	< 0.0692	< 0.0677	< 0.0679	< 0.0669	< 0.0670	< 5.13	< 5.22	< 0.258	< 0.102	< 5.52	< 0.588	< 0.105	< 0.101	< 27.4
Aroclor 1221	11104-28-2	< 0.144	< 0.14	< 0.137	< 0.138	< 0.136	< 0.136	< 10.4	< 10.6	< 0.524	< 0.206	< 11.2	< 1.19	< 0.213	< 0.204	< 55.6
Aroclor 1232	11141-16-5	< 0.0711	< 0.0692	< 0.0677	< 0.0679	< 0.0669	< 0.0670	< 5.13	< 5.22	< 0.258	< 0.102	< 5.52	< 0.588	< 0.105	< 0.101	< 27.4
Aroclor 1242	53469-21-9	**0.401**	**0.177**	< 0.0677	< 0.0679	< 0.0669	< 0.0670	**18.9**	**9.18**	**2.67**	< 0.102	**18.5**	**4.27**	< 0.105	**0.125**	**137**
Aroclor 1248	12672-29-6	< 0.0711	< 0.0692	< 0.0677	< 0.0679	< 0.0669	< 0.0670	< 5.13	< 5.22	< 0.258	< 0.102	< 5.52	< 0.588	< 0.105	< 0.101	< 27.4
Aroclor 1254	11097-69-1	< 0.0711	**0.365**	< 0.0677	< 0.0679	< 0.0669	< 0.0670	< 5.13	< 5.22	< 0.258	< 0.102	< 5.52	< 0.588	< 0.105	< 0.101	< 27.4
Aroclor 1260	11096-82-5	< 0.0711	< 0.0692	< 0.0677	< 0.0679	< 0.0669	< 0.0670	< 5.13	< 5.22	**0.914**	< 0.102	< 5.52	**3.1**	< 0.105	< 0.101	< 27.4
Sum of Detections		**0.401**	**0.542**	0	0	0	0	**18.9**	**9.18**	**3.584**	0	**18.5**	**7.37**	0	**0.125**	137

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	H-9-16 12 11/3/2016 H-9-16 (12-14)	H-9-16 14 11/3/2016 H-9-16 (14-16)	H-9-16 16 11/3/2016 H-9-16 (16-18)	H-9-16 18 11/3/2016 H-9-16 (18-20)	H-9-16 20 11/3/2016 H-9-16 (20-22)	H-9-16 22 11/3/2016 H-9-16 (22-24)	H-9-16 24 11/3/2016 H-9-16 (24-26)	H-9-16 26 11/3/2016 H-9-16 (26-28)	H-9-16 28 11/3/2016 H-9-16 (28-30)	I-15-17 0 10/6/2017 I-15-17 (0-2)	I-15-17 2 10/6/2017 I-15-17 (2-4)	I-15-17 4 10/6/2017 I-15-17 (4-6)	I-15-17 6 10/6/2017 I-15-17 (6-8)	I-15-17 8 10/6/2017 I-15-17 (8-10)
	CAS														
Aroclor 1016	12674-11-2	< 5.44	< 27.7	< 27.6	< 54	< 27.6	< 5.44	< 5.18	< 0.101	< 0.102	< 0.0683	< 0.361 M1	< 1.92	< 1.93	< 3.58
Aroclor 1221	11104-28-2	< 11	< 56.3	< 56.1	< 110	< 56	< 11	< 10.5	< 0.206	< 0.207	< 0.139	< 0.733	< 3.9	< 3.92	< 7.26
Aroclor 1232	11141-16-5	< 5.44	< 27.7	< 27.6	< 54	< 27.6	< 5.44	< 5.18	< 0.101	< 0.102	< 0.0683	< 0.361	< 1.92	< 1.93	< 3.58
Aroclor 1242	53469-21-9	**81.5**	**164**	**218**	**303**	**248**	**9.45**	**10.5**	< 0.101	< 0.102	**0.507**	**3.27**	**20.8**	**18.7**	**43.3**
Aroclor 1248	12672-29-6	< 5.44	< 27.7	< 27.6	< 54	< 27.6	< 5.44	< 5.18	< 0.101	< 0.102	< 0.0683	< 0.361	< 1.92	< 1.93	< 3.58
Aroclor 1254	11097-69-1	< 5.44	< 27.7	< 27.6	< 54	< 27.6	< 5.44	< 5.18	< 0.101	< 0.102	**0.326**	< 0.361	< 1.92	< 1.93	< 3.58
Aroclor 1260	11096-82-5	< 5.44	< 27.7	< 27.6	< 54	< 27.6	< 5.44	< 5.18	< 0.101	< 0.102	< 0.0683	< 0.361 M1	< 1.92	< 1.93	< 3.58
Sum of Detections		**81.5**	**164**	**218**	**303**	**248**	**9.45**	**10.5**	0	0	**0.833**	**3.27**	**20.8**	**18.7**	**43.3**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	I-16-16 0 11/1/2016 I-16-16 (0-2)	I-16-16 10 11/1/2016 I-16-16 (10-12)	I-16-16 12 11/1/2016 REP 110116	I-16-16 12 11/1/2016 I-16-16 (12-14	I-16-16 14 11/1/2016 I-16-16 (14-16)	I-16-16 16 11/1/2016 I-16-16 (16-18)	I-16-16 18 11/1/2016 I-16-16 (18-20)	I-16-16 20 11/1/2016 I-16-16 (20-22)	I-16-16 22 11/1/2016 I-16-16 (22-24)	I-16-16 24 11/1/2016 I-16-16 (24-26)	I-16-16 26 11/1/2016 I-16-16 (26-28)	I-16-16 28 11/1/2016 I-16-16 (28-30)	I-17-16 10 11/28/2016 I-17-16 (10-12)
	CAS													
Aroclor 1016	12674-11-2	< 0.108	< 5.44	< 5.46	< 5.42	< 5.5	< 5.66	< 5.47	< 5.74	< 5.57	< 5.42	< 6.04	< 0.103	< 11
Aroclor 1221	11104-28-2	< 0.22	< 11	< 11.1	< 11	< 11.2	< 11.5	< 11.1	< 11.7	< 11.3	< 11	< 12.3	< 0.208	< 22.4
Aroclor 1232	11141-16-5	< 0.108	< 5.44	< 5.46	< 5.42	< 5.5	< 5.66	< 5.47	< 5.74	< 5.57	< 5.42	< 6.04	< 0.103	< 11
Aroclor 1242	53469-21-9	**0.22**	**38.3**	**68.6**	**76.3**	**75.7**	**27.3**	**9.46**	**39**	**26.7**	**29.7**	**24.9**	**0.27**	**53.9**
Aroclor 1248	12672-29-6	< 0.108	< 5.44	< 5.46	< 5.42	< 5.5	< 5.66	< 5.47	< 5.74	< 5.57	< 5.42	< 6.04	< 0.103	< 11
Aroclor 1254	11097-69-1	< 0.108	< 5.44	< 5.46	< 5.42	< 5.5	< 5.66	< 5.47	< 5.74	< 5.57	< 5.42	< 6.04	< 0.103	< 11
Aroclor 1260	11096-82-5	< 0.108	< 5.44	< 5.46	< 5.42	< 5.5	< 5.66	< 5.47	< 5.74	< 5.57	< 5.42	< 6.04	< 0.103	< 11
Sum of Detections		**0.22**	**38.3**	**68.6**	**76.3**	**75.7**	**27.3**	**9.46**	**39**	**26.7**	**29.7**	**24.9**	**0.27**	**53.9**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	I-17-16 12 11/28/2016 I-17-16 (12-14)	I-17-16 14 11/28/2016 I-17-16 (14-16)	I-17-16 16 11/28/2016 I-17-16 (16-18)	I-17-16 18 11/28/2016 I-17-16 (18-20)	I-17-16 20 11/28/2016 I-17-16 (20-22)	I-17-16 22 11/28/2016 I-17-16 (22-24)	I-21-17 0 9/22/2017 I-21-17 (0-2)	I-21-17 2 9/22/2017 I-21-17 (2-4)	I-21-17 4 9/22/2017 I-21-17 (4-6)	I-21-17 6 9/22/2017 I-21-17 (6-8)	I-21-17 8 9/22/2017 I-21-17 (8-10)	I-21-17 10 9/22/2017 I-21-17 (10-12)	I-21-17 12 9/22/2017 I-21-17 (12-14)	I-2-17 0 10/2/2017 I-2-17 (0-2)
	CAS														
Aroclor 1016	12674-11-2	< 5.41	< 10.8	< 1.07	< 1.23	< 0.551	< 2.75	< 0.0693	< 0.0691	< 0.0700	< 0.0696	< 0.0669	< 0.0675	< 0.0676	< 0.0685
Aroclor 1221	11104-28-2	< 11	< 21.9	< 2.17	< 2.5	< 1.12	< 5.57	< 0.141	< 0.14	< 0.142	< 0.141	< 0.136	< 0.137	< 0.137	< 0.139
Aroclor 1232	11141-16-5	< 5.41	< 10.8	< 1.07	< 1.23	< 0.551	< 2.75	< 0.0693	< 0.0691	< 0.0700	< 0.0696	< 0.0669	< 0.0675	< 0.0676	< 0.0685
Aroclor 1242	53469-21-9	**35.5**	**64.1**	**8.61 J**	**7.59**	**4.32 J**	**21.3**	**0.189**	**0.503**	**0.925**	**0.801**	< 0.0669	**0.357**	< 0.0676	**0.156**
Aroclor 1248	12672-29-6	< 5.41	< 10.8	< 1.07	< 1.23	< 0.551	< 2.75	< 0.0693	< 0.0691	< 0.0700	< 0.0696	< 0.0669	< 0.0675	< 0.0676	< 0.0685
Aroclor 1254	11097-69-1	< 5.41	< 10.8	< 1.07	< 1.23	< 0.551	< 2.75	**0.174**	**0.119**	< 0.0700	< 0.0696	< 0.0669	< 0.0675	< 0.0676	**0.237**
Aroclor 1260	11096-82-5	< 5.41	< 10.8	< 1.07	< 1.23	< 0.551	< 2.75	**0.0998**	< 0.0691	**0.134**	**0.251**	< 0.0669	< 0.0675	< 0.0676	< 0.0685
Sum of Detections		**35.5**	64.1	**8.61**	**7.59**	**4.32**	**21.3**	**0.4628**	**0.622**	**1.059**	**1.052**	0	**0.357**	0	**0.393**

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	I-25-17 0 10/3/2017 I-25-17 (0-2)	I-26-17 2 10/3/2017 I-26-17 (2-4)	I-26-17 4 10/3/2017 I-26-17 (4-6)	I-26-17 6 10/3/2017 I-26-17 (6-8)	I-26-17 8 10/3/2017 I-26-17 (8-10)	I-5-16 2 11/7/2016 I-5-16 (2-4)	I-5-16 4 11/7/2016 I-5-16 (4-6)	I-5-16 4 11/7/2016 REP (110716)	I-5-16 4 11/7/2016 REP110716	I-5-16 6 11/7/2016 I-5-16 (6-8)	I-5-16 8 11/7/2016 I-5-16 (8-10)	I-9-16 10 11/10/2016 I-9-16 (10-12)	I-9-16 12 11/10/2016 I-9-16 (12-14)	I-9-16 14 11/10/2016 I-9-16 (14-16)	I-9-16 16 11/10/2016 I-9-16 (16-18)
	CAS															
Aroclor 1016	12674-11-2	< 0.0776	< 0.0701	< 0.0681	< 0.0667	< 0.0739	< 0.108	< 0.104	< 0.103	< 26.6	< 0.105	< 0.105	< 27	< 5.4	< 10.8	< 5.52
Aroclor 1221	11104-28-2	< 0.158	< 0.142	< 0.138	< 0.135	< 0.15	< 0.219	< 0.211	< 0.21	< 54.1	< 0.212	< 0.213	< 54.8	< 11	< 21.9	< 11.2
Aroclor 1232	11141-16-5	< 0.0776	< 0.0701	< 0.0681	< 0.0667	< 0.0739	< 0.108	< 0.104	< 0.103	< 26.6	< 0.105	< 0.105	< 27	< 5.4	< 10.8	< 5.52
Aroclor 1242	53469-21-9	**0.119**	< 0.0701	< 0.0681	< 0.0667	< 0.0739	**1.44**	**0.543**	**0.592**	**208**	**0.127**	< 0.105	**192**	**35.4**	**65.1**	**38.4**
Aroclor 1248	12672-29-6	< 0.0776	< 0.0701	< 0.0681	< 0.0667	< 0.0739	< 0.108	< 0.104	< 0.103	< 26.6	< 0.105	< 0.105	< 27	< 5.4	< 10.8	< 5.52
Aroclor 1254	11097-69-1	**0.0957**	< 0.0701	< 0.0681	< 0.0667	< 0.0739	< 0.108	< 0.104	< 0.103	< 26.6	< 0.105	< 0.105	< 27	< 5.4	< 10.8	< 5.52
Aroclor 1260	11096-82-5	< 0.0776	< 0.0701	< 0.0681	< 0.0667	< 0.0739	< 0.108	< 0.104	< 0.103	< 26.6	< 0.105	< 0.105	< 27	< 5.4	< 10.8	< 5.52
Sum of Detections		**0.2147**	0	0	0	0	**1.44**	**0.543**	**0.592**	208	**0.127**	0	192	**35.4**	65.1	**38.4**

Table 3
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	I-9-16 / 18 / 11/10/2016 / I-9-16 (18-20)	J-1.5-17 / 0 / 10/25/2017 / J-1.5-17 (0-2)	J-14-16 / 0 / 11/2/2016 / J-14-16 (0-2)	J-14-16 / 10 / 11/2/2016 / J-14-16 (10-12)	J-14-16 / 12 / 11/2/2016 / J-14-16 (12-14)	J-14-16 / 14 / 11/2/2016 / J-14-16 (14-16)	J-14-16 / 16 / 11/2/2016 / J-14-16 (16-18)	J-14-16 / 18 / 11/2/2016 / J-14-16 (18-20)	J-14-16 / 20 / 11/2/2016 / J-14-16 (20-22)	J-14-16 / 22 / 11/2/2016 / J-14-16 (22-24)	J-14-16 / 24 / 11/2/2016 / J-14-16 (24-26)	J-14-16 / 26 / 11/2/2016 / J-14-16 (26-28)	J-14-16 / 28 / 11/2/2016 / J-14-16 (28-30)	J-15-17 / 0 / 10/6/2017 / J-15-17 (0-2)
	CAS														
Aroclor 1016	12674-11-2	< 10.9	< 0.0682	< 0.106	< 5.44	< 5.56	< 5.49	< 5.47	< 5.46	< 2.82	< 5.58	< 2.62	< 0.101	< 0.101	< 0.0681
Aroclor 1221	11104-28-2	< 22.2	< 0.139	< 0.215	< 11	< 11.3	< 11.1	< 11.1	< 11.1	< 5.72	< 11.3	< 5.33	< 0.206	< 0.205	< 0.138
Aroclor 1232	11141-16-5	< 10.9	< 0.0682	< 0.106	< 5.44	< 5.56	< 5.49	< 5.47	< 5.46	< 2.82	< 5.58	< 2.62	< 0.101	< 0.101	< 0.0681
Aroclor 1242	53469-21-9	**72.4**	**0.202**	**0.621**	**47.6**	**59.5**	**40.4**	**59.6**	**63.4**	**26.2**	**68**	**28.6**	**0.163**	< 0.101	**0.978**
Aroclor 1248	12672-29-6	< 10.9	< 0.0682	< 0.106	< 5.44	< 5.56	< 5.49	< 5.47	< 5.46	< 2.82	< 5.58	< 2.62	< 0.101	< 0.101	< 0.0681
Aroclor 1254	11097-69-1	< 10.9	**0.282**	< 0.106	< 5.44	< 5.56	< 5.49	< 5.47	< 5.46	< 2.82	< 5.58	< 2.62	< 0.101	< 0.101	< 0.0681
Aroclor 1260	11096-82-5	< 10.9	< 0.0682	< 0.106	< 5.44	< 5.56	< 5.49	< 5.47	< 5.46	< 2.82	< 5.58	< 2.62	< 0.101	< 0.101	< 0.0681
Sum of Detections		72.4	**0.484**	**0.621**	**47.6**	59.5	**40.4**	59.6	63.4	**26.2**	68	**28.6**	**0.163**	0	**0.978**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	J-15-17 2 10/6/2017 J-15-17 (2-4)	J-15-17 4 10/6/2017 J-15-17 (4-6)	J-15-17 6 10/6/2017 J-15-17 (6-8)	J-15-17 8 10/6/2017 J-15-17 (8-10)	J-15-17 10 10/6/2017 J-15-17 (10-12)	J-15-17 12 10/6/2017 J-15-17 (12-14)	J-15-17 14 10/6/2017 J-15-17 (14-16)	J-16-16 10 11/28/2016 J-16-16 (10-12)	J-16-16 12 11/28/2016 J-16-16 (12-14)	J-16-16 14 11/28/2016 J-16-16 (14-16)	J-16-16 16 11/28/2016 J-16-16 (16-18)	J-16-16 18 11/28/2016 J-16-16 (18-20)	J-16-16 20 11/28/2016 J-16-16 (20-22)	J-16-16 22 11/28/2016 J-16-16 (22-24)
	CAS														
Aroclor 1016	12674-11-2	< 0.0701	< 7.23	< 1.8	< 1.81	< 3.69	< 1.54	< 1.8	< 5.58	< 2.76	< 5.39	< 2.73	< 5.43	< 2.82	< 5.56
Aroclor 1221	11104-28-2	< 0.142	< 14.7	< 3.66	< 3.67	< 7.49	< 3.12	< 3.64	< 11.3	< 5.61	< 10.9	< 5.53	< 11	< 5.72	< 11.3
Aroclor 1232	11141-16-5	< 0.0701	< 7.23	< 1.8	< 1.81	< 3.69	< 1.54	< 1.8	< 5.58	< 2.76	< 5.39	< 2.73	< 5.43	< 2.82	< 5.56
Aroclor 1242	53469-21-9	**0.679**	**105**	**28.7**	**23.4**	**38.2**	**18.4**	**16.5**	**40.7**	**24.4**	**34.3**	**40.2**	**31.9**	**26.1**	**20.9**
Aroclor 1248	12672-29-6	< 0.0701	< 7.23	< 1.8	< 1.81	< 3.69	< 1.54	< 1.8	< 5.58	< 2.76	< 5.39	< 2.73	< 5.43	< 2.82	< 5.56
Aroclor 1254	11097-69-1	< 0.0701	< 7.23	< 1.8	< 1.81	< 3.69	< 1.54	< 1.8	< 5.58	< 2.76	< 5.39	< 2.73	< 5.43	< 2.82	< 5.56
Aroclor 1260	11096-82-5	< 0.0701	< 7.23	< 1.8	< 1.81	< 3.69	< 1.54	< 1.8	< 5.58	< 2.76	< 5.39	< 2.73	< 5.43	< 2.82	< 5.56
Sum of Detections		**0.679**	**105**	**28.7**	**23.4**	**38.2**	**18.4**	**16.5**	**40.7**	**24.4**	**34.3**	**40.2**	**31.9**	**26.1**	**20.9**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	J-20-16 10 11/30/2016 -20-16 (10-12	J-20-16 12 11/30/2016 -20-16 (12-14	J-22-17 0 9/22/2017 J-22-17 (0-2)	J-22-17 2 9/22/2017 J-22-17 (2-4)	J-22-17 4 9/22/2017 J-22-17 (4-6)	J-22-17 6 9/22/2017 J-22-17 (6-8)	J-22-17 8 9/22/2017 J-22-17 (8-10)	J-22-17 10 9/22/2017 J-22-17 (10-12)	J-22-17 12 9/22/2017 J-22-17 (12-14)	J-24-16 0 11/8/2016 J-24-16 (0-2)	J-6-17 0 10/27/2017 J-6-17 (0-2)	J-6-17 2 10/27/2017 J-6-17 (2-4)
	CAS												
Aroclor 1016	12674-11-2	< 5.44	< 2.7	< 0.342	< 0.0678	< 0.0679	< 0.0671	< 0.0672	< 0.0671	< 0.0672	< 0.11	< 0.0730	< 1.39
Aroclor 1221	11104-28-2	< 11	< 5.49	< 0.694	< 0.138	< 0.138	< 0.136	< 0.136	< 0.136	< 0.136	< 0.224	< 0.148	< 2.82
Aroclor 1232	11141-16-5	< 5.44	< 2.7	< 0.342	< 0.0678	< 0.0679	< 0.0671	< 0.0672	< 0.0671	< 0.0672	< 0.11	< 0.0730	< 1.39
Aroclor 1242	53469-21-9	**32.3**	**22.6**	**2.08 J**	**0.28**	**0.176**	< 0.0671	< 0.0672	**0.146 J**	< 0.0672	**0.437**	**0.69**	**12.4 J**
Aroclor 1248	12672-29-6	< 5.44	< 2.7	< 0.342 J	< 0.0678	< 0.0679	< 0.0671	< 0.0672	< 0.0671	< 0.0672	< 0.11	< 0.0730	< 1.39
Aroclor 1254	11097-69-1	< 5.44	< 2.7	< 0.342 J	< 0.0678	**0.187**	< 0.0671	< 0.0672	< 0.0671	< 0.0672	< 0.11	**0.587**	< 1.39
Aroclor 1260	11096-82-5	< 5.44	< 2.7	< 0.342 J	**0.37 J**	< 0.0679	< 0.0671	< 0.0672	**0.205 J**	< 0.0672	< 0.11	< 0.0730	< 1.39
Sum of Detections		**32.3**	**22.6**	**2.08**	**0.65**	**0.363**	0	0	**0.351**	0	**0.437**	**1.277**	**12.4**

Table 3
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	J-6-17 4 10/27/2017 J-6-17 (4-6)	J-6-17 6 10/27/2017 J-6-17 (6-8)	J-6-17 8 10/27/2017 J-6-17 (8-10)	J-6-17 10 10/27/2017 J-6-17 (10-12)	J-8-16 10 11/17/2016 16 (10-12)_111	J-8-16 12 11/17/2016 16 (12-14)_111	J-8-16 14 11/17/2016 16 (14-16)_111	J-8-16 16 11/17/2016 16 (16-18)_111	J-8-16 18 11/17/2016 -16 (18-20)_111	J-9-16 10 11/7/2016 J-9-16 (10-12)	J-9-16 12 11/7/2016 J-9-16 (12-14)	J-9-16 14 11/7/2016 REP (110716)-2	J-9-16 14 11/7/2016 J-9-16 (14-16)	J-9-16 16 11/7/2016 J-9-16 (16-18)
	CAS														
Aroclor 1016	12674-11-2	< 1.4	< 0.698	< 0.0711	< 0.348	< 2.16	< 1.04	< 0.101	< 0.101	< 0.101	< 28	< 5.52	< 5.44	< 5.47	< 5.42
Aroclor 1221	11104-28-2	< 2.85	< 1.42	< 0.144	< 0.706	< 4.38	< 2.1	< 0.205	< 0.205	< 0.206	< 56.8	< 11.2	< 11	< 11.1	< 11
Aroclor 1232	11141-16-5	< 1.4	< 0.698	< 0.0711	< 0.348	< 2.16	< 1.04	< 0.101	< 0.101	< 0.101	< 28	< 5.52	< 5.44	< 5.47	< 5.42
Aroclor 1242	53469-21-9	**6.66 J**	**2.97**	< 0.0711	**1.99 J**	**22.7**	**11.5**	**0.303**	< 0.101	< 0.101	**120**	**11.4**	**36.3**	**53**	**13.4**
Aroclor 1248	12672-29-6	< 1.4	< 0.698	< 0.0711	< 0.348	< 2.16	< 1.04	< 0.101	< 0.101	< 0.101	< 28	< 5.52	< 5.44	< 5.47	< 5.42
Aroclor 1254	11097-69-1	< 1.4	< 0.698	< 0.0711	< 0.348	< 2.16	< 1.04	< 0.101	< 0.101	< 0.101	< 28	< 5.52	< 5.44	< 5.47	< 5.42
Aroclor 1260	11096-82-5	< 1.4	< 0.698	< 0.0711	< 0.348	< 2.16	< 1.04	< 0.101	< 0.101	< 0.101	< 28	< 5.52	< 5.44	< 5.47	< 5.42
Sum of Detections		**6.66**	**2.97**	0	**1.99**	**22.7**	**11.5**	**0.303**	0	0	**120**	**11.4**	**36.3**	**53**	**13.4**

Table 3
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Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	J-9-16 18 11/7/2016 J-9-16 (18-20)	K.5-4-17 0 10/25/2017 K.5-4-17 (0-2)	K.5-4-17 2 10/25/2017 K.5-4-17 (2-4)	K.5-4-17 4 10/25/2017 K.5-4-17 (4-6)	K.5-4-17 6 10/25/2017 K.5-4-17 (6-8)	K.5-4-17 8 10/25/2017 K.5-4-17 (8-10)	K.5-5-17 2 10/25/2017 K.5-5-17 (2-4)	K.5-5-17 4 10/25/2017 K.5-5-17 (4-6)	K.5-5-17 6 10/25/2017 K.5-5-17 (6-8)	K.5-5-17 8 10/25/2017 K.5-5-17 (8-10)	K.5-6.5-17 2 10/25/2017 K.5-6.5-17 (2-4	K.5-6.5-17 4 10/25/2017 K.5-6.5-17 (4-6	K.5-6.5-17 6 10/25/2017 K.5-6.5-17 (6-8)
	CAS													
Aroclor 1016	12674-11-2	< 5.37	< 0.0749	< 0.368	< 1.46	< 37.9	< 0.15	< 0.362	< 0.0743	< 1.85	< 7.33	< 0.742	< 0.693	< 0.0685
Aroclor 1221	11104-28-2	< 10.9	< 0.152	< 0.748	< 2.97	< 77	< 0.305	< 0.735	< 0.151	< 3.76	< 14.9	< 1.51	< 1.41	< 0.139
Aroclor 1232	11141-16-5	< 5.37	< 0.0749	< 0.368	< 1.46	< 37.9	< 0.15	< 0.362	< 0.0743	< 1.85	< 7.33	< 0.742	< 0.693	< 0.0685
Aroclor 1242	53469-21-9	**8.83**	**0.169**	**3.16**	**13.3**	**440**	**1.49**	**3.93**	**0.106**	**20.3**	**67**	**5.51**	**6.01**	**0.225**
Aroclor 1248	12672-29-6	< 5.37	< 0.0749	< 0.368	< 1.46	< 37.9	< 0.15	< 0.362	< 0.0743	< 1.85	< 7.33	< 0.742	< 0.693	< 0.0685
Aroclor 1254	11097-69-1	< 5.37	**0.338**	< 0.368	< 1.46	< 37.9	**1.08**	< 0.362	**0.0860**	< 1.85	< 7.33	< 0.742	< 0.693	< 0.0685
Aroclor 1260	11096-82-5	< 5.37	< 0.0749	< 0.368	< 1.46	< 37.9	< 0.15	< 0.362	< 0.0743	< 1.85	< 7.33	< 0.742	< 0.693	< 0.0685
Sum of Detections		**8.83**	**0.507**	**3.16**	**13.3**	**440**	**2.57**	**3.93**	**0.192**	**20.3**	**67**	**5.51**	**6.01**	**0.225**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	K.5-6.5-17 8 10/25/2017 K.5-6.5-17 (8-10)	K-10-16 10 11/7/2016 K-10-16 (10-12)	K-10-16 12 11/7/2016 K-10-16 (12-14)	K-10-16 14 11/7/2016 K-10-16 (14-16)	K-10-16 16 11/7/2016 K-10-16 (16-18)	K-10-16 18 11/7/2016 K-10-16 (18-20)	K-13-16 0 12/13/2016 K-13-16 (0-2)	K-13-16 2 12/13/2016 K-13-16 (2-4)	K-13-16 4 12/13/2016 K-13-16 (4-6)	K-13-16 6 12/13/2016 K-13-16 (6-8)	K-13-16 8 12/13/2016 K-13-16 (8-10)
	CAS											
Aroclor 1016	12674-11-2	< 0.0764	< 5.54	< 5.55	< 5.53	< 27.7	< 5.43	< 0.111	< 0.106	< 5.3	< 22.3	< 21.6
Aroclor 1221	11104-28-2	< 0.155	< 11.2	< 11.3	< 11.2	< 56.2	< 11	< 0.226	< 0.215	< 10.8	< 45.2	< 43.9
Aroclor 1232	11141-16-5	< 0.0764	< 5.54	< 5.55	< 5.53	< 27.7	< 5.43	< 0.111	< 0.106	< 5.3	< 22.3	< 21.6
Aroclor 1242	53469-21-9	< 0.0764	**78**	**62.8**	**55.2**	**110**	**12.9**	**1.15**	**1.25**	**8.89**	**84.4**	**76.4**
Aroclor 1248	12672-29-6	< 0.0764	< 5.54	< 5.55	< 5.53	< 27.7	< 5.43	< 0.111	< 0.106	< 5.3	< 22.3	< 21.6
Aroclor 1254	11097-69-1	< 0.0764	< 5.54	< 5.55	< 5.53	< 27.7	< 5.43	< 0.111	< 0.106	< 5.3	< 22.3	< 21.6
Aroclor 1260	11096-82-5	< 0.0764	< 5.54	< 5.55	< 5.53	< 27.7	< 5.43	< 0.111	< 0.106	< 5.3	< 22.3	< 21.6
Sum of Detections		0	**78**	**62.8**	**55.2**	**110**	**12.9**	**1.15**	**1.25**	**8.89**	**84.4**	**76.4**

Table 3
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Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	K-13-16 10 12/13/2016 K-13-16 (10-12)	K-13-16 12 12/13/2016 K-13-16 (12-14)	K-13-16 14 12/13/2016 K-13-16 (14-16)	K-13-16 16 12/13/2016 K-13-16 (16-18)	K-13-16 18 12/13/2016 K-13-16 (18-20)	K-13-16 20 12/13/2016 K-13-16 (20-22)	K-13-17 22 9/20/2017 K-13-17 (22-24	K-13-17 22 9/20/2017 EP092017AD	K-13-17 24 9/20/2017 K-13-17-(24-26	K-14-16 10 11/17/2016 16 (10-12)_11
	CAS										
Aroclor 1016	12674-11-2	< 0.106	< 11.1	< 11	< 5.55	< 22.5	< 11.4	< 1.37	< 3.53	< 1.41 M1	< 5.54
Aroclor 1221	11104-28-2	< 0.214	< 22.5	< 22.3	< 11.3	< 45.8	< 23.1	< 2.78	< 7.17	< 2.87	< 11.3
Aroclor 1232	11141-16-5	< 0.106	< 11.1	< 11	< 5.55	< 22.5	< 11.4	< 1.37	< 3.53	< 1.41	< 5.54
Aroclor 1242	53469-21-9	**1.47**	**34.7**	**27.3**	**35.9**	**60**	**109**	**9.76**	**20.7**	**9.99**	< 46 B
Aroclor 1248	12672-29-6	< 0.106	< 11.1	< 11	< 5.55	< 22.5	< 11.4	< 1.37	< 3.53	< 1.41	< 5.54
Aroclor 1254	11097-69-1	< 0.106	< 11.1	< 11	< 5.55	< 22.5	< 11.4	< 1.37	< 3.53	< 1.41	< 5.54
Aroclor 1260	11096-82-5	< 0.106	< 11.1	< 11	< 5.55	< 22.5	< 11.4	< 1.37	< 3.53	< 1.41 M1R1	< 5.54
Sum of Detections		**1.47**	**34.7**	**27.3**	**35.9**	**60**	**109**	**9.76**	**20.7**	**9.99**	0

Table 3
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	K-14-16 12 11/17/2016 4-16 (12-14)_111	K-14-16 14 11/17/2016 4-16 (14-16)_111	K-14-16 16 11/17/2016 4-16 (16-18)_111	K-14-16 18 11/17/2016 -16 (18-20)_11	K-14-16 20 11/17/2016 4-16 (20-22)_111	K-14-16 22 11/17/2016 4-16 (22-24)_111	K-14-16 24 11/17/2016 16 (24-26)_1	K-17-17 2 10/26/2017 K-17-17 (2-4)	K-17-17 4 10/26/2017 K-17-17 (4-6)	K-17-17 6 10/26/2017 K-17-17 (6-8)	K-19-16 0 11/9/2016 K-19-16 (0-2	K-20-16 10 11/4/2016 K-20-16 (10-12)
	CAS												
Aroclor 1016	12674-11-2	< 5.55	< 5.5	< 5.48	0 J	< 5.61	< 2.81	< 0.102	< 0.0717	< 21	< 7.14	< 0.104	< 27.7
Aroclor 1221	11104-28-2	< 11.3	< 11.2	< 11.1	0 J	< 11.4	< 5.7	< 0.208	< 0.146	< 42.6	< 14.5	< 0.212	< 56.2
Aroclor 1232	11141-16-5	< 5.55	< 5.5	< 5.48	0 J	< 5.61	< 2.81	< 0.102	< 0.0717	< 21	< 7.14	< 0.104	< 27.7
Aroclor 1242	53469-21-9	< 76.4 B	< 37.3 B	< 66.6 B	< 155 BJ	< 54.3 B	< 27.5 B	< 1.06 BJ	**0.455**	**145**	**87.1**	**0.137**	**114**
Aroclor 1248	12672-29-6	< 5.55	< 5.5	< 5.48	0 J	< 5.61	< 2.81	< 0.102	< 0.0717	< 21	< 7.14	< 0.104	< 27.7
Aroclor 1254	11097-69-1	< 5.55	< 5.5	< 5.48	0 J	< 5.61	< 2.81	< 0.102	**0.465**	< 21	< 7.14	< 0.104	< 27.7
Aroclor 1260	11096-82-5	< 5.55	< 5.5	< 5.48	0 J	< 5.61	< 2.81	< 0.102	< 0.0717	< 21	< 7.14	< 0.104	< 27.7
Sum of Detections		0	0	0	0	0	0	0	**0.92**	**145**	**87.1**	**0.137**	**114**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Northrop Grumman Systems Corporation, Bethpage, New York

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	K-20-16 12 11/4/2016 K-20-16 (12-14)	K-20-16 14 11/4/2016 REP (110416)	K-20-16 14 11/4/2016 K-20-16 (14-16)	K-20-16 16 11/4/2016 K-20-16 (16-18)	K-20-16 18 11/4/2016 K-20-16 (18-20)	K-2-17 0 10/25/2017 K-2-17 (0-2)	K-22-17 0 9/22/2017 K-22-17 (0-2)	K-23-17 0 9/22/2017 K-23-17 (0-2)	K-8-16 10 11/17/2016 DUP-(02)
	CAS									
Aroclor 1016	12674-11-2	< 5.42	< 5.45	< 5.41	< 0.507	< 0.101	< 0.0711	< 0.0687	< 0.0687	< 2.18
Aroclor 1221	11104-28-2	< 11	< 11.1	< 11	< 1.03	< 0.206	< 0.144	< 0.139	< 0.139	< 4.43
Aroclor 1232	11141-16-5	< 5.42	< 5.45	< 5.41	< 0.507	< 0.101	< 0.0711	< 0.0687	< 0.0687	< 2.18
Aroclor 1242	53469-21-9	**21**	**22.7**	**25.6**	**1**	**0.302**	**0.326**	**0.307**	**0.242 J**	**26.2**
Aroclor 1248	12672-29-6	< 5.42	< 5.45	< 5.41	< 0.507	< 0.101	< 0.0711	< 0.0687	< 0.0687	< 2.18
Aroclor 1254	11097-69-1	< 5.42	< 5.45	< 5.41	< 0.507	< 0.101	**0.364**	< 0.0687	< 0.0687	< 2.18
Aroclor 1260	11096-82-5	< 5.42	< 5.45	< 5.41	< 0.507	< 0.101	< 0.0711	**0.247**	**0.415 JN**	< 2.18
Sum of Detections		**21**	**22.7**	**25.6**	**1**	**0.302**	**0.69**	**0.554**	**0.657**	**26.2**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	K-8-16 10 11/17/2016 -16 (10-12)_111	K-8-16 12 11/17/2016 -16 (12-14)_111	K-8-16 14 11/17/2016 -16 (14-16)_111	K-8-16 16 11/17/2016 -16 (16-18)_111	K-8-16 18 11/17/2016 16 (18-20)_11	K-9-16 10 11/17/2016 -16 (10-12)_111	K-9-16 12 11/17/2016 -16 (12-14)_111	K-9-16 14 11/17/2016 -16 (14-16)_111	K-9-16 16 11/17/2016 -16 (16-18)_111	K-9-16 18 11/17/2016 -16 (18-20)_111	L-10-16 10 12/1/2016 L-10-16 (10-12)	L-10-16 12 12/1/2016 L-10-16 (12-14)	L-10-16 14 12/1/2016 L-10-16 (14-16)
	CAS													
Aroclor 1016	12674-11-2	< 2.77	< 0.101	< 0.101	< 0.102	< 0.102	< 5.59	< 11.1	< 5.78	< 2.35	< 0.102	< 11.2	< 2.62	< 0.101
Aroclor 1221	11104-28-2	< 5.62	< 0.205	< 0.206	< 0.206	< 0.208	< 11.3	< 22.6	< 11.7	< 4.76	< 0.207	< 22.7	< 5.31	< 0.204
Aroclor 1232	11141-16-5	< 2.77	< 0.101	< 0.101	< 0.102	< 0.102	< 5.59	< 11.1	< 5.78	< 2.35	< 0.102	< 11.2	< 2.62	< 0.101
Aroclor 1242	53469-21-9	**26.3**	< 0.101	**0.519**	< 0.102	< 0.102	< 64.6 B	**95**	**55.6**	**29.1**	**0.17**	**146**	**20.2**	**0.622**
Aroclor 1248	12672-29-6	< 2.77	< 0.101	< 0.101	< 0.102	< 0.102	< 5.59	< 11.1	< 5.78	< 2.35	< 0.102	< 11.2	< 2.62	< 0.101
Aroclor 1254	11097-69-1	< 2.77	< 0.101	< 0.101	< 0.102	< 0.102	< 5.59	< 11.1	< 5.78	< 2.35	< 0.102	< 11.2	< 2.62	< 0.101
Aroclor 1260	11096-82-5	< 2.77	< 0.101	< 0.101	< 0.102	< 0.102	< 5.59	< 11.1	< 5.78	< 2.35	< 0.102	< 11.2	< 2.62	< 0.101
Sum of Detections		**26.3**	0	**0.519**	0	0	0	**95**	**55.6**	**29.1**	**0.17**	**146**	**20.2**	**0.622**

Table 3
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	L-10-16 16 12/1/2016 L-10-16 (16-18)	L-10-16 18 12/1/2016 L-10-16 (18-20)	L-12-16 0 11/15/2016 L-12-16 (0-2)	L-12-16 10 11/15/2016 L-12-16 (10-12)	L-12-16 12 11/15/2016 L-12-16 (12-14)	L-12-16 14 11/15/2016 L-12-16 (14-16)	L-12-16 16 11/15/2016 L-12-16 (16-18)	L-12-16 18 11/15/2016 L-12-16 (18-20	L-12-16 20 11/16/2016 L-12-16 (20-22	L-12-16 22 11/16/2016 L-12-16 (22-24)	L-12-16 24 11/16/2016 L-12-16 (24-25)	L-14-16 10 12/8/2016 L-14-16 (10-12)	L-14-16 12 12/8/2016 L-14-16 (12-14)
	CAS													
Aroclor 1016	12674-11-2	< 5.25	< 0.102	< 0.109	< 5.44	< 1.06	< 10.8	< 0.537	< 0.101	< 0.528	< 0.102	< 0.102	< 0.988	< 0.0979
Aroclor 1221	11104-28-2	< 10.7	< 0.208	< 0.221	< 11	< 2.15	< 22	< 1.09	< 0.206	< 1.07	< 0.207	< 0.207	< 2.01	< 0.199
Aroclor 1232	11141-16-5	< 5.25	< 0.102	< 0.109	< 5.44	< 1.06	< 10.8	< 0.537	< 0.101	< 0.528	< 0.102	< 0.102	< 0.988	< 0.0979
Aroclor 1242	53469-21-9	**33.3**	< 0.102	**0.571**	**28.5**	**12.8**	**78.2**	**4.79**	< 0.101	**2.97**	**0.135**	< 0.102	**6.42**	< 0.0979
Aroclor 1248	12672-29-6	< 5.25	< 0.102	< 0.109	< 5.44	< 1.06	< 10.8	< 0.537	< 0.101	< 0.528	< 0.102	< 0.102	< 0.988	< 0.0979
Aroclor 1254	11097-69-1	< 5.25	< 0.102	< 0.109	< 5.44	< 1.06	< 10.8	< 0.537	< 0.101	< 0.528	< 0.102	< 0.102	< 0.988	< 0.0979
Aroclor 1260	11096-82-5	< 5.25	< 0.102	< 0.109	< 5.44	< 1.06	< 10.8	< 0.537	< 0.101	< 0.528	< 0.102	< 0.102	< 0.988	< 0.0979
Sum of Detections		**33.3**	0	**0.571**	**28.5**	**12.8**	78.2	**4.79**	0	**2.97**	**0.135**	0	**6.42**	0

Table 3
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	L-14-16 14 12/8/2016 L-14-16 (14-16)	L-14-16 16 12/8/2016 L-14-16 (16-18)	L-14-16 18 12/8/2016 L-14-16 (18-20)	L-14-16 20 12/8/2016 L-14-16 (20-22)	L-14-16 22 12/8/2016 L-14-16 (22-24	L-17-17 4 10/6/2017 L-17-17 (4-6)	L-17-17 6 10/6/2017 L-17-17 (6-8)	L-17-17 8 10/6/2017 L-17-17 (8-10)	L-20-16 16 11/4/2016 L-20-16 (16-18)	L-20-16 18 11/4/2016 L-20-16 (18-20)	L-21-16 10 11/9/2016 L-21-16 (10-12)	L-21-16 12 11/9/2016 L-21-16 (12-14)	L-21-16 14 11/9/2016 L-21-16 (14-16)	L-21-16 16 11/9/2016 L-21-16 (16-18)
	CAS														
Aroclor 1016	12674-11-2	< 0.0971	< 0.998	< 0.0942	< 0.0966	< 0.1	< 7.11	< 3.56	< 3.6	< 0.101	< 0.101	< 1.05	< 0.101	< 0.101	< 1.02
Aroclor 1221	11104-28-2	< 0.197	< 2.03	< 0.191	< 0.196	< 0.204	< 14.4	< 7.23	< 7.31	< 0.206	< 0.206	< 2.12	< 0.205	< 0.205	< 2.08
Aroclor 1232	11141-16-5	< 0.0971	< 0.998	< 0.0942	< 0.0966	< 0.1	< 7.11	< 3.56	< 3.6	< 0.101	< 0.101	< 1.05	< 0.101	< 0.101	< 1.02
Aroclor 1242	53469-21-9	< 0.0971	**1.34**	**0.103**	**0.335**	< 0.1	**104**	**35.8**	**31.1**	**0.485**	**0.353**	**16**	< 0.101	< 0.101	**1.16**
Aroclor 1248	12672-29-6	< 0.0971	< 0.998	< 0.0942	< 0.0966	< 0.1	< 7.11	< 3.56	< 3.6	< 0.101	< 0.101	< 1.05	< 0.101	< 0.101	< 1.02
Aroclor 1254	11097-69-1	< 0.0971	< 0.998	< 0.0942	**0.155**	< 0.1	< 7.11	**9.32**	< 3.6	< 0.101	< 0.101	< 1.05	< 0.101	< 0.101	< 1.02
Aroclor 1260	11096-82-5	< 0.0971	< 0.998	< 0.0942	< 0.0966	< 0.1	< 7.11	< 3.56	< 3.6	< 0.101	< 0.101	< 1.05	< 0.101	< 0.101	< 1.02
Sum of Detections		0	**1.34**	**0.103**	**0.49**	0	**104**	**45.12**	**31.1**	**0.485**	**0.353**	**16**	0	0	**1.16**

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Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	L-21-16 18 11/9/2016 -21-16 (18-20	L-24-16 0 11/8/2016 L-24-16 (0-2)	L-25-17 0 10/3/2017 L-25-17 (0-2)	L-9-16 10 12/1/2016 L-9-16 (10-12)	L-9-16 12 12/1/2016 L-9-16 (12-14)	L-9-16 14 12/1/2016 L-9-16 (14-16)	L-9-16 16 12/1/2016 L-9-16 (16-18)	L-9-16 18 12/1/2016 L-9-16 (18-20)	M.5-21-17 0 10/26/2017 M.5-21-17 (0-2	M.5-9-17 0 10/25/2017 M.5-9-17 (0-2)	M-17-16 0 11/4/2016 M-17-16 (0-2)	N-10-17 10 10/4/2017 N-10-17(35)	N-10-17 22 10/4/2017 N-10-17(22-24)	N-10-17 24 10/4/2017 N-10-17(24-26)
	CAS														
Aroclor 1016	12674-11-2	< 0.101	< 0.108	< 0.0794	< 2.26	< 2.14	< 1.06	< 5.45	< 1.03	< 0.365	< 0.0735	< 0.106	< 0.0720	< 0.719	< 0.357
Aroclor 1221	11104-28-2	< 0.206	< 0.22	< 0.161	< 4.6	< 4.34	< 2.16	< 11.1	< 2.09	< 0.741	< 0.149	< 0.215	< 0.146	< 1.46	< 0.724
Aroclor 1232	11141-16-5	< 0.101	< 0.108	< 0.0794	< 2.26	< 2.14	< 1.06	< 5.45	< 1.03	< 0.365	< 0.0735	< 0.106	< 0.0720	< 0.719	< 0.357
Aroclor 1242	53469-21-9	< 0.101	**0.294**	< 0.0794	**20.8**	**4.15**	**9.92**	**33.3**	**9.09**	**3.73**	**0.932**	**0.203**	**0.466**	**3.28**	**2.92**
Aroclor 1248	12672-29-6	< 0.101	< 0.108	< 0.0794	< 2.26	< 2.14	< 1.06	< 5.45	< 1.03	< 0.365	< 0.0735	< 0.106	< 0.0720	< 0.719	< 0.357
Aroclor 1254	11097-69-1	< 0.101	< 0.108	< 0.0794	< 2.26	< 2.14	< 1.06	< 5.45	< 1.03	< 0.365	< 0.0735	< 0.106	**0.163**	**3.58**	**0.978**
Aroclor 1260	11096-82-5	< 0.101	< 0.108	**0.218**	< 2.26	< 2.14	< 1.06	< 5.45	< 1.03	< 0.365	< 0.0735	< 0.106	< 0.0720	< 0.719	< 0.357
Sum of Detections		0	**0.294**	**0.218**	**20.8**	**4.15**	**9.92**	**33.3**	**9.09**	**3.73**	**0.932**	**0.203**	**0.629**	**6.86**	**3.898**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	N-10-17 26 10/4/2017 N-10-17(26-28)	N-10-17 28 10/4/2017 N-10-17(28-30)	N-10-17 30 10/4/2017 N-10-17(30-32)	N-10-17 32 10/4/2017 N-10-17(32-34)	N-14-16 2 11/29/2016 N-14-16 (2-4)	N-14-16 4 11/29/2016 N-14-16 (4-6)	N-14-16 6 11/29/2016 N-14-16 (6-8)	N-14-16 8 11/29/2016 N-14-16 (8-10)	N-19-16 6 12/12/2016 N-19-16 (6-8)	N-20-16 10 11/4/2016 N-20-16 (10-12)	N-20-16 12 11/4/2016 N-20-16 (12-14)	N-20-16 14 11/4/2016 N-20-16 (14-16)
	CAS												
Aroclor 1016	12674-11-2	< 0.213	< 0.349	< 0.359	< 0.0736	< 0.112	< 5.17	< 5.68	< 0.108	< 2.08	< 1.06	< 1.02	< 0.101
Aroclor 1221	11104-28-2	< 0.432	< 0.71	< 0.728	< 0.149	< 0.227	< 10.5	< 11.5	< 0.219	< 4.22	< 2.15	< 2.07	< 0.205
Aroclor 1232	11141-16-5	< 0.213	< 0.349	< 0.359	< 0.0736	< 0.112	< 5.17	< 5.68	< 0.108	< 2.08	< 1.06	< 1.02	< 0.101
Aroclor 1242	53469-21-9	**1.74**	**3.05**	**4.37**	**1.15**	**0.372**	**46.1**	**52.8**	< 0.108	**19.5**	**4.27**	**2.37**	**0.418**
Aroclor 1248	12672-29-6	< 0.213	< 0.349	< 0.359	< 0.0736	< 0.112	< 5.17	< 5.68	< 0.108	< 2.08	< 1.06	< 1.02	< 0.101
Aroclor 1254	11097-69-1	**1.88**	**0.576**	**2.07**	**0.83**	< 0.112	< 5.17	< 5.68	< 0.108	< 2.08	< 1.06	< 1.02	< 0.101
Aroclor 1260	11096-82-5	< 0.213	< 0.349	< 0.359	< 0.0736	< 0.112	< 5.17	< 5.68	< 0.108	< 2.08	< 1.06	< 1.02	< 0.101
Sum of Detections		**3.62**	**3.626**	**6.44**	**1.98**	**0.372**	**46.1**	**52.8**	0	**19.5**	**4.27**	**2.37**	**0.418**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	N-20-16 16 11/4/2016 N-20-16 (16-18)	N-20-16 18 11/4/2016 N-20-16 (18-20)	N-20-16 20 11/4/2016 N-20-16 (20-22.5)	N-20-16 22.5 11/4/2016 N-20-16 (22.5-25)	N-9-17 20 10/5/2017 N-9-17 (20-22)	N-9-17 22 10/5/2017 N-9-17 (22-24)	N-9-17 24 10/5/2017 N-9-17 (24-26)	nAB-25-16 2 11/16/2016 nAB-25-16 (2-4)	nAB-25-16 4 11/16/2016 nAB-25-16 (4-6)	nAB-25-16 6 11/16/2016 nAB-25-16 (6-8)	nAB-25-16 8 11/16/2016 nAB-25-16 (8-10)	nAG-19-16 2 11/9/2016 nAG-19-16 (2-4)
	CAS												
Aroclor 1016	12674-11-2	< 0.101	< 0.101	< 0.102	< 0.102	< 0.206	< 0.0688	< 0.0698	< 0.111	< 0.101	< 0.1	< 0.1	< 1.06
Aroclor 1221	11104-28-2	< 0.206	< 0.206	< 0.207	< 0.207	< 0.418	< 0.14	< 0.142	< 0.225	< 0.205	< 0.203	< 0.204	< 2.15
Aroclor 1232	11141-16-5	< 0.101	< 0.101	< 0.102	< 0.102	< 0.206	< 0.0688	< 0.0698	< 0.111	< 0.101	< 0.1	< 0.1	< 1.06
Aroclor 1242	53469-21-9	**0.114**	**0.293**	**0.267**	**0.103**	**0.778**	< 0.0688	< 0.0698	**0.152**	**0.387**	< 0.1	**0.104**	**8.58**
Aroclor 1248	12672-29-6	< 0.101	< 0.101	< 0.102	< 0.102	< 0.206	< 0.0688	< 0.0698	< 0.111	< 0.101	< 0.1	< 0.1	< 1.06
Aroclor 1254	11097-69-1	< 0.101	< 0.101	< 0.102	< 0.102	**1.11 J**	**1.09**	**1.04**	< 0.111	< 0.101	< 0.1	< 0.1	< 1.06
Aroclor 1260	11096-82-5	< 0.101	< 0.101	< 0.102	< 0.102	< 0.206	< 0.0688	< 0.0698	< 0.111	< 0.101	< 0.1	< 0.1	< 1.06
Sum of Detections		**0.114**	**0.293**	**0.267**	**0.103**	**1.888**	**1.09**	**1.04**	**0.152**	**0.387**	0	**0.104**	**8.58**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nAG-19-16 4 11/9/2016 nAG-19-16 (4-6)	nAG-19-16 6 11/9/2016 nAG-19-16 (6-8)	nAG-19-16 8 11/9/2016 AG-19-16 (8-1	nAH-23-16 10 11/10/2016 AH-23-16 (10-12	nAH-23-16 12 11/10/2016 AH-23-16 (12-14	nAH-23-16 14 11/10/2016 AH-23-16 (14-16	nAI-23-16 2 11/10/2016 nAI-23-16 (2-4)	nAI-23-16 4 11/10/2016 nAI-23-16 (4-6)	nAI-23-16 6 11/10/2016 nAI-23-16 (6-8)	nAI-23-16 8 11/10/2016 nAI-23-16 (8-10)	nAI-25-16 0 11/30/2016 nAI-25-16 (0-2)	nAI-25-16 2 11/30/2016 nAI-25-16 (2-4)	nAI-25-16 4 11/30/2016 nAI-25-16 (4-6)
	CAS													
Aroclor 1016	12674-11-2	< 0.11	< 0.113	< 0.101	< 1.01	< 0.102	< 5.11	< 0.101	< 0.1	< 0.1	< 0.101	< 11.8	< 0.117	< 0.114
Aroclor 1221	11104-28-2	< 0.223	< 0.229	< 0.205	< 2.05	< 0.207	< 10.4	< 0.206	< 0.204	< 0.204	< 0.205	< 23.9	< 0.237	< 0.231
Aroclor 1232	11141-16-5	< 0.11	< 0.113	< 0.101	< 1.01	< 0.102	< 5.11	< 0.101	< 0.1	< 0.1	< 0.101	< 11.8	< 0.117	< 0.114
Aroclor 1242	53469-21-9	**0.539**	< 0.113	< 0.101	**7.38**	**0.133**	**9.34**	< 0.101	**0.216**	**0.141**	< 0.101	**77.2**	**1.57**	< 0.114
Aroclor 1248	12672-29-6	< 0.11	< 0.113	< 0.101	< 1.01	< 0.102	< 5.11	< 0.101	< 0.1	< 0.1	< 0.101	< 11.8	< 0.117	< 0.114
Aroclor 1254	11097-69-1	< 0.11	**0.142**	< 0.101	< 1.01	< 0.102	< 5.11	< 0.101	< 0.1	< 0.1	< 0.101	< 11.8	< 0.117	< 0.114
Aroclor 1260	11096-82-5	< 0.11	< 0.113	< 0.101	< 1.01	< 0.102	< 5.11	< 0.101	< 0.1	< 0.1	< 0.101	< 11.8	< 0.117	< 0.114
Sum of Detections		**0.539**	**0.142**	0	**7.38**	**0.133**	**9.34**	0	**0.216**	**0.141**	0	**77.2**	**1.57**	0

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Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nC-7-16 6 12/7/2016 nC-7-16 (6-8)	nC-7-16 8 12/7/2016 nC-7-16 (8-10)	nC-7-16 10 12/7/2016 nC-7-16 (10-12)	nC-7-16 12 12/7/2016 nC-7-16 (12-14)	nC-7-16 14 12/7/2016 nC-7-16 (14-16)	nC-7-16 16 12/7/2016 nC-7-16 (16-18)	nC-7-16 18 12/7/2016 nC-7-16 (18-20)	nC-7-16 20 12/7/2016 nC-7-16 (20-22)	nC-7-16 22 12/7/2016 nC-7-16 (22-24)	nC-7-16 26 12/7/2016 nC-7-16 (26-28)	nD-7-16 6 12/12/2016 nD-7-16 (6-8)	nD-7-16 8 12/12/2016 nD-7-16 (8-10)	nD-7-16 10 12/12/2016 nD-7-16 (10-12
	CAS													
Aroclor 1016	12674-11-2	< 1.08	< 11.1	< 5.62	< 10.8	< 5.65	< 2.17	< 1.09	< 5.55	< 0.101	< 2.62	< 535	< 5.57	< 2.13
Aroclor 1221	11104-28-2	< 2.2	< 22.4	< 11.4	< 21.9	< 11.5	< 4.41	< 2.22	< 11.3	< 0.205	< 5.33	< 1090	< 11.3	< 4.33
Aroclor 1232	11141-16-5	< 1.08	< 11.1	< 5.62	< 10.8	< 5.65	< 2.17	< 1.09	< 5.55	< 0.101	< 2.62	< 535	< 5.57	< 2.13
Aroclor 1242	53469-21-9	**5.54**	**80.9**	**65.7**	**66.4**	**28.7**	**21.9**	**7.62**	**22.9**	**0.121**	**21.8**	**8180**	**30**	**24.2**
Aroclor 1248	12672-29-6	< 1.08	< 11.1	< 5.62	< 10.8	< 5.65	< 2.17	< 1.09	< 5.55	< 0.101	< 2.62	< 535	< 5.57	< 2.13
Aroclor 1254	11097-69-1	< 1.08	< 11.1	< 5.62	< 10.8	< 5.65	< 2.17	< 1.09	< 5.55	< 0.101	< 2.62	< 535	< 5.57	< 2.13
Aroclor 1260	11096-82-5	< 1.08	< 11.1	< 5.62	< 10.8	< 5.65	< 2.17	< 1.09	< 5.55	< 0.101	< 2.62	< 535	< 5.57	< 2.13
Sum of Detections		**5.54**	**80.9**	**65.7**	**66.4**	**28.7**	**21.9**	**7.62**	**22.9**	**0.121**	**21.8**	**8180**	**30**	**24.2**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nD-7-16 12 12/12/2016 nD-7-16 (12-14	nD-7-16 14 12/12/2016 nD-7-16 (14-16	nD-7-16 16 12/12/2016 nD-7-16 (16-18	nD-7-16 18 12/12/2016 nD-7-16 (18-20	nD-7-16 20 12/12/2016 nD-7-16 (20-22)	nD-7-16 22 12/12/2016 nD-7-16 (22-24)	nD-7-16 24 12/12/2016 nD-7-16 (24-26)	nD-7-16 26 12/12/2016 nD-7-16 (26-28)	nD-7-17 0 9/18/2017 nD-7-17 (0-2)	nD-7-17 2 9/18/2017 nD-7-17 (2-4)
	CAS										
Aroclor 1016	12674-11-2	< 0.295	< 0.102	< 0.304	< 0.304	< 0.0974	< 0.308	< 0.102	< 0.508	< 0.352	< 0.711
Aroclor 1221	11104-28-2	< 0.599	< 0.207	< 0.618	< 0.617	< 0.198	< 0.625	< 0.206	< 1.03	< 0.714	< 1.44
Aroclor 1232	11141-16-5	< 0.295	< 0.102	< 0.304	< 0.304	< 0.0974	< 0.308	< 0.102	< 0.508	< 0.352	< 0.711
Aroclor 1242	53469-21-9	**1.93**	**1.03**	**1.73**	**2.41**	**0.7**	**2.21**	**1.64**	**2.89**	**3.41**	**5.86**
Aroclor 1248	12672-29-6	< 0.295	< 0.102	< 0.304	< 0.304	< 0.0974	< 0.308	< 0.102	< 0.508	< 0.352	< 0.711
Aroclor 1254	11097-69-1	< 0.295	< 0.102	< 0.304	< 0.304	< 0.0974	< 0.308	< 0.102	< 0.508	< 0.352	< 0.711
Aroclor 1260	11096-82-5	< 0.295	< 0.102	< 0.304	< 0.304	< 0.0974	< 0.308	< 0.102	< 0.508	< 0.352	< 0.711
Sum of Detections		**1.93**	**1.03**	**1.73**	**2.41**	**0.7**	**2.21**	**1.64**	**2.89**	**3.41**	**5.86**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nD-7-17 4 9/18/2017 nD-7-17 (4-6)	nD-8-16 0 11/18/2016 nD-8-16 (0-2)	nD-8-16 2 11/18/2016 nD-8-16 (2-4)	nD-8-16 4 11/18/2016 nD-8-16 (4-6)	nD-8-16 6 11/18/2016 nD-8-16 (6-8)	nD-8-16 8 11/18/2016 nD-8-16 (8-10)	nD-8-16 10 11/18/2016 8-16 (10-12)_111	nD-8-16 12 11/18/2016 8-16 (12-14)_111	nD-8-16 14 11/18/2016 8-16 (14-16)_111	nD-8-16 16 11/18/2016 8-16 (16-18)_111	nD-8-16 18 11/18/2016 8-16 (18-20)_111
	CAS											
Aroclor 1016	12674-11-2	< 0.354	< 0.109	< 2.66	< 1.04	< 2.1	< 21.9	< 5.58	< 5.53	< 5.5	< 1.09	< 1.17
Aroclor 1221	11104-28-2	< 0.719	< 0.222	< 5.41	< 2.12	< 4.26	< 44.4	< 11.3	< 11.2	< 11.2	< 2.22	< 2.37
Aroclor 1232	11141-16-5	< 0.354	< 0.109	< 2.66	< 1.04	< 2.1	< 21.9	< 5.58	< 5.53	< 5.5	< 1.09	< 1.17
Aroclor 1242	53469-21-9	**2.1**	**0.501**	**14**	**5.17**	**11.3**	**85.9**	**55.4**	**59.2**	**59.4**	**7.98**	**11.3**
Aroclor 1248	12672-29-6	< 0.354	< 0.109	< 2.66	< 1.04	< 2.1	< 21.9	< 5.58	< 5.53	< 5.5	< 1.09	< 1.17
Aroclor 1254	11097-69-1	< 0.354	< 0.109	< 2.66	< 1.04	< 2.1	< 21.9	< 5.58	< 5.53	< 5.5	< 1.09	< 1.17
Aroclor 1260	11096-82-5	< 0.354	< 0.109	< 2.66	< 1.04	< 2.1	< 21.9	< 5.58	< 5.53	< 5.5	< 1.09	< 1.17
Sum of Detections		**2.1**	**0.501**	**14**	**5.17**	**11.3**	**85.9**	**55.4**	**59.2**	**59.4**	**7.98**	**11.3**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nD-8-16 20 11/18/2016 8-16 (20-22)_111	nD-8-16 22 11/18/2016 -8-16 (22-24)_1118	nD-8-16 24 11/18/2016 -8-16 (24-26)_1118	nD-8-16 26 11/18/2016 8-16 (26-28)_111	nD-8-16 28 11/18/2016 nD-8-16 (28-30)	nD-8-16 28 11/18/2016 DUP-111816 (01)	nD-N6-17 0 9/18/2017 nD-N6-17 (0-2)	nD-N6-17 2 9/18/2017 nD-N6-17 (2-4)	nD-n6-17 4 9/18/2017 nD-n6-17 (4-6)	nD-n6-17 6 9/18/2017 nD-n6-17 (6-8)	nD-n6-17 8 9/18/2017 nD-n6-17 (8-10	nE-16-17 8 9/19/2017 nE-16-17 (8-10	nE-16-17 10 9/19/2017 E-16-17 (10-12
	CAS													
Aroclor 1016	12674-11-2	< 1.13	< 5.71	< 1.16	< 5.51	< 0.112	< 2.15	< 0.366	< 1.41	< 1.8	< 7.26	< 6.97	< 7.19	< 1.41
Aroclor 1221	11104-28-2	< 2.29	< 11.6	< 2.36	< 11.2	< 0.227	< 4.36	< 0.743	< 2.86	< 3.65	< 14.7	< 14.1	< 14.6	< 2.87
Aroclor 1232	11141-16-5	< 1.13	< 5.71	< 1.16	< 5.51	< 0.112	< 2.15	< 0.366	< 1.41	< 1.8	< 7.26	< 6.97	< 7.19	< 1.41
Aroclor 1242	53469-21-9	**10.7**	**62.2**	**8.77**	**27.8**	< 0.112	**7.33**	**2.05**	**13.1**	**17.1**	**35**	**18.8**	**62.9**	**13.1**
Aroclor 1248	12672-29-6	< 1.13	< 5.71	< 1.16	< 5.51	< 0.112	< 2.15	< 0.366	< 1.41	< 1.8	< 7.26	< 6.97	< 7.19	< 1.41
Aroclor 1254	11097-69-1	< 1.13	< 5.71	< 1.16	< 5.51	< 0.112	< 2.15	< 0.366	< 1.41	< 1.8	< 7.26	< 6.97	< 7.19	< 1.41
Aroclor 1260	11096-82-5	< 1.13	< 5.71	**1.38**	< 5.51	< 0.112	< 2.15	< 0.366	< 1.41	< 1.8	< 7.26	< 6.97	< 7.19	< 1.41
Sum of Detections		**10.7**	**62.2**	**10.15**	**27.8**	0	**7.33**	**2.05**	**13.1**	**17.1**	**35**	**18.8**	**62.9**	**13.1**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nE-16-17 12 9/19/2017 nE-16-17 (12-14	nE-16-17 12 9/19/2017 REP091917DC-1	nE-16-17 14 9/19/2017 nE-16-17 (14-16)	nE-16-17 16 9/19/2017 nE-16-17 (16-18)	nE-16-17 18 9/19/2017 nE-16-17 (18-20)	nE-16-17 20 9/19/2017 nE-16-17 (20-22)	nE-16-17 22 9/19/2017 nE-16-17 (22-24)	nE-8-16 0 11/18/2016 nE-8-16 (0-2)	nE-8-16 2 11/18/2016 nE-8-16 (2-4)	nE-8-16 4 11/18/2016 nE-8-16 (4-6)	nE-8-16 6 11/18/2016 nE-8-16 (6-8)	nE-8-16 8 11/18/2016 nE-8-16 (8-10)	nE-8-16 10 11/18/2016 nE-8-16 (10-12)
	CAS													
Aroclor 1016	12674-11-2	< 13.9	< 14.4	< 14.4 CHM1	< 7.11	< 14.3	< 14.5	< 14.6	< 0.109	< 0.105	< 1.07	< 10.8	< 10.8	< 0.347
Aroclor 1221	11104-28-2	< 28.3	< 29.2	< 29.3	< 14.4	< 29	< 29.5	< 29.6	< 0.222	< 0.214	< 2.18	< 21.9	< 21.9	< 0.704
Aroclor 1232	11141-16-5	< 13.9	< 14.4	< 14.4	< 7.11	< 14.3	< 14.5	< 14.6	< 0.109	< 0.105	< 1.07	< 10.8	< 10.8	< 0.347
Aroclor 1242	53469-21-9	**93.3**	**105**	**40.9 CH**	**75.8**	**65.3**	**67.2**	**15**	**0.707**	**0.7**	**7.84**	**59.4**	**73.1**	**2.53**
Aroclor 1248	12672-29-6	< 13.9	< 14.4	< 14.4	< 7.11	< 14.3	< 14.5	< 14.6	< 0.109	< 0.105	< 1.07	< 10.8	< 10.8	< 0.347
Aroclor 1254	11097-69-1	< 13.9	< 14.4	< 14.4	< 7.11	< 14.3	< 14.5	< 14.6	< 0.109	< 0.105	< 1.07	< 10.8	< 10.8	< 0.347
Aroclor 1260	11096-82-5	< 13.9	< 14.4	< 14.4 M1	< 7.11	< 14.3	< 14.5	< 14.6	< 0.109	< 0.105	< 1.07	< 10.8	< 10.8	< 0.347
Sum of Detections		**93.3**	**105**	**40.9**	**75.8**	**65.3**	**67.2**	**15**	**0.707**	**0.7**	**7.84**	**59.4**	**73.1**	**2.53**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nE-8-16 12 11/18/2016 nE-8-16 (12-14)	nE-8-16 14 11/18/2016 nE-8-16 (14-16)	nE-8-16 16 11/18/2016 nE-8-16 (16-18)	nE-8-16 18 11/18/2016 nE-8-16 (18-20)	nE-8-16 20 11/18/2016 nE-8-16 (20-22)	nE-8-16 22 11/18/2016 nE-8-16 (22-24)	nE-8-16 24 11/18/2016 nE-8-16 (24-26)	nE-8-16 26 11/18/2016 nE-8-16 (26-28)	nE-8-16 28 11/18/2016 nE-8-16 (28-30)	nE-n6-17 0 10/5/2017 nE-n6-17 (0-2)	nE-n6-17 2 10/5/2017 nE-n6-17 (2-4)	nE-n6-17 4 10/5/2017 nE-n6-17 (4-6)	nE-n6-17 6 10/5/2017 nE-n6-17 (6-8)
	CAS													
Aroclor 1016	12674-11-2	< 5.83	< 5.87	< 2.29	< 5.45	< 2.88	< 5.43	< 5.42	< 2.73	< 0.102	< 0.685	< 3.6	< 3.56	< 3.56
Aroclor 1221	11104-28-2	< 11.8	< 11.9	< 4.64	< 11.1	< 5.84	< 11	< 11	< 5.54	< 0.207	< 1.39	< 7.31	< 7.23	< 7.23
Aroclor 1232	11141-16-5	< 5.83	< 5.87	< 2.29	< 5.45	< 2.88	< 5.43	< 5.42	< 2.73	< 0.102	< 0.685	< 3.6	< 3.56	< 3.56
Aroclor 1242	53469-21-9	**28.4**	**49.3**	**14.4**	**33.5**	**17**	**34.1**	**57**	**24.3**	**0.36**	**5.43**	**37.4**	**28.1**	**46.2**
Aroclor 1248	12672-29-6	< 5.83	< 5.87	< 2.29	< 5.45	< 2.88	< 5.43	< 5.42	< 2.73	< 0.102	< 0.685	< 3.6	< 3.56	< 3.56
Aroclor 1254	11097-69-1	< 5.83	< 5.87	< 2.29	< 5.45	< 2.88	< 5.43	< 5.42	< 2.73	< 0.102	< 0.685	< 3.6	< 3.56	< 3.56
Aroclor 1260	11096-82-5	< 5.83	< 5.87	< 2.29	< 5.45	< 2.88	< 5.43	< 5.42	< 2.73	< 0.102	< 0.685	< 3.6	< 3.56	< 3.56
Sum of Detections		**28.4**	**49.3**	**14.4**	**33.5**	**17**	**34.1**	**57**	**24.3**	**0.36**	**5.43**	**37.4**	**28.1**	**46.2**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nE-n6-17 8 10/5/2017 nE-n6-17 (8-10)	nE-n6-17 10 10/5/2017 nE-n6-17 (10-12)	nF-11-16 2 11/28/2016 nF-11-16 (2-4)	nF-11-16 4 11/28/2016 nF-11-16 (4-6)	nF-11-16 6 11/28/2016 nF-11-16 (6-8)	nF-11-16 8 11/28/2016 nF-11-16 (8-10)	nF-11-16 10 11/29/2016 nF-11-16 (10-12.5)	nF-12-16 2 11/28/2016 nF-12-16 (2-4)	nF-12-16 4 11/28/2016 nF-12-16 (4-6)	nF-12-16 6 11/28/2016 nF-12-16 (6-8)	nF-12-16 8 11/28/2016 nF-12-16 (8-10)	nF-12-16 10 11/28/2016 nF-12-16 (10-12.5
	CAS												
Aroclor 1016	12674-11-2	< 0.72	< 0.341	< 0.106	< 2.14	< 2.13	< 5.34	< 10.4	< 0.104	< 21	< 2.69	< 10.7	< 10.7
Aroclor 1221	11104-28-2	< 1.46	< 0.692	< 0.215	< 4.34	< 4.32	< 10.8	< 21	< 0.211	< 42.7	< 5.47	< 21.7	< 21.7
Aroclor 1232	11141-16-5	< 0.72	< 0.341	< 0.106	< 2.14	< 2.13	< 5.34	< 10.4	< 0.104	< 21	< 2.69	< 10.7	< 10.7
Aroclor 1242	53469-21-9	**7.41**	**2.16**	**0.436 J**	**15.4**	**18.1**	**30.1**	**61.4**	**0.575**	**280**	**20.1**	**107**	**56.7**
Aroclor 1248	12672-29-6	< 0.72	< 0.341	< 0.106	< 2.14	< 2.13	< 5.34	< 10.4	< 0.104	< 21	< 2.69	< 10.7	< 10.7
Aroclor 1254	11097-69-1	< 0.72	< 0.341	< 0.106	< 2.14	< 2.13	< 5.34	< 10.4	< 0.104	< 21	< 2.69	< 10.7	< 10.7
Aroclor 1260	11096-82-5	< 0.72	< 0.341	< 0.106	< 2.14	< 2.13	< 5.34	< 10.4	< 0.104	< 21	< 2.69	< 10.7	< 10.7
Sum of Detections		**7.41**	**2.16**	**0.436**	**15.4**	**18.1**	**30.1**	**61.4**	**0.575**	**280**	**20.1**	**107**	**56.7**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nF-16-17 8 9/18/2017 nF-16-17 (8-10)	nF-16-17 10 9/18/2017 nF-16-17 (10-12)	nF-16-17 12 9/18/2017 nF-16-17 (12-14)	nF-16-17 14 9/18/2017 nF-16-17 (14-16)	nF-16-17 16 9/18/2017 nF-16-17 (16-18)	nF-16-17 18 9/18/2017 nF-16-17 (18-20)	nF-16-17 20 9/18/2017 nF-16-17 (20-22)	nF-16-17 22 9/18/2017 nF-16-17 (22-24)	nF-16-17 24 9/18/2017 nF-16-17 (24-26)	nF-16-17 26 9/18/2017 nF-16-17 (26-28)	nF-17-17 8 9/19/2017 nF-17-17 (8-10)	nF-17-17 10 9/19/2017 nF-17-17 (10-12	nF-17-17 12 9/19/2017 nF-17-17 (12-14
	CAS													
Aroclor 1016	12674-11-2	< 7.15	< 7.09	< 3.73	< 7.24	< 3.58	< 0.711	< 3.69	< 1.5	< 7.58	< 3.76	< 3.62	< 7.07	< 14.6
Aroclor 1221	11104-28-2	< 14.5	< 14.4	< 7.58	< 14.7	< 7.27	< 1.44	< 7.49	< 3.04	< 15.4	< 7.64	< 7.34	< 14.4	< 29.5
Aroclor 1232	11141-16-5	< 7.15	< 7.09	< 3.73	< 7.24	< 3.58	< 0.711	< 3.69	< 1.5	< 7.58	< 3.76	< 3.62	< 7.07	< 14.6
Aroclor 1242	53469-21-9	**47.4 J**	**49.7 J**	**39 J**	**49.2 J**	**31.4 J**	**5.15**	**34.9 J**	**10**	**47.7**	**27**	**16.4**	**79.5**	**22**
Aroclor 1248	12672-29-6	< 7.15	< 7.09	< 3.73	< 7.24	< 3.58	< 0.711	< 3.69	< 1.5	< 7.58	< 3.76	< 3.62	< 7.07	< 14.6
Aroclor 1254	11097-69-1	< 7.15	< 7.09	< 3.73	< 7.24	< 3.58	< 0.711	< 3.69	< 1.5	< 7.58	< 3.76	< 3.62	< 7.07	< 14.6
Aroclor 1260	11096-82-5	< 7.15	< 7.09	< 3.73	< 7.24	< 3.58	< 0.711	< 3.69	< 1.5	< 7.58	< 3.76	< 3.62	< 7.07	< 14.6
Sum of Detections		**47.4**	**49.7**	**39**	**49.2**	**31.4**	**5.15**	**34.9**	**10**	**47.7**	**27**	**16.4**	**79.5**	**22**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nF-9-16 10 12/14/2016 nF-9-16 (10-12)	nF-9-16 12 12/14/2016 nF-9-16 (12-14)	nF-9-16 14 12/14/2016 nF-9-16 (14-16)	nF-9-16 16 12/14/2016 nF-9-16 (16-18)	nF-9-16 18 12/14/2016 nF-9-16 (18-20)	nF-9-16 20 12/14/2016 nF-9-16 (20-22)	nF-9-16 22 12/14/2016 nF-9-16 (22-24)	nF-9-16 24 12/14/2016 nF-9-16 (24-26)	nG-11-16 2 11/29/2016 nG-11-16 (2-4)	nG-11-16 4 11/29/2016 nG-11-16 (4-6)	nG-11-16 6 11/29/2016 nG-11-16 (6-8)	nG-11-16 8 11/29/2016 nG-11-16 (8-10)
	CAS												
Aroclor 1016	12674-11-2	< 13.3	< 27.2	< 54.7	< 54.1	< 10.9	< 10.9	< 10.9	< 0.101	< 1.03	< 2.16	< 10.3	< 10.3
Aroclor 1221	11104-28-2	< 27.1	< 55.3	< 111	< 110	< 22.1	< 22.1	< 22.2	< 0.205	< 2.1	< 4.38	< 20.9	< 20.9
Aroclor 1232	11141-16-5	< 13.3	< 27.2	< 54.7	< 54.1	< 10.9	< 10.9	< 10.9	< 0.101	< 1.03	< 2.16	< 10.3	< 10.3
Aroclor 1242	53469-21-9	**118**	**235**	**469**	**627**	**82.9**	**55.6**	**116**	**0.29**	**4.96**	**16.4**	**53.7**	**73.9**
Aroclor 1248	12672-29-6	< 13.3	< 27.2	< 54.7	< 54.1	< 10.9	< 10.9	< 10.9	< 0.101	< 1.03	< 2.16	< 10.3	< 10.3
Aroclor 1254	11097-69-1	< 13.3	< 27.2	< 54.7	< 54.1	< 10.9	< 10.9	< 10.9	< 0.101	< 1.03	< 2.16	< 10.3	< 10.3
Aroclor 1260	11096-82-5	< 13.3	< 27.2	< 54.7	< 54.1	< 10.9	< 10.9	< 10.9	< 0.101	< 1.03	< 2.16	< 10.3	< 10.3
Sum of Detections		**118**	**235**	**469**	**627**	**82.9**	**55.6**	**116**	**0.29**	**4.96**	**16.4**	**53.7**	**73.9**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nG-12-16 2 11/16/2016 nG-12-16 (2-4)	nG-12-16 4 11/16/2016 nG-12-16 (4-6)	nG-12-16 5 11/14/2016 nG-12-16 (5-6)	nG-12-16 6 11/16/2016 nG-12-16 (6-8)	nG-12-16 8 11/16/2016 nG-12-16 (8-10)	nG-12-16 10 11/16/2016 nG-12-16 (10-12)	nG-12-16 12 11/16/2016 nG-12-16 (12-14)	nG-12-16 14 11/16/2016 nG-12-16 (14-16)	nG-12-16 16 11/16/2016 G-12-16 (16-18	nG-12-16 18 11/16/2016 G-12-16 (18-20	nG-12-16 20 11/16/2016 G-12-16 (20-22	nG-12-16 22 11/16/2016 nG-12-16 (22-24
	CAS												
Aroclor 1016	12674-11-2	< 1.05	< 2.16	< 0.108	< 10.7	< 5.39	< 5.4	< 5.51	< 2.69	< 5.57	< 5.36	< 5.51	< 10.8
Aroclor 1221	11104-28-2	< 2.13	< 4.39	< 0.219	< 21.7	< 10.9	< 11	< 11.2	< 5.46	< 11.3	< 10.9	< 11.2	< 21.9
Aroclor 1232	11141-16-5	< 1.05	< 2.16	< 0.108	< 10.7	< 5.39	< 5.4	< 5.51	< 2.69	< 5.57	< 5.36	< 5.51	< 10.8
Aroclor 1242	53469-21-9	**12.4**	**26.8**	**31**	**107**	**50.7**	**62.1**	**25.2**	**28.4**	**36.1**	**63.1**	**55.2**	**94.7**
Aroclor 1248	12672-29-6	< 1.05	< 2.16	< 0.108	< 10.7	< 5.39	< 5.4	< 5.51	< 2.69	< 5.57	< 5.36	< 5.51	< 10.8
Aroclor 1254	11097-69-1	< 1.05	< 2.16	< 0.108	< 10.7	< 5.39	< 5.4	< 5.51	< 2.69	< 5.57	< 5.36	< 5.51	< 10.8
Aroclor 1260	11096-82-5	< 1.05	< 2.16	< 0.108	< 10.7	< 5.39	< 5.4	< 5.51	< 2.69	< 5.57	< 5.36	< 5.51	< 10.8
Sum of Detections		**12.4**	**26.8**	**31**	**107**	**50.7**	**62.1**	**25.2**	**28.4**	**36.1**	**63.1**	**55.2**	**94.7**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
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ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nG-12-16 24 11/16/2016 nG-12-16 (24-26)	nG-12-16 26 11/16/2016 nG-12-16 (26-28)	nG-19-16 10 12/13/2016 nG-19-16 (10-12)	nG-19-16 12 12/13/2016 nG-19-16 (12-14)	nG-19-16 14 12/13/2016 nG-19-16 (14-16)	nG-19-16 16 12/13/2016 nG-19-16 (16-18)	nG-19-16 18 12/13/2016 nG-19-16 (18-20)	nG-9-16 2 11/14/2016 nG-9-16 (2-4)	nG-9-16 4 11/14/2016 nG-9-16 (4-6)	nG-9-16 6 11/14/2016 nG-9-16 (6-8)	nG-9-16 8 11/14/2016 nG-9-16 (8-10)	nG-9-16 10 11/14/2016 nG-9-16 (10-12	nG-9-16 12 11/14/2016 nG-9-16 (12-14
	CAS													
Aroclor 1016	12674-11-2	< 0.11	< 0.101	< 10.8	< 10.7	< 2.71	< 5.34	< 5.07	< 0.107	< 2.7	< 10.9	< 10.8	< 5.42	< 5.41
Aroclor 1221	11104-28-2	< 0.223	< 0.204	< 21.9	< 21.7	< 5.5	< 10.8	< 10.3	< 0.217	< 5.47	< 22	< 21.9	< 11	< 11
Aroclor 1232	11141-16-5	< 0.11	< 0.101	< 10.8	< 10.7	< 2.71	< 5.34	< 5.07	< 0.107	< 2.7	< 10.9	< 10.8	< 5.42	< 5.41
Aroclor 1242	53469-21-9	**1.68**	**0.329**	**100**	**125**	**36.2**	**45.1**	**16.5**	**0.112**	**20.8**	**156**	**96**	**45.7**	**25.9**
Aroclor 1248	12672-29-6	< 0.11	< 0.101	< 10.8	< 10.7	< 2.71	< 5.34	< 5.07	< 0.107	< 2.7	< 10.9	< 10.8	< 5.42	< 5.41
Aroclor 1254	11097-69-1	< 0.11	< 0.101	< 10.8	< 10.7	< 2.71	< 5.34	< 5.07	< 0.107	< 2.7	< 10.9	< 10.8	< 5.42	< 5.41
Aroclor 1260	11096-82-5	**1.43**	< 0.101	< 10.8	< 10.7	< 2.71	< 5.34	< 5.07	< 0.107	< 2.7	< 10.9	< 10.8	< 5.42	< 5.41
Sum of Detections		**3.11**	**0.329**	**100**	**125**	**36.2**	**45.1**	**16.5**	**0.112**	**20.8**	**156**	**96**	**45.7**	**25.9**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nG-9-16 14 11/14/2016 nG-9-16 (14-15)	nH-10-16 8 12/8/2016 nH-10-16 (8-10)	nH-10-16 10 12/8/2016 nH-10-16 (10-12)	nH-10-16 12 12/8/2016 nH-10-16 (12-14)	nH-10-16 14 12/8/2016 nH-10-16 (14-16)	nH-10-16 16 12/8/2016 nH-10-16 (16-18)	nH-10-16 18 12/8/2016 nH-10-16 (18-20)	nH-8-16 0 11/17/2016 nH-8-16 (0-2)	nH-8-16 2 11/17/2016 nH-8-16 (2-4)	nH-8-16 4 11/17/2016 nH-8-16 (4-6)	nH-8-16 6 11/17/2016 nH-8-16 (6-8)	nH-8-16 8 11/17/2016 nH-8-16 (8-10)	nH-8-16 10 11/17/2016 nH-8-16 (10-12)
	CAS													
Aroclor 1016	12674-11-2	< 2.68	< 20.1	< 10.2	< 50.8	< 52.9	< 21.1	< 31	< 0.106	< 1.07	< 10.7	< 10.6	< 10.7	< 43.8
Aroclor 1221	11104-28-2	< 5.45	< 40.8	< 20.8	< 103	< 107	< 42.8	< 62.9	< 0.215	< 2.17	< 21.8	< 21.5	< 21.8	< 88.9
Aroclor 1232	11141-16-5	< 2.68	< 20.1	< 10.2	< 50.8	< 52.9	< 21.1	< 31	< 0.106	< 1.07	< 10.7	< 10.6	< 10.7	< 43.8
Aroclor 1242	53469-21-9	**27.3**	**113**	**100**	**373**	**439**	**227**	**476**	**1.03**	**12.6 J**	**147**	**103**	**121**	**421**
Aroclor 1248	12672-29-6	< 2.68	< 20.1	< 10.2	< 50.8	< 52.9	< 21.1	< 31	< 0.106	< 1.07	< 10.7	< 10.6	< 10.7	< 43.8
Aroclor 1254	11097-69-1	< 2.68	< 20.1	< 10.2	< 50.8	< 52.9	< 21.1	< 31	< 0.106	< 1.07	< 10.7	< 10.6	< 10.7	< 43.8
Aroclor 1260	11096-82-5	< 2.68	< 20.1	< 10.2	< 50.8	< 52.9	< 21.1	< 31	< 0.106	< 1.07	< 10.7	< 10.6	< 10.7	< 43.8
Sum of Detections		**27.3**	**113**	**100**	**373**	**439**	**227**	**476**	**1.03**	**12.6**	**147**	**103**	**121**	**421**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nH-8-16 12 11/17/2016 nH-8-16 (12-14)	nH-8-16 14 11/17/2016 nH-8-16 (14-16)	nH-8-16 14 11/17/2016 UP-111716 (03	nH-8-16 16 11/17/2016 nH-8-16 (16-18	nH-8-16 18 11/17/2016 nH-8-16 (18-20)	nH-8-16 20 11/17/2016 nH-8-16 (20-22)	nH-8-16 22 11/17/2016 nH-8-16 (22-24)	nH-9-16 8 12/8/2016 nH-9-16 (8-10)	nH-9-16 10 12/8/2016 nH-9-16 (10-12	nH-9-16 12 12/8/2016 nH-9-16 (12-14	nH-9-16 14 12/8/2016 nH-9-16 (14-16	nH-9-16 16 12/8/2016 nH-9-16 (16-18)	nH-9-16 18 12/8/2016 nH-9-16 (18-20)
	CAS													
Aroclor 1016	12674-11-2	< 21.6	< 2.21	< 2.25	< 2.2	< 2.76	< 1.06	< 0.101	< 21.8	< 54.2	< 55.3	< 130	< 21.5	< 11.1
Aroclor 1221	11104-28-2	< 43.8	< 4.48	< 4.58	< 4.46	< 5.61	< 2.15	< 0.206	< 44.2	< 110	< 112	< 263	< 43.7	< 22.6
Aroclor 1232	11141-16-5	< 21.6	< 2.21	< 2.25	< 2.2	< 2.76	< 1.06	< 0.101	< 21.8	< 54.2	< 55.3	< 130	< 21.5	< 11.1
Aroclor 1242	53469-21-9	**213**	**20.2**	**23.9**	**23**	**34.8**	**7.86**	**0.189 J**	**204**	**307**	**442**	**967**	**187**	**89.8**
Aroclor 1248	12672-29-6	< 21.6	< 2.21	< 2.25	< 2.2	< 2.76	< 1.06	< 0.101	< 21.8	< 54.2	< 55.3	< 130	< 21.5	< 11.1
Aroclor 1254	11097-69-1	< 21.6	< 2.21	< 2.25	< 2.2	< 2.76	< 1.06	< 0.101	< 21.8	< 54.2	< 55.3	< 130	< 21.5	< 11.1
Aroclor 1260	11096-82-5	< 21.6	< 2.21	< 2.25	< 2.2	< 2.76	< 1.06	< 0.101	< 21.8	< 54.2	< 55.3	< 130	< 21.5	< 11.1
Sum of Detections		**213**	**20.2**	**23.9**	**23**	**34.8**	**7.86**	**0.189**	**204**	**307**	**442**	**967**	**187**	**89.8**

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Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nl-20-16 4 11/30/2016 nl-20-16 (4-6)	nl-20-16 6 11/30/2016 nl-20-16 (6-8)	nl-20-16 8 11/30/2016 nl-20-16 (8-10)	nl-20-16 10 11/30/2016 nl-20-16 (10-12)	nl-20-16 12 11/30/2016 nl-20-16 (12-14)	nl-7-16 2 11/14/2016 nl-7-16 (2-4)	nl-7-16 4 11/14/2016 nl-7-16 (4-6)	nl-7-16 6 11/14/2016 nl-7-16 (6-8)	nl-7-16 8 11/14/2016 nl-7-16 (8-10)	nl-7-16 10 11/14/2016 nl-7-16 (10-12)	nl-7-16 12 11/14/2016 nl-7-16 (12-14)	nl-7-16 14 11/14/2016 nl-7-16 (14-15)	nl-9-16 8 12/8/2016 nl-9-16 (8-10)
	CAS													
Aroclor 1016	12674-11-2	< 2.12	< 5.34	< 10.7	< 10.7	< 5.43	< 10.8	< 5.38	< 5.44	< 5.37	< 1.05	< 1.06	< 0.101	< 11
Aroclor 1221	11104-28-2	< 4.31	< 10.8	< 21.7	< 21.8	< 11	< 22	< 10.9	< 11	< 10.9	< 2.13	< 2.15	< 0.204	< 22.2
Aroclor 1232	11141-16-5	< 2.12	< 5.34	< 10.7	< 10.7	< 5.43	< 10.8	< 5.38	< 5.44	< 5.37	< 1.05	< 1.06	< 0.101	< 11
Aroclor 1242	53469-21-9	**16.8**	**33.7**	**78.2**	**73.9**	**29.9**	**169**	**43.7**	**65.1**	**78.6**	**4.25**	**10**	< 0.101	**120**
Aroclor 1248	12672-29-6	< 2.12	< 5.34	< 10.7	< 10.7	< 5.43	< 10.8	< 5.38	< 5.44	< 5.37	< 1.05	< 1.06	< 0.101	< 11
Aroclor 1254	11097-69-1	< 2.12	< 5.34	< 10.7	< 10.7	< 5.43	< 10.8	< 5.38	< 5.44	< 5.37	< 1.05	< 1.06	< 0.101	< 11
Aroclor 1260	11096-82-5	< 2.12	< 5.34	< 10.7	< 10.7	< 5.43	< 10.8	< 5.38	< 5.44	< 5.37	< 1.05	< 1.06	< 0.101	< 11
Sum of Detections		**16.8**	**33.7**	**78.2**	**73.9**	**29.9**	**169**	**43.7**	**65.1**	**78.6**	**4.25**	**10**	0	**120**

Table 3
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nI-9-16 10 12/8/2016 nI-9-16 (10-12)	nI-9-16 12 12/8/2016 nI-9-16 (12-14)	nI-9-16 14 12/8/2016 nI-9-16 (14-16)	nI-9-16 16 12/8/2016 nI-9-16 (16-18)	nI-9-16 18 12/8/2016 nI-9-16 (18-20)	nJ-10-16 2 11/14/2016 nJ-10-16 (2-4)	nJ-10-16 4 11/14/2016 nJ-10-16 (4-6)	nJ-10-16 6 11/14/2016 nJ-10-16 (6-8)	nJ-10-16 8 11/14/2016 nJ-10-16 (8-10)	nJ-10-16 10 11/14/2016 nJ-10-16 (10-12)	nJ-10-16 12 11/14/2016 nJ-10-16 (12-14)	nJ-10-16 14 11/14/2016 nJ-10-16 (14-16)
	CAS												
Aroclor 1016	12674-11-2	< 18.5	< 5.51	< 5.44	< 11.2	< 5.55	< 5.41	< 5.62	< 1.08	< 5.39	< 5.39	< 5.41	< 5.42
Aroclor 1221	11104-28-2	< 37.6	< 11.2	< 11.1	< 22.7	< 11.3	< 11	< 11.4	< 2.19	< 10.9	< 10.9	< 11	< 11
Aroclor 1232	11141-16-5	< 18.5	< 5.51	< 5.44	< 11.2	< 5.55	< 5.41	< 5.62	< 1.08	< 5.39	< 5.39	< 5.41	< 5.42
Aroclor 1242	53469-21-9	**161**	**23.2**	**37.2**	**101**	**62.4**	**52.9**	**61.7**	**14.2**	**82.2**	**75**	**53**	**35.9**
Aroclor 1248	12672-29-6	< 18.5	< 5.51	< 5.44	< 11.2	< 5.55	< 5.41	< 5.62	< 1.08	< 5.39	< 5.39	< 5.41	< 5.42
Aroclor 1254	11097-69-1	< 18.5	< 5.51	< 5.44	< 11.2	< 5.55	< 5.41	< 5.62	< 1.08	< 5.39	< 5.39	< 5.41	< 5.42
Aroclor 1260	11096-82-5	< 18.5	< 5.51	< 5.44	< 11.2	< 5.55	< 5.41	< 5.62	< 1.08	< 5.39	< 5.39	< 5.41	< 5.42
Sum of Detections		**161**	**23.2**	**37.2**	**101**	**62.4**	**52.9**	**61.7**	**14.2**	**82.2**	**75**	**53**	**35.9**

Table 3
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nJ-10-16 16 11/14/2016 nJ-10-16 (16-18)	nJ-10-16 18 11/14/2016 nJ-10-16 (18-20)	nJ-10-16 20 11/16/2016 nJ-10-16 (20-22)	nJ-10-16 22 11/16/2016 nJ-10-16 (22-24)	nJ-10-16 24 11/16/2016 nJ-10-16 (24-26)	nJ-20-16 4 11/30/2016 nJ-20-16 (4-6)	nJ-20-16 6 11/30/2016 nJ-20-16 (6-8)	nJ-20-16 8 11/30/2016 nJ-20-16 (8-10)	nJ-20-16 10 11/30/2016 nJ-20-16 (10-12)	nJ-20-16 12 11/30/2016 nJ-20-16 (12-14)	nK-10-16 0 11/17/2016 nK-10-16 (0-2)_111716	nK-10-16 2 11/17/2016 nK-10-16 (2-4)_111716
	CAS												
Aroclor 1016	12674-11-2	< 5.39	< 21.9	< 5.71	< 2.76	< 0.102	< 1.06	< 2.68	< 21.7	< 22.1	< 5.35	< 0.108	< 10.8
Aroclor 1221	11104-28-2	< 10.9	< 44.5	< 11.6	< 5.59	< 0.207	< 2.15	< 5.45	< 44.1	< 44.8	< 10.9	< 0.219	< 21.9
Aroclor 1232	11141-16-5	< 5.39	< 21.9	< 5.71	< 2.76	< 0.102	< 1.06	< 2.68	< 21.7	< 22.1	< 5.35	< 0.108	< 10.8
Aroclor 1242	53469-21-9	**59.5**	**172**	**49.4**	**20.5**	**0.157**	**9.87**	**20.2**	**197**	**161**	**26.6**	**1.01**	< 105 B
Aroclor 1248	12672-29-6	< 5.39	< 21.9	< 5.71	< 2.76	< 0.102	< 1.06	< 2.68	< 21.7	< 22.1	< 5.35	< 0.108	< 10.8
Aroclor 1254	11097-69-1	< 5.39	< 21.9	< 5.71	< 2.76	< 0.102	< 1.06	< 2.68	< 21.7	< 22.1	< 5.35	< 0.108	< 10.8
Aroclor 1260	11096-82-5	< 5.39	< 21.9	< 5.71	< 2.76	< 0.102	< 1.06	< 2.68	< 21.7	< 22.1	< 5.35	< 0.108	< 10.8
Sum of Detections		**59.5**	**172**	**49.4**	**20.5**	**0.157**	**9.87**	**20.2**	**197**	**161**	**26.6**	**1.01**	0

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nK-10-16 4 11/17/2016 nK-10-16 (4-6)_111716	nK-10-16 6 11/17/2016 nK-10-16 (6-8)_111716	nK-10-16 8 11/17/2016 nK-10-16 (8-10)_111716	nK-10-16 10 11/17/2016 nK-10-16 (10-12)_111716	nK-10-16 12 11/17/2016 nK-10-16 (12-14)_111716	nK-10-16 14 11/17/2016 nK-10-16 (14-16)_111716	nK-10-16 16 11/17/2016 nK-10-16 (16-18)_111716	nK-10-16 18 11/17/2016 nK-10-16 (18-20)_111716
	CAS								
Aroclor 1016	12674-11-2	< 10.9	< 5.64	< 5.46	< 5.48	< 5.52	< 5.39	< 2.73	< 0.102
Aroclor 1221	11104-28-2	< 22.1	< 11.5	< 11.1	< 11.1	< 11.2	< 10.9	< 5.55	< 0.207
Aroclor 1232	11141-16-5	< 10.9	< 5.64	< 5.46	< 5.48	< 5.52	< 5.39	< 2.73	< 0.102
Aroclor 1242	53469-21-9	< 58.3 B	< 31.3 B	< 58.3 B	< 77.1 B	< 57.9 B	< 52.6 B	< 37.2 B	**0.164**
Aroclor 1248	12672-29-6	< 10.9	< 5.64	< 5.46	< 5.48	< 5.52	< 5.39	< 2.73	< 0.102
Aroclor 1254	11097-69-1	< 10.9	< 5.64	< 5.46	< 5.48	< 5.52	< 5.39	< 2.73	< 0.102
Aroclor 1260	11096-82-5	< 10.9	< 5.64	< 5.46	< 5.48	< 5.52	< 5.39	< 2.73	< 0.102
Sum of Detections		0	0	0	0	0	0	0	**0.164**

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Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nL-10-16 2 12/9/2016 nL-10-16 (2-4)	nL-10-16 4 12/9/2016 nL-10-16 (4-6)	nL-10-16 6 12/9/2016 nL-10-16 (6-8)	nL-11-16 2 12/9/2016 nL-11-16 (2-4)	nL-11-16 4 12/9/2016 nL-11-16 (4-6)	nL-11-16 6 12/9/2016 nL-11-16 (6-8)	nL-12-16 10 12/1/2016 nL-12-16 (10-12)	nL-12-16 12 12/1/2016 nL-12-16 (12-14)	nL-12-16 14 12/1/2016 nL-12-16 (14-16)	nL-12-16 16 12/1/2016 nL-12-16 (16-18)	nL-13-16 10 12/1/2016 nL-13-16 (10-12)	nL-13-16 12 12/1/2016 nL-13-16 (12-14)	nL-13-16 14 12/1/2016 nL-13-16 (14-16)
	CAS													
Aroclor 1016	12674-11-2	< 10.9	< 5.39	< 1.02	< 5.1	< 0.101	< 0.132	< 0.112	< 0.1	< 0.1	< 0.102	< 5.15	< 0.1	< 0.1
Aroclor 1221	11104-28-2	< 22.2	< 10.9	< 2.06	< 10.4	< 0.204	< 0.267	< 0.228	< 0.203	< 0.204	< 0.207	< 10.5	< 0.204	< 0.204
Aroclor 1232	11141-16-5	< 10.9	< 5.39	< 1.02	< 5.1	< 0.101	< 0.132	< 0.112	< 0.1	< 0.1	< 0.102	< 5.15	< 0.1	< 0.1
Aroclor 1242	53469-21-9	**94.7**	**44**	**7.16**	**13.6**	**47.9**	**0.848**	**0.208**	< 0.1	< 0.1	**0.389**	**28**	< 0.1	< 0.1
Aroclor 1248	12672-29-6	< 10.9	< 5.39	< 1.02	< 5.1	< 0.101	< 0.132	< 0.112	< 0.1	< 0.1	< 0.102	< 5.15	< 0.1	< 0.1
Aroclor 1254	11097-69-1	< 10.9	< 5.39	< 1.02	< 5.1	< 0.101	< 0.132	< 0.112	< 0.1	< 0.1	< 0.102	< 5.15	< 0.1	< 0.1
Aroclor 1260	11096-82-5	< 10.9	< 5.39	< 1.02	< 5.1	< 0.101	**15.7**	**0.194**	< 0.1	< 0.1	**0.109**	< 5.15	< 0.1	< 0.1
Sum of Detections		94.7	**44**	**7.16**	**13.6**	**47.9**	**16.548**	**0.402**	0	0	**0.498**	**28**	0	0

Table 3
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nL-13-16 16 12/1/2016 nL-13-16 (16-18)	nM-10-16 2 12/9/2016 nM-10-16 (2-4)	nM-10-16 4 12/9/2016 nM-10-16 (4-6)	nM-10-16 6 12/9/2016 nM-10-16 (6-8)	nN-10-16 8 12/20/2016 nN-10-16 (8-10)	nN-10-16 10 12/20/2016 nN-10-16 (10-12)	nN-10-16 12 12/20/2016 nN-10-16 (12-14)	nN-10-16 14 12/20/2016 nN-10-16 (14-16)	nN-10-16 16 12/20/2016 nN-10-16 (16-18)	nN-10-16 18 12/20/2016 nN-10-16 (18-20)	nN-10-16 20 12/20/2016 nN-10-16 (20-22)	nN-10-16 22 12/20/2016 nN-10-16 (22-24)
	CAS												
Aroclor 1016	12674-11-2	< 0.511	< 7.26	< 5.29	< 0.107	< 55.9	< 2.74	< 1.06	< 2.07	< 0.528	< 0.305	< 2.1	< 0.309
Aroclor 1221	11104-28-2	< 1.04	< 14.7	< 10.7	< 0.217	< 113	< 5.55	< 2.16	< 4.2	< 1.07	< 0.619	< 4.26	< 0.628
Aroclor 1232	11141-16-5	< 0.511	< 7.26	< 5.29	< 0.107	< 55.9	< 2.74	< 1.06	< 2.07	< 0.528	< 0.305	< 2.1	< 0.309
Aroclor 1242	53469-21-9	**3.78**	**107**	**44.9**	**0.386**	**551**	**38.4**	**9.52**	**24.6**	**5.42**	**3.26**	**15.2**	**3.51**
Aroclor 1248	12672-29-6	< 0.511	< 7.26	< 5.29	< 0.107	< 55.9	< 2.74	< 1.06	< 2.07	< 0.528	< 0.305	< 2.1	< 0.309
Aroclor 1254	11097-69-1	< 0.511	< 7.26	< 5.29	< 0.107	< 55.9	< 2.74	< 1.06	< 2.07	< 0.528	< 0.305	< 2.1	< 0.309
Aroclor 1260	11096-82-5	< 0.511	< 7.26	< 5.29	< 0.107	< 55.9	< 2.74	< 1.06	< 2.07	< 0.528	< 0.305	< 2.1	< 0.309
Sum of Detections		**3.78**	**107**	**44.9**	**0.386**	**551**	**38.4**	**9.52**	**24.6**	**5.42**	**3.26**	**15.2**	**3.51**

Table 3
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Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nN-11-17 0 9/25/2017 nN-11-17 (0-2)	nN-11-17 2 9/25/2017 nN-11-17 (2-4)	nN-11-17 4 9/25/2017 nN-11-17 (4-6)	nN-11-17 6 9/25/2017 nN-11-17 (6-8)	nN-11-17 8 9/25/2017 nN-11-17 (8-10)	nN-11-17 10 9/25/2017 nN-11-17 (10-12)	nN-18-16 0 12/13/2016 nN-18-16 (0-2)	nN-18-16 2 12/13/2016 nN-18-16 (2-4)	nN-18-16 4 12/13/2016 nN-18-16 (4-6)	nN-18-16 6 12/13/2016 nN-18-16 (6-8)	nN-9.5-17 0 10/5/2017 nN-9.5-17 (0-2)	nN-9.5-17 2 10/5/2017 nN-9.5-17 (2-4)	nN-9.5-17 4 10/5/2017 nN-9.5-17 (4-6)
	CAS													
Aroclor 1016	12674-11-2	< 0.0696	< 0.341	< 0.36	< 0.674	< 1.44	< 0.344	< 0.116	< 1.11	< 5.42	< 0.105	< 0.694	< 1.39	< 3.52
Aroclor 1221	11104-28-2	< 0.141	< 0.693	< 0.73	< 1.37	< 2.92	< 0.698	< 0.236	< 2.25	< 11	< 0.214	< 1.41	< 2.83	< 7.15
Aroclor 1232	11141-16-5	< 0.0696	< 0.341	< 0.36	< 0.674	< 1.44	< 0.344	< 0.116	< 1.11	< 5.42	< 0.105	< 0.694	< 1.39	< 3.52
Aroclor 1242	53469-21-9	**0.146**	**3.92**	**1.12**	< 0.674	**8.26**	**1.66**	**1.12**	**3.9**	**55.8**	**0.486**	**3.77**	**9.44**	**29.2 J**
Aroclor 1248	12672-29-6	< 0.0696	< 0.341	< 0.36	< 0.674	< 1.44	< 0.344	< 0.116	< 1.11	< 5.42	< 0.105	< 0.694	< 1.39	< 3.52
Aroclor 1254	11097-69-1	< 0.0696	< 0.341	**2.16**	**8.43**	**12.1**	**2.69**	< 0.116	< 1.11	< 5.42	< 0.105	< 0.694	< 1.39	< 3.52
Aroclor 1260	11096-82-5	< 0.0696	< 0.341	< 0.36	< 0.674	< 1.44	< 0.344	< 0.116	< 1.11	< 5.42	< 0.105	< 0.694	< 1.39	< 3.52
Sum of Detections		**0.146**	**3.92**	**3.28**	**8.43**	**20.36**	**4.35**	**1.12**	**3.9**	**55.8**	**0.486**	**3.77**	**9.44**	**29.2**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nN-9.5-17 6 10/5/2017 nN-9.5-17 (6-8)	nN-9.5-17 8 10/5/2017 nN-9.5-17 (8-10)	nN-9.5-17 10 10/5/2017 nN-9.5-17 (10-12)	nN-9.5-17 12 10/5/2017 nN-9.5-17 (12-14)	nN-9.5-17 14 10/5/2017 nN-9.5-17 (14-16)	nN-9.5-17 16 10/5/2017 nN-9.5-17 (16-18)	nN-9.5-17 18 10/5/2017 nN-9.5-17 (18-20)	nN-9.5-17 20 10/5/2017 nN-9.5-17 (20-22)	nN-9.5-17 22 10/5/2017 nN-9.5-17 (22-24)	nN-9.5-17 24 10/5/2017 nN-9.5-17 (24-26)	nN-9-16 8 12/8/2016 nN-9-16 (8-10)	nN-9-16 10 12/8/2016 nN-9-16 (10-12)
	CAS												
Aroclor 1016	12674-11-2	< 0.368	< 7.44	< 7.11	< 0.711	< 0.34	< 3.62	< 0.714	< 0.204	< 0.206	< 0.205	< 1.12	< 11.8
Aroclor 1221	11104-28-2	< 0.747	< 15.1	< 14.4	< 1.44	< 0.689	< 7.35	< 1.45	< 0.415	< 0.419	< 0.417	< 2.27	< 23.9
Aroclor 1232	11141-16-5	< 0.368	< 7.44	< 7.11	< 0.711	< 0.34	< 3.62	< 0.714	< 0.204	< 0.206	< 0.205	< 1.12	< 11.8
Aroclor 1242	53469-21-9	**2.96**	**91.1**	**68.7**	**4.4**	**0.894**	**34.6**	**7.3**	**1.33**	**1.38**	**1.92**	**5.91**	**129**
Aroclor 1248	12672-29-6	< 0.368	< 7.44	< 7.11	< 0.711	< 0.34	< 3.62	< 0.714	< 0.204	< 0.206	< 0.205	< 1.12	< 11.8
Aroclor 1254	11097-69-1	< 0.368	< 7.44	< 7.11	**6.75**	**1.91 J**	< 3.62	< 0.714	**1.28 J**	**1.44**	**1.28**	< 1.12	< 11.8
Aroclor 1260	11096-82-5	< 0.368	< 7.44	< 7.11	< 0.711	< 0.34	< 3.62	< 0.714	< 0.204	< 0.206	< 0.205	< 1.12	< 11.8
Sum of Detections		**2.96**	**91.1**	**68.7**	**11.15**	**2.804**	**34.6**	**7.3**	**2.61**	**2.82**	**3.2**	**5.91**	**129**

Table 3
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Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nN-9-16 12 12/8/2016 nN-9-16 (12-14)	nN-9-16 14 12/8/2016 nN-9-16 (14-16)	nN-9-16 16 12/8/2016 nN-9-16 (16-18)	nN-9-17 18 9/19/2017 nN-9-17 (18-20)	nN-9-17 20 9/19/2017 nN-9-17 (20-22)	nN-9-17 22 9/19/2017 nN-9-17 (22-24)	nN-9-17 24 10/4/2017 nN-9-17 (24-26)	nO-10-16 8 12/9/2016 nO-10-16 (8-10)	nO-10-16 10 12/9/2016 nO-10-16 (10-12)	nO-10-16 12 12/9/2016 nO-10-16 (12-14)	nO-10-16 14 12/9/2016 nO-10-16 (14-16)	nO-10-16 16 12/9/2016 nO-10-16 (16-18)
	CAS												
Aroclor 1016	12674-11-2	< 527	< 524	< 624	< 41.4	< 44.6	< 20.7	< 0.342	< 0.534	< 651	< 2.53	< 5.11	< 5.24
Aroclor 1221	11104-28-2	< 1070	< 1060	< 1270	< 84.1	< 90.5	< 42.1	< 0.694	< 1.08	< 1320	< 5.13	< 10.4	< 10.6
Aroclor 1232	11141-16-5	< 527	< 524	< 624	< 41.4	< 44.6	< 20.7	< 0.342	< 0.534	< 651	< 2.53	< 5.11	< 5.24
Aroclor 1242	53469-21-9	**5800**	**2140**	**4030**	**658**	**454**	**141**	**2.72**	**3.4**	**5430**	**35.9**	**56.2**	**72.1**
Aroclor 1248	12672-29-6	< 527	< 524	< 624	< 41.4	< 44.6	< 20.7	< 0.342	< 0.534	< 651	< 2.53	< 5.11	< 5.24
Aroclor 1254	11097-69-1	< 527	< 524	< 624	< 41.4	< 44.6	< 20.7	**1.88**	< 0.534	< 651	< 2.53	< 5.11	< 5.24
Aroclor 1260	11096-82-5	< 527	< 524	< 624	< 41.4	< 44.6	< 20.7	< 0.342	< 0.534	< 651	< 2.53	< 5.11	< 5.24
Sum of Detections		**5800**	**2140**	**4030**	**658**	**454**	**141**	**4.6**	**3.4**	**5430**	**35.9**	**56.2**	**72.1**

Table 3
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Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nO-10-16 18 12/20/2016 nO-10-16 (18-20)	nO-10-16 20 12/20/2016 nO-10-16 (20-22)	nO-10-16 22 12/20/2016 nO-10-16 (22-24)	nO-11-16 8 12/9/2016 nO-11-16 (8-10)	nO-11-16 10 12/9/2016 nO-11-16 (10-12)	nO-11-16 12 12/9/2016 nO-11-16 (12-14)	nO-11-16 14 12/9/2016 nO-11-16 (14-16)	nO-11-16 16 12/9/2016 nO-11-16 (16-18)	nO-8.5-17 10 10/5/2017 nO-8.5-17 (10-12)	nO-8.5-17 12 10/5/2017 nO-8.5-17 (12-14)	nO-8.5-17 14 10/5/2017 nO-8.5-17 (14-16)
	CAS											
Aroclor 1016	12674-11-2	< 0.102	< 0.101	< 0.102	< 0.315	< 0.308	< 0.102	< 0.309	< 0.102	< 3.45	< 0.218	< 0.344
Aroclor 1221	11104-28-2	< 0.206	< 0.206	< 0.208	< 0.64	< 0.625	< 0.207	< 0.628	< 0.206	< 7.01	< 0.442	< 0.698
Aroclor 1232	11141-16-5	< 0.102	< 0.101	< 0.102	< 0.315	< 0.308	< 0.102	< 0.309	< 0.102	< 3.45	< 0.218	< 0.344
Aroclor 1242	53469-21-9	**0.4**	**0.801**	< 0.102	**2.82**	**2.71**	**1.61**	**3.17**	**1.02**	**49.1**	**1.86**	**3.17 J**
Aroclor 1248	12672-29-6	< 0.102	< 0.101	< 0.102	< 0.315	< 0.308	< 0.102	< 0.309	< 0.102	< 3.45	< 0.218	< 0.344 J
Aroclor 1254	11097-69-1	**0.883**	**0.933**	**1.41**	< 0.315	< 0.308	< 0.102	< 0.309	< 0.102	< 3.45	**2.16**	**2.83 J**
Aroclor 1260	11096-82-5	< 0.102	< 0.101	< 0.102	< 0.315	< 0.308	< 0.102	< 0.309	< 0.102	< 3.45	< 0.218	< 0.344 J
Sum of Detections		**1.283**	**1.734**	**1.41**	**2.82**	**2.71**	**1.61**	**3.17**	**1.02**	**49.1**	**4.02**	**6**

Table 3
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nO-8.5-17 16 10/5/2017 nO-8.5-17 (16-18)	nO-8.5-17 18 10/5/2017 nO-8.5-17 (18-20)	nO-8.5-17 20 10/5/2017 nO-8.5-17 (20-22)	nO-8.5-17 22 10/5/2017 nO-8.5-17 (22-24)	nO-9-16 8 12/9/2016 nO-9-16 (8-10)	nO-9-16 10 12/9/2016 nO-9-16 (10-12)	nO-9-16 12 12/9/2016 nO-9-16 (12-14)	nO-9-16 14 12/9/2016 nO-9-16 (14-16)	nO-9-16 16 12/9/2016 nO-9-16 (16-18)	nO-9-16 18 12/19/2016 nO-9-16 (18-20)	nO-9-16 20 12/19/2016 nO-9-16 (20-22)	nO-9-16 22 12/19/2016 nO-9-16 (22-24)
	CAS												
Aroclor 1016	12674-11-2	< 0.0712	< 0.0684 J	< 0.208	< 0.208	< 0.111	< 110	< 5450	< 10700	< 101	< 5.09	< 217	< 0.51
Aroclor 1221	11104-28-2	< 0.145	< 0.139 J	< 0.421	< 0.422	< 0.225	< 223	< 11100	< 21700	< 206	< 10.3	< 441	< 1.04
Aroclor 1232	11141-16-5	< 0.0712	< 0.0684 J	< 0.208	< 0.208	< 0.111	< 110	< 5450	< 10700	< 101	< 5.09	< 217	< 0.51
Aroclor 1242	53469-21-9	**0.403**	**0.612 J**	**1.35**	**1.49**	**1.03**	**937**	**38700**	**88100**	**1430**	**44.7**	**3440**	**3.63**
Aroclor 1248	12672-29-6	< 0.0712	< 0.0684 J	< 0.208	< 0.208	< 0.111	< 110	< 5450	< 10700	< 101	< 5.09	< 217	< 0.51
Aroclor 1254	11097-69-1	**0.586 J**	**1.04 J**	**1.36**	**2.25**	< 0.111	< 110	< 5450	< 10700	< 101	< 5.09	< 217	< 0.51
Aroclor 1260	11096-82-5	< 0.0712	< 0.0684 J	< 0.208	< 0.208	< 0.111	< 110	< 5450	< 10700	< 101	< 5.09	< 217	< 0.51
Sum of Detections		**0.989**	**1.652**	**2.71**	**3.74**	**1.03**	**937**	**38700**	**88100**	**1430**	**44.7**	**3440**	**3.63**

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nO-n11-16 8 12/20/2016 nO-n11-16 (8-10)	nO-n11-16 10 12/20/2016 nO-n11-16 (10-12)	nO-n11-16 12 12/20/2016 nO-n11-16 (12-14)	nO-n11-16 14 12/20/2016 nO-n11-16 (14-16)	nO-n11-16 16 12/20/2016 nO-n11-16 (16-18)	nO-n11-16 18 12/20/2016 nO-n11-16 (18-20)	nO-n11-16 20 12/20/2016 nO-n11-16 (20-22)	nO-n11-16 22 12/20/2016 nO-n11-16 (22-24)	nO-n9-16 8 12/19/2016 nO-9-16 (8-10)	nO-n9-16 10 12/19/2016 nO-9-16 (10-12)	nO-n9-16 12 12/19/2016 nO-9-16 (12-14)
	CAS											
Aroclor 1016	12674-11-2	< 0.105	< 1060	< 0.511	< 51.9	< 0.525	< 0.102	< 5.13	< 0.102	< 0.113	< 109	< 11200
Aroclor 1221	11104-28-2	< 0.214	< 2160	< 1.04	< 105	< 1.07	< 0.206	< 10.4	< 0.208	< 0.23	< 221	< 22800
Aroclor 1232	11141-16-5	< 0.105	< 1060	< 0.511	< 51.9	< 0.525	< 0.102	< 5.13	< 0.102	< 0.113	< 109	< 11200
Aroclor 1242	53469-21-9	< 0.105	**9570**	**2.43**	**626**	**7.22**	**0.437**	**39.7**	**0.313**	**0.438**	**647**	**89600**
Aroclor 1248	12672-29-6	< 0.105	< 1060	< 0.511	< 51.9	< 0.525	< 0.102	< 5.13	< 0.102	< 0.113	< 109	< 11200
Aroclor 1254	11097-69-1	< 0.105	< 1060	< 0.511	< 51.9	< 0.525	**1.4**	< 5.13	**1.5**	< 0.113	< 109	< 11200
Aroclor 1260	11096-82-5	< 0.105	< 1060	< 0.511	< 51.9	< 0.525	< 0.102	< 5.13	< 0.102	**0.279**	< 109	< 11200
Sum of Detections		0	**9570**	**2.43**	**626**	**7.22**	**1.837**	**39.7**	**1.813**	**0.717**	**647**	**89600**

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nO-n9-16 14 12/19/2016 nO-9-16 (14-16)	nO-n9-16 16 12/19/2016 nO-9-16 (16-18)	nP-10-16 8 12/20/2016 nP-10-16 (8-10)	nP-10-16 10 12/20/2016 nP-10-16 (10-12)	nP-10-16 12 12/20/2016 nP-10-16 (12-14)	nP-10-16 14 12/20/2016 nP-10-16 (14-16)	nP-10-16 16 12/20/2016 nP-10-16 (16-18)	nP-10-16 18 12/20/2016 nP-10-16 (18-20)	nP-10-16 20 12/20/2016 nP-10-16 (20-22)	nP-10-16 22 12/20/2016 nP-10-16 (22-24)	nP-9-16 8 12/19/2016 nP-9-16 (8-10)	nP-9-16 10 12/19/2016 nP-9-16 (10-12)
	CAS												
Aroclor 1016	12674-11-2	< 227	< 308	< 0.102	< 0.109	< 54.5	< 0.543	< 0.307	< 0.102	< 1.04	< 0.103	< 0.112	< 0.109
Aroclor 1221	11104-28-2	< 460	< 625	< 0.207	< 0.222	< 111	< 1.1	< 0.623	< 0.207	< 2.11	< 0.208	< 0.227	< 0.221
Aroclor 1232	11141-16-5	< 227	< 308	< 0.102	< 0.109	< 54.5	< 0.543	< 0.307	< 0.102	< 1.04	< 0.103	< 0.112	< 0.109
Aroclor 1242	53469-21-9	**2340**	**2020**	**0.699**	**0.277**	**847**	**3.65**	**1.96**	< 0.102	**9.73**	**0.674**	**0.522**	**0.683**
Aroclor 1248	12672-29-6	< 227	< 308	< 0.102	< 0.109	< 54.5	< 0.543	< 0.307	< 0.102	< 1.04	< 0.103	< 0.112	< 0.109
Aroclor 1254	11097-69-1	< 227	< 308	**1.14**	< 0.109	< 54.5	< 0.543	< 0.307	**0.986**	< 1.04	< 0.103	< 0.112	< 0.109
Aroclor 1260	11096-82-5	< 227	< 308	< 0.102	< 0.109	< 54.5	< 0.543	< 0.307	< 0.102	< 1.04	< 0.103	< 0.112	< 0.109
Sum of Detections		**2340**	**2020**	**1.839**	**0.277**	**847**	**3.65**	**1.96**	**0.986**	**9.73**	**0.674**	**0.522**	**0.683**

Table 3
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nP-9-16 12 12/19/2016 nP-9-16 (12-14)	nP-9-16 14 12/19/2016 nP-9-16 (14-16)	nP-9-16 16 12/19/2016 nP-9-16 (16-18)	nP-9-16 18 12/19/2016 nP-9-16 (18-20)	nP-9-17 20 9/19/2017 nP-9-17 (20-22)	nP-9-17 22 9/19/2017 nP-9-17 (22-24)	nP-9-17 24 10/4/2017 nP-9-17 (24-26)	nP-9-17 26 10/4/2017 nP-9-17 (26-28)	nP-9-17 28 10/4/2017 nP-9-17 (28-30)	nP-n10-16 8 12/20/2016 nP-n10-16 (8-10)	nP-n10-16 10 12/20/2016 nP-n10-16 (10-12)	nP-n10-16 12 12/20/2016 nP-n10-16 (12-14)
	CAS												
Aroclor 1016	12674-11-2	< 249	< 55.5	< 104	< 2040	< 72	< 137 CHM1	< 41.2	< 0.678	< 0.0674	< 2.11	< 0.534	< 1.05
Aroclor 1221	11104-28-2	< 505	< 113	< 212	< 4130	< 146	< 278	< 83.6	< 1.38	< 0.137	< 4.29	< 1.08	< 2.14
Aroclor 1232	11141-16-5	< 249	< 55.5	< 104	< 2040	< 72	< 137	< 41.2	< 0.678	< 0.0674	< 2.11	< 0.534	< 1.05
Aroclor 1242	53469-21-9	**2920**	**866**	**1020**	**11200**	**653**	**1290 CH**	**330**	**5.1**	**0.879**	**15**	**3.38**	**8.13**
Aroclor 1248	12672-29-6	< 249	< 55.5	< 104	< 2040	< 72	< 137	< 41.2	< 0.678	< 0.0674	< 2.11	< 0.534	< 1.05
Aroclor 1254	11097-69-1	< 249	< 55.5	< 104	< 2040	< 72	< 137	< 41.2	**2.14**	**0.63**	< 2.11	< 0.534	< 1.05
Aroclor 1260	11096-82-5	< 249	< 55.5	< 104	< 2040	< 72	< 137 CHM1	< 41.2	< 0.678	< 0.0674	< 2.11	< 0.534	< 1.05
Sum of Detections		**2920**	**866**	**1020**	**11200**	**653**	**1290**	**330**	**7.24**	**1.509**	**15**	**3.38**	**8.13**

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Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nP-n10-16 14 12/20/2016 nP-n10-16 (14-16)	nP-n10-16 16 12/20/2016 nP-n10-16 (16-18)	nP-n10-16 18 12/20/2016 nP-n10-16 (18-20)	nP-n10-16 20 12/20/2016 nP-n10-16 (20-22)	nP-n10-16 22 12/20/2016 nP-n10-16 (22-24)	nP-n9-17 8 9/19/2017 nP-n9-17 (8-10)	nP-n9-17 10 9/19/2017 nP-n9-17 (10-12)	nP-n9-17 12 9/19/2017 nP-n9-17 (12-14)	nP-n9-17 14 9/19/2017 nP-n9-17 (14-16)	nP-n9-17 16 9/19/2017 nP-n9-17 (16-18)	nP-n9-17 18 9/19/2017 nP-n9-17 (18-20)
	CAS											
Aroclor 1016	12674-11-2	< 0.104	< 0.517	< 0.514	< 0.513	< 0.513	< 1.48	< 0.714	< 431	< 146	< 148	< 13.6
Aroclor 1221	11104-28-2	< 0.212	< 1.05	< 1.04	< 1.04	< 1.04	< 3	< 1.45	< 875	< 296	< 300	< 27.6
Aroclor 1232	11141-16-5	< 0.104	< 0.517	< 0.514	< 0.513	< 0.513	< 1.48	< 0.714	< 431	< 146	< 148	< 13.6
Aroclor 1242	53469-21-9	**1.63**	**4.42**	**5.33**	**4.02**	**5.23**	**14.2**	**4.77**	**3310**	**2230**	**1460**	**137**
Aroclor 1248	12672-29-6	< 0.104	< 0.517	< 0.514	< 0.513	< 0.513	< 1.48	< 0.714	< 431	< 146	< 148	< 13.6
Aroclor 1254	11097-69-1	< 0.104	< 0.517	< 0.514	< 0.513	< 0.513	< 1.48	< 0.714	< 431	< 146	< 148	< 13.6
Aroclor 1260	11096-82-5	< 0.104	< 0.517	< 0.514	< 0.513	< 0.513	< 1.48	< 0.714	< 431	< 146	< 148	< 13.6
Sum of Detections		**1.63**	**4.42**	**5.33**	**4.02**	**5.23**	**14.2**	**4.77**	**3310**	**2230**	**1460**	**137**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	nP-n9-17 20 9/19/2017 nP-n9-17 (20-22)	nP-n9-17 22 9/19/2017 nP-n9-17 (22-24)	O.5-18-17 2 10/26/2017 O.5-18-17 (2-4)	O.5-18-17 4 10/26/2017 O.5-18-17 (4-6)	O.5-18-17 6 10/26/2017 O.5-18-17 (6-8)	O.5-18-17 8 10/26/2017 O.5-18-17 (8-10)	O-10-16.E 10 11/17/2016 O-10-16.E (10-12)	O-10-16.E 12 11/17/2016 O-10-16.E (12-14)	O-10-16.N 10 11/17/2016 O-10-16.N (10-12)	O-10-16.N 12 11/17/2016 O-10-16.N (12-14)	O-10-16.W 10 11/17/2016 O-10-16.W (10-12)
	CAS											
Aroclor 1016	12674-11-2	< 42.1	< 3.45	< 0.363	< 10.7	< 0.0748	< 0.0741	< 57	< 589	< 5.49	< 5.24	< 26.8
Aroclor 1221	11104-28-2	< 85.4	< 7.01	< 0.737	< 21.7	< 0.152	< 0.15	< 116	< 1200	< 11.2	< 10.6	< 54.5
Aroclor 1232	11141-16-5	< 42.1	< 3.45	< 0.363	< 10.7	< 0.0748	< 0.0741	< 57	< 589	< 5.49	< 5.24	< 26.8
Aroclor 1242	53469-21-9	**315**	**22.2**	**4.68**	**72.6**	< 0.0748	< 0.0741	**760**	**6970**	**11.8**	**26.6**	**149**
Aroclor 1248	12672-29-6	< 42.1	< 3.45	< 0.363	< 10.7	< 0.0748	< 0.0741	< 57	< 589	< 5.49	< 5.24	< 26.8
Aroclor 1254	11097-69-1	< 42.1	< 3.45	< 0.363	< 10.7	< 0.0748	< 0.0741	< 57	< 589	< 5.49	< 5.24	< 26.8
Aroclor 1260	11096-82-5	< 42.1	< 3.45	< 0.363	< 10.7	< 0.0748	< 0.0741	< 57	< 589	< 5.49	< 5.24	< 26.8
Sum of Detections		**315**	**22.2**	**4.68**	**72.6**	0	0	**760**	**6970**	**11.8**	**26.6**	**149**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	O-10-16.W 12 11/17/2016 O-10-16.W (12-14)	O-12-16 10 11/4/2016 O-12-16 (10-12)	O-12-16 12 11/4/2016 O-12-16 (12-14)	O-12-16 14 11/4/2016 O-12-16 (14-16)	O-12-16 16 11/4/2016 O-12-16 (16-18.5)	O-12-16 18.5 11/4/2016 O-12-16 (18.5-21)	O-13-16 2 11/3/2016 O-13-16 (2-4)	O-13-16 4 11/3/2016 O-13-16 (4-6)	O-13-16 6 11/3/2016 O-13-16 (6-8)	O-13-16 8 11/3/2016 O-13-16 (8-10)	O-14-16 2 11/14/2016 O-14-16 (2-4)	O-14-16 4 11/14/2016 O-14-16 (4-6)	O-14-16 6 11/14/2016 O-14-16 (6-8)
	CAS													
Aroclor 1016	12674-11-2	< 5.25	< 0.509	< 0.101	< 0.101	< 0.101	< 0.101	< 0.519	< 5.28	< 0.102	< 0.253	< 0.105	< 5.17	< 21.2
Aroclor 1221	11104-28-2	< 10.7	< 1.03	< 0.206	< 0.205	< 0.204	< 0.206	< 1.05	< 10.7	< 0.207	< 0.513	< 0.213	< 10.5	< 43
Aroclor 1232	11141-16-5	< 5.25	< 0.509	< 0.101	< 0.101	< 0.101	< 0.101	< 0.519	< 5.28	< 0.102	< 0.253	< 0.105	< 5.17	< 21.2
Aroclor 1242	53469-21-9	**25**	< 0.509	< 0.101	< 0.101	**0.156**	**0.113**	**1.7**	**6.46**	< 0.102	**0.436**	**0.383**	**50.7**	**233**
Aroclor 1248	12672-29-6	< 5.25	< 0.509	< 0.101	< 0.101	< 0.101	< 0.101	< 0.519	< 5.28	< 0.102	< 0.253	< 0.105	< 5.17	< 21.2
Aroclor 1254	11097-69-1	< 5.25	**0.533**	< 0.101	**0.302**	**0.435**	< 0.101	< 0.519	< 5.28	**0.14**	< 0.253	< 0.105	< 5.17	< 21.2
Aroclor 1260	11096-82-5	< 5.25	< 0.509	< 0.101	**0.138**	**0.204**	< 0.101	< 0.519	< 5.28	< 0.102	< 0.253	< 0.105	< 5.17	< 21.2
Sum of Detections		**25**	**0.533**	0	**0.44**	**0.795**	**0.113**	**1.7**	**6.46**	**0.14**	**0.436**	**0.383**	**50.7**	**233**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Alternative Evaluation Report for PCBs and Metals in Soil
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Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	O-14-16 8 11/14/2016 O-14-16 (8-10)	O-17-17 0 9/22/2017 O-17-17 (0-2)	O-17-17 2 9/22/2017 O-17-17 (2-4)	O-17-17 4 9/22/2017 O-17-17 (4-6)	O-17-17 6 9/22/2017 O-17-17 (6-8)	O-17-17 8 9/22/2017 O-17-17 (8-10)	O-21-16 0 11/9/2016 O-21-16 (0-2)	O-21-16 2 11/9/2016 O-21-16 (2-4)	O-21-16 4 11/9/2016 O-21-16 (4-6)	O-6.5-17 2 10/25/2017 O-6.5-17 (2-4)	O-6.5-17 4 10/25/2017 O-6.5-17 (4-6)	O-6.5-17 6 10/25/2017 O-6.5-17 (6-8)	O-6.5-17 8 10/25/2017 O-6.5-17 (8-10)	P.5-20.5-17 2 10/26/2017 P.5-20.5-17 (2-4)
	CAS														
Aroclor 1016	12674-11-2	< 0.1	< 0.0730	< 0.0704	< 3.51	< 0.0678	< 0.0783	< 1.04	< 0.104	< 0.103	< 0.341	< 0.0741	< 0.0694	< 0.691	< 0.714
Aroclor 1221	11104-28-2	< 0.204	< 0.148	< 0.143	< 7.12	< 0.138	< 0.159	< 2.11	< 0.211	< 0.209	< 0.692	< 0.15	< 0.141	< 1.4	< 1.45
Aroclor 1232	11141-16-5	< 0.1	< 0.0730	< 0.0704	< 3.51	< 0.0678	< 0.0783	< 1.04	< 0.104	< 0.103	< 0.341	< 0.0741	< 0.0694	< 0.691	< 0.714
Aroclor 1242	53469-21-9	**0.374**	**0.16**	**0.185**	**31.1**	< 0.0678	**0.117**	**6.51**	**0.166**	**0.261**	**3.54**	**0.669**	**0.184**	< 0.691	**5.02**
Aroclor 1248	12672-29-6	< 0.1	< 0.0730	< 0.0704	< 3.51	< 0.0678	< 0.0783	< 1.04	< 0.104	< 0.103	< 0.341	< 0.0741	< 0.0694	< 0.691	< 0.714
Aroclor 1254	11097-69-1	< 0.1	< 0.0730	< 0.0704	< 3.51	< 0.0678	< 0.0783	< 1.04	< 0.104	< 0.103	< 0.341	< 0.0741	< 0.0694	**6.93**	< 0.714
Aroclor 1260	11096-82-5	< 0.1	< 0.0730	< 0.0704	< 3.51	< 0.0678	< 0.0783	< 1.04	< 0.104	< 0.103	< 0.341	< 0.0741	< 0.0694	< 0.691	< 0.714
Sum of Detections		**0.374**	**0.16**	**0.185**	**31.1**	0	**0.117**	**6.51**	**0.166**	**0.261**	**3.54**	**0.669**	**0.184**	**6.93**	**5.02**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Alternative Evaluation Report for PCBs and Metals in Soil
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	P.5-20.5-17 4 10/26/2017 P.5-20.5-17 (4-6)	P-13-17 0 9/25/2017 REP092517AD	P-13-17 0 9/25/2017 P-13-17 (0-2)	P-14-16 2 11/29/2016 P-14-16 (2-4)	P-14-16 4 11/29/2016 P-14-16 (4-6)	P-14-16 6 11/29/2016 P-14-16 (6-8)	P-14-16 8 11/29/2016 P-14-16 (8-10)	P-15-16 2 11/29/2016 P-15-16 (2-4)	P-15-16 4 11/29/2016 P-15-16 (4-6)	P-15-16 6 11/29/2016 P-15-16 (6-8)	P-15-16 8 11/29/2016 P-15-16 (8-10)	P-15-16 10 11/29/2016 P-15-16 (10-12.5)	P-22-17 0 9/26/2017 P-22-17 (0-2)	P-22-17 2 9/26/2017 P-22-17 (2-4)
	CAS														
Aroclor 1016	12674-11-2	< 0.0739	< 0.0703	< 0.0695	< 0.105	< 1.02	< 0.102	< 0.106	< 0.107	< 1.04	< 0.102	< 0.104	< 0.108	< 0.0693	< 0.0675
Aroclor 1221	11104-28-2	< 0.15	< 0.143	< 0.141	< 0.214	< 2.07	< 0.207	< 0.216	< 0.217	< 2.12	< 0.208	< 0.212	< 0.219	< 0.141	< 0.137
Aroclor 1232	11141-16-5	< 0.0739	< 0.0703	< 0.0695	< 0.105	< 1.02	< 0.102	< 0.106	< 0.107	< 1.04	< 0.102	< 0.104	< 0.108	< 0.0693	< 0.0675
Aroclor 1242	53469-21-9	**1.12**	**0.487**	**0.566**	**0.685**	**10.2**	**0.237**	< 0.106	**0.601**	**7.41**	< 0.102	< 0.104	< 0.108	**0.502**	**0.187**
Aroclor 1248	12672-29-6	< 0.0739	< 0.0703	< 0.0695	< 0.105	< 1.02	< 0.102	< 0.106	< 0.107	< 1.04	< 0.102	< 0.104	< 0.108	< 0.0693	< 0.0675
Aroclor 1254	11097-69-1	< 0.0739	< 0.0703	< 0.0695	< 0.105	< 1.02	< 0.102	< 0.106	< 0.107	< 1.04	< 0.102	< 0.104	< 0.108	< 0.0693	< 0.0675
Aroclor 1260	11096-82-5	< 0.0739	< 0.0703	< 0.0695	< 0.105	< 1.02	< 0.102	< 0.106	< 0.107	< 1.04	< 0.102	< 0.104	< 0.108	**0.161**	< 0.0675
Sum of Detections		**1.12**	**0.487**	**0.566**	**0.685**	**10.2**	**0.237**	0	**0.601**	**7.41**	0	0	0	**0.663**	**0.187**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Alternative Evaluation Report for PCBs and Metals in Soil
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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	P-22-17 4 9/26/2017 P-22-17 (4-6)	P-22-17 6 9/26/2017 P-22-17 (6-8)	P-22-17 8 9/26/2017 P-22-17 (8-10)	P-26-16 0 11/8/2016 P-26-16 (0-2)	P-30-16 6 12/7/2016 P-30-16 (6-8)	P-30-16 8 12/7/2016 P-30-16 (8-10)	P-30-16 10 12/7/2016 P-30-16 (10-12)	P-30-16 12 12/7/2016 P-30-16 (12-14)	P-30-16 14 12/7/2016 P-30-16 (14-16)	P-30-16 16 12/7/2016 P-30-16 (16-18)	P-30-16 18 12/7/2016 P-30-16 (18-20)	P-30-16 20 12/7/2016 P-30-16 (20-22)	P-30-16 22 12/7/2016 P-30-16 (22-24)
	CAS													
Aroclor 1016	12674-11-2	< 0.0678	< 0.0669	< 0.0671	< 0.11	< 5.25	< 10.7	< 10.4	< 2.65	< 2.62	< 10.4	< 2.03	< 0.994	< 0.0951
Aroclor 1221	11104-28-2	< 0.138	< 0.136	< 0.136	< 0.223	< 10.7	< 21.8	< 21	< 5.38	< 5.32	< 21	< 4.12	< 2.02	< 0.193
Aroclor 1232	11141-16-5	< 0.0678	< 0.0669	< 0.0671	< 0.11	< 5.25	< 10.7	< 10.4	< 2.65	< 2.62	< 10.4	< 2.03	< 0.994	< 0.0951
Aroclor 1242	53469-21-9	**0.113**	< 0.0669	< 0.0671	**0.292**	**45.6**	**56.3**	**104**	**20.5**	**33.8**	**59.9**	**7.65**	**15**	**0.167**
Aroclor 1248	12672-29-6	< 0.0678	< 0.0669	< 0.0671	< 0.11	< 5.25	< 10.7	< 10.4	< 2.65	< 2.62	< 10.4	< 2.03	< 0.994	< 0.0951
Aroclor 1254	11097-69-1	< 0.0678	< 0.0669	< 0.0671	< 0.11	< 5.25	< 10.7	< 10.4	< 2.65	< 2.62	< 10.4	< 2.03	< 0.994	< 0.0951
Aroclor 1260	11096-82-5	**0.0796**	< 0.0669	< 0.0671	< 0.11	< 5.25	< 10.7	< 10.4	< 2.65	< 2.62	< 10.4	< 2.03	< 0.994	< 0.0951
Sum of Detections		**0.1926**	0	0	**0.292**	**45.6**	**56.3**	**104**	**20.5**	**33.8**	**59.9**	**7.65**	**15**	**0.167**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	P-30-16 24 12/7/2016 P-30-16 (24-26)	P-30-16 26 12/7/2016 P-30-16 (26-28)	Q-10-17 8 10/25/2017 Q-10-17 (8-10)	Q-13-16 0 11/4/2016 Q-13-16 (0-2)	Q-14-17 0 9/20/2017 Q-14-17 (0-2)	Q-14-17 2 9/20/2017 Q-14-17 (2-4)	Q-14-17 4 9/20/2017 Q-14-17 (4-6)	Q-14-17 6 9/20/2017 Q-14-17 (6-8)	Q-14-17 8 9/20/2017 Q-14-17 (8-10)	Q-16-16 2 11/14/2016 Q-16-16 (2-4)	Q-16-16 4 11/14/2016 Q-16-16 (4-6)	Q-16-16 6 11/14/2016 Q-16-16 (6-8)	Q-16-16 8 11/14/2016 Q-16-16 (8-10)	Q-18-17 2 10/26/2017 Q-18-17 (2-4)
	CAS														
Aroclor 1016	12674-11-2	< 1.01	< 0.474	< 0.0660	< 0.105	< 0.0715	< 0.0692	< 0.348	< 0.0669	< 0.0668	< 2.62	< 1.12	< 0.115	< 0.1	< 0.0708
Aroclor 1221	11104-28-2	< 2.05	< 0.962	< 0.134	< 0.214	< 0.145	< 0.141	< 0.706	< 0.136	< 0.136	< 5.31	< 2.28	< 0.233	< 0.204	< 0.144
Aroclor 1232	11141-16-5	< 1.01	< 0.474	< 0.0660	< 0.105	< 0.0715	< 0.0692	< 0.348	< 0.0669	< 0.0668	< 2.62	< 1.12	< 0.115	< 0.1	< 0.0708
Aroclor 1242	53469-21-9	**8.76**	**3.22**	< 0.0660	**0.248**	**0.757**	**0.829**	**3.36**	**0.304**	**0.129**	**14.8**	**9.27**	< 0.115	< 0.1	**0.516**
Aroclor 1248	12672-29-6	< 1.01	< 0.474	< 0.0660	< 0.105	< 0.0715	< 0.0692	< 0.348	< 0.0669	< 0.0668	< 2.62	< 1.12	< 0.115	< 0.1	< 0.0708
Aroclor 1254	11097-69-1	< 1.01	< 0.474	< 0.0660	< 0.105	< 0.0715	< 0.0692	< 0.348	< 0.0669	< 0.0668	< 2.62	< 1.12	< 0.115	< 0.1	**0.595**
Aroclor 1260	11096-82-5	< 1.01	**0.86**	< 0.0660	< 0.105	< 0.0715	< 0.0692	< 0.348	< 0.0669	< 0.0668	< 2.62	< 1.12	< 0.115	< 0.1	**0.0744**
Sum of Detections		**8.76**	**4.08**	0	**0.248**	**0.757**	**0.829**	**3.36**	**0.304**	**0.129**	**14.8**	**9.27**	0	0	**1.1854**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	Q-18-17 4 10/26/2017 Q-18-17 (4-6)	Q-18-17 6 10/26/2017 Q-18-17 (6-8)	Q-18-17 8 10/26/2017 Q-18-17 (8-10)	Q-19-16 0 11/15/2016 Q-19-16 (0-2)	Q-19-16 2 11/15/2016 Q-19-16 (2-4)	Q-19-16 4 11/15/2016 Q-19-16 (4-6)	Q-19-16 6 11/15/2016 Q-19-16 (6-8)	Q-19-16 8 11/15/2016 Q-19-16 (8-10)	Q-19-16 10 11/15/2016 Q-19-16 (10-12)	Q-19-16 12 11/15/2016 Q-19-16 (12-14)	Q-19-16 14 11/15/2016 Q-19-16 (14-16)	Q-19-16 16 11/15/2016 Q-19-16 (16-18)	Q-19-16 18 11/15/2016 Q-19-16 (18-20)
	CAS													
Aroclor 1016	12674-11-2	< 1.41	< 0.0681	< 0.0717 R1	< 0.109	< 2.6	< 0.515	< 0.106	< 0.1	< 0.101	< 0.101	< 0.102	< 0.101	< 0.101
Aroclor 1221	11104-28-2	< 2.86	< 0.138	< 0.146	< 0.221	< 5.28	< 1.05	< 0.215	< 0.204	< 0.205	< 0.205	< 0.207	< 0.205	< 0.206
Aroclor 1232	11141-16-5	< 1.41	< 0.0681	< 0.0717	< 0.109	< 2.6	< 0.515	< 0.106	< 0.1	< 0.101	< 0.101	< 0.102	< 0.101	< 0.101
Aroclor 1242	53469-21-9	**17.3**	< 0.0681	< 0.0717	**0.465 J**	**22.3**	**3.41**	**0.26**	**0.16**	**0.906**	**0.101**	**0.207**	**0.655**	< 0.101
Aroclor 1248	12672-29-6	< 1.41	< 0.0681	< 0.0717	< 0.109	< 2.6	< 0.515	< 0.106	< 0.1	< 0.101	< 0.101	< 0.102	< 0.101	< 0.101
Aroclor 1254	11097-69-1	< 1.41	< 0.0681	< 0.0717	< 0.109	< 2.6	< 0.515	< 0.106	< 0.1	< 0.101	< 0.101	< 0.102	< 0.101	< 0.101
Aroclor 1260	11096-82-5	< 1.41	< 0.0681	< 0.0717	< 0.109	< 2.6	< 0.515	< 0.106	< 0.1	< 0.101	< 0.101	< 0.102	< 0.101	< 0.101
Sum of Detections		**17.3**	0	0	**0.465**	**22.3**	**3.41**	**0.26**	**0.16**	**0.906**	**0.101**	**0.207**	**0.655**	0

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	Q-6.5-17 2 10/27/2017 Q-6.5-17 (2-4)	Q-6.5-17 4 10/27/2017 Q-6.5-17 (4-6)	Q-6.5-17 6 10/27/2017 Q-6.5-17 (6-8)	Q-6.5-17 8 10/27/2017 Q-6.5-17 (8-10)	R.5-14.5-17 2 10/25/2017 R.5-14.5-17 (2-4)	R.5-14.5-17 4 10/25/2017 R.5-14.5-17 (4-6)	R.5-14.5-17 6 10/25/2017 R.5-14.5-17 (6-8)	R.5-14.5-17 8 10/25/2017 R.5-14.5-17 (8-10	R.5-16-17 2 10/25/2017 R.5-16-17 (2-4)	R.5-16-17 4 10/25/2017 R.5-16-17 (4-6)	R.5-16-17 6 10/25/2017 R.5-16-17 (6-8)	R.5-16-17 8 10/25/2017 R.5-16-17 (8-10)
	CAS												
Aroclor 1016	12674-11-2	< 1.54	< 0.0688	< 0.0685	< 0.0674	< 0.69	< 0.346	< 0.0770	< 0.0668	< 0.0691	< 0.683	< 0.0694	< 0.0670
Aroclor 1221	11104-28-2	< 3.12	< 0.14	< 0.139	< 0.137	< 1.4	< 0.703	< 0.156	< 0.136	< 0.14	< 1.39	< 0.141	< 0.136
Aroclor 1232	11141-16-5	< 1.54	< 0.0688	< 0.0685	< 0.0674	< 0.69	< 0.346	< 0.0770	< 0.0668	< 0.0691	< 0.683	< 0.0694	< 0.0670
Aroclor 1242	53469-21-9	**8.91**	**0.421**	< 0.0685	**0.0923**	**8.13**	**3.89**	< 0.0770	< 0.0668	**0.101**	**6.46**	< 0.0694	< 0.0670
Aroclor 1248	12672-29-6	< 1.54	< 0.0688	< 0.0685	< 0.0674	< 0.69	< 0.346	< 0.0770	< 0.0668	< 0.0691	< 0.683	< 0.0694	< 0.0670
Aroclor 1254	11097-69-1	< 1.54	**0.248**	< 0.0685	**0.275**	< 0.69	< 0.346	< 0.0770	< 0.0668	< 0.0691	< 0.683	< 0.0694	< 0.0670
Aroclor 1260	11096-82-5	< 1.54	< 0.0688	< 0.0685	< 0.0674	< 0.69	< 0.346	< 0.0770	< 0.0668	< 0.0691	< 0.683	< 0.0694	< 0.0670
Sum of Detections		**8.91**	**0.669**	0	**0.3673**	**8.13**	**3.89**	0	0	**0.101**	**6.46**	0	0

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	R.5-19.5-17 4 10/25/2017 R.5-19.5-17 (4-6)	R-11-17 0 9/27/2017 R-11-17 (0-2)	R-13-17 0 9/20/2017 R-13-17 (0-2)	R-15-17 0 9/20/2017 R-15-17 (0-2)	R-15-17 2 9/20/2017 R-15-17 (2-4)	R-15-17 4 9/20/2017 R-15-17 (4-6)	R-15-17 6 9/20/2017 R-15-17 (6-8)	R-15-17 8 9/20/2017 R-15-17 (8-10)	R-17-17 0 9/26/2017 R-17-17 (0-2)	R-17-17 2 9/26/2017 R-17-17 (2-4)	R-17-17 4 9/26/2017 R-17-17 (4-6)	R-17-17 6 9/26/2017 R-17-17 (6-8)	R-17-17 8 9/26/2017 R-17-17 (8-10)	R-21-17 0 9/26/2017 R-21-17 (0-2)
	CAS														
Aroclor 1016	12674-11-2	< 0.699	< 0.344 M1	< 0.0694	< 0.0664	< 1.39	< 1.36	< 0.0783	< 0.0763	< 0.0702	< 0.0688	< 3.58	< 0.0748	< 0.0751	< 0.0705
Aroclor 1221	11104-28-2	< 1.42	< 0.699	< 0.141	< 0.135	< 2.83	< 2.77	< 0.159	< 0.155	< 0.143	< 0.14	< 7.28	< 0.152	< 0.152	< 0.143
Aroclor 1232	11141-16-5	< 0.699	< 0.344	< 0.0694	< 0.0664	< 1.39	< 1.36	< 0.0783	< 0.0763	< 0.0702	< 0.0688	< 3.58	< 0.0748	< 0.0751	< 0.0705
Aroclor 1242	53469-21-9	**9.51**	**1.83 J**	**0.391**	**0.87**	**11.8**	**9.6**	**0.276**	**0.305**	**0.147**	**0.285**	**42.1**	**0.151**	< 0.0751	**0.388**
Aroclor 1248	12672-29-6	< 0.699	< 0.344 J	< 0.0694	< 0.0664	< 1.39	< 1.36	< 0.0783	< 0.0763	< 0.0702	< 0.0688	< 3.58	< 0.0748	< 0.0751	< 0.0705
Aroclor 1254	11097-69-1	< 0.699	< 0.344 J	< 0.0694	< 0.0664	< 1.39	< 1.36	< 0.0783	< 0.0763	**0.41**	< 0.0688	< 3.58	< 0.0748	< 0.0751	< 0.0705
Aroclor 1260	11096-82-5	< 0.699	< 0.344 J	< 0.0694	< 0.0664	< 1.39	< 1.36	< 0.0783	< 0.0763	< 0.0702	**0.138**	< 3.58	< 0.0748	< 0.0751	**0.0930**
Sum of Detections		**9.51**	**1.83**	**0.391**	**0.87**	**11.8**	**9.6**	**0.276**	**0.305**	**0.557**	**0.423**	**42.1**	**0.151**	0	**0.481**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	R-21-17 2 9/26/2017 R-21-17 (2-4)	R-21-17 4 9/26/2017 R-21-17 (4-6)	R-21-17 6 9/26/2017 R-21-17 (6-8)	R-21-17 8 9/26/2017 R-21-17 (8-10)	R-22-16 0 11/16/2016 R-22-16 (0-2)	R-22-16 2 11/14/2016 R-22-16 (2-4)	R-22-16 4 11/14/2016 R-22-16 (4-6)	R-22-16 6 11/14/2016 R-22-16 (6-8)	R-22-16 8 11/14/2016 R-22-16 (8-10)	R-26-16 0 11/8/2016 R-26-16 (0-2)	S-10-16 0 11/15/2016 S-10-16 (0-2)	S-12-17 0 9/20/2017 S-12-17 (0-2)	S-14-17 0 9/20/2017 S-14-17 (0-2)	S-16-17 0 9/20/2017 S-16-17 (0-2)
	CAS														
Aroclor 1016	12674-11-2	< 0.0702	< 0.0691	< 0.0680	< 0.0687	< 0.543	< 0.51	< 0.101	< 0.1	< 0.101	< 0.114	< 0.104	< 0.206	< 0.0997	< 0.0682
Aroclor 1221	11104-28-2	< 0.142	< 0.14	< 0.138	< 0.139	< 1.1	< 1.03	< 0.206	< 0.204	< 0.205	< 0.232	< 0.21	< 0.418	< 0.202	< 0.138
Aroclor 1232	11141-16-5	< 0.0702	< 0.0691	< 0.0680	< 0.0687	< 0.543	< 0.51	< 0.101	< 0.1	< 0.101	< 0.114	< 0.104	< 0.206	< 0.0997	< 0.0682
Aroclor 1242	53469-21-9	**0.992**	**0.126**	< 0.0680	< 0.0687	**4.5**	**2.17**	< 0.101	**0.237**	< 0.101	**1.06**	**1.22**	**1.8**	**0.713**	**0.935**
Aroclor 1248	12672-29-6	< 0.0702	< 0.0691	< 0.0680	< 0.0687	< 0.543	< 0.51	< 0.101	< 0.1	< 0.101	< 0.114	< 0.104	< 0.206	< 0.0997	< 0.0682
Aroclor 1254	11097-69-1	< 0.0702	< 0.0691	< 0.0680	< 0.0687	< 0.543	< 0.51	< 0.101	< 0.1	< 0.101	< 0.114	< 0.104	< 0.206	< 0.0997	< 0.0682
Aroclor 1260	11096-82-5	**0.113**	< 0.0691	< 0.0680	< 0.0687	< 0.543	< 0.51	< 0.101	< 0.1	< 0.101	< 0.114	< 0.104	< 0.206	< 0.0997	< 0.0682
Sum of Detections		**1.105**	**0.126**	0	0	**4.5**	**2.17**	0	**0.237**	0	**1.06**	**1.22**	**1.8**	**0.713**	**0.935**

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	U-20-16 2 11/9/2016 U-20-16 (2-4)	U-20-16 4 11/9/2016 U-20-16 (4-6)	U-20-16 6 11/9/2016 U-20-16 (6-8)	U-20-16 8 11/9/2016 U-20-16 (8-10)	U-24-16 0 11/16/2016 U-24-16 (0-2)	X-18-16 2 11/9/2016 X-18-16 (2-4)	X-18-16 4 11/9/2016 X-18-16 (4-6)	X-18-16 6 11/9/2016 X-18-16 (6-8)	X-18-16 8 11/9/2016 X-18-16 (8-10)	Y-24-16 0 11/16/2016 Y-24-16 (0-2)	Z-24-17 2 10/2/2017 Z-24-17 (2-4)	z-24-17 2 10/2/2017 REP100217AD1	Z-24-17 4 10/2/2017 Z-24-17 (4-6)	Z-24-17 6 10/2/2017 Z-24-17 (6-8)
	CAS														
Aroclor 1016	12674-11-2	< 0.108	< 0.111	< 0.107	< 0.117	< 0.111	< 1.1	< 0.104	< 0.102	< 0.104	< 0.533	< 0.0729	< 0.0723	< 0.0686	< 0.0665
Aroclor 1221	11104-28-2	< 0.219	< 0.226	< 0.217	< 0.238	< 0.226	< 2.23	< 0.211	< 0.206	< 0.211	< 1.08	< 0.148	< 0.147	< 0.139	< 0.135
Aroclor 1232	11141-16-5	< 0.108	< 0.111	< 0.107	< 0.117	< 0.111	< 1.1	< 0.104	< 0.102	< 0.104	< 0.533	< 0.0729	< 0.0723	< 0.0686	< 0.0665
Aroclor 1242	53469-21-9	**0.696**	< 0.111	< 0.107	< 0.117	**0.147**	**3.82**	**0.387**	< 0.102	< 0.104	**3.01**	< 0.0729	< 0.0723	**0.264**	< 0.0665
Aroclor 1248	12672-29-6	< 0.108	< 0.111	< 0.107	< 0.117	< 0.111	< 1.1	< 0.104	< 0.102	< 0.104	< 0.533	< 0.0729	< 0.0723	< 0.0686	< 0.0665
Aroclor 1254	11097-69-1	< 0.108	< 0.111	< 0.107	< 0.117	< 0.111	< 1.1	< 0.104	< 0.102	< 0.104	< 0.533	< 0.0729	< 0.0723	< 0.0686	< 0.0665
Aroclor 1260	11096-82-5	< 0.108	**0.457**	< 0.107	< 0.117	< 0.111	< 1.1	< 0.104	< 0.102	< 0.104	< 0.533	< 0.0729	< 0.0723	< 0.0686	< 0.0665
Sum of Detections		**0.696**	**0.457**	0	0	**0.147**	**3.82**	**0.387**	0	0	**3.01**	0	0	**0.264**	0

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
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Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

ARCADIS Design & Consultancy for natural and built assets

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	Z-24-17 8 10/2/2017 Z-24-17 (8-10)	ZZA-13-16 10 11/8/2016 ZZA-13-16 (10-12)	ZZA-13-16 12 11/8/2016 ZZA-13-16 (12-14)	ZZA-13-16 14 11/8/2016 ZZA-13-16 (14-16)	ZZA-17-16 0 11/8/2016 REP (110816)	ZZA-17-16 0 11/8/2016 ZZA-17-16 (0-2	ZZA-22-17 0 10/3/2017 EP100317AD1 (0-	ZZA-22-17 0 10/3/2017 ZZA-22-17 (0-2)	ZZA-23-16 2 11/8/2016 ZZA-23-16 (2-4)	ZZA-23-16 4 11/10/2016 ZZA-23-16 (4-6)	ZZA-23-16 6 11/10/2016 ZZA-23-16 (6-8)	ZZA-23-16 8 11/10/2016 ZZA-23-16 (8-10)
	CAS												
Aroclor 1016	12674-11-2	< 0.0666 CH	< 0.102	< 0.102	< 0.101	< 0.108	< 0.107	< 0.682	< 0.692	< 5.3	< 0.102	< 0.1	< 0.101
Aroclor 1221	11104-28-2	< 0.135	< 0.208	< 0.206	< 0.206	< 0.22	< 0.218	< 1.38	< 1.4	< 10.8	< 0.208	< 0.203	< 0.205
Aroclor 1232	11141-16-5	< 0.0666	< 0.102	< 0.102	< 0.101	< 0.108	< 0.107	< 0.682	< 0.692	< 5.3	< 0.102	< 0.1	< 0.101
Aroclor 1242	53469-21-9	< 0.0666	**0.122**	**0.275**	**0.191**	< 0.108	**0.117**	**4.26**	**4.87**	**9.01**	**0.356**	< 0.1	< 0.101
Aroclor 1248	12672-29-6	< 0.0666	< 0.102	< 0.102	< 0.101	< 0.108	< 0.107	< 0.682	< 0.692	< 5.3	< 0.102	< 0.1	< 0.101
Aroclor 1254	11097-69-1	< 0.0666	< 0.102	< 0.102	< 0.101	< 0.108	< 0.107	< 0.682	< 0.692	< 5.3	< 0.102	< 0.1	< 0.101
Aroclor 1260	11096-82-5	< 0.0666 CH	< 0.102	< 0.102	< 0.101	< 0.108	< 0.107	< 0.682	< 0.692	< 5.3	< 0.102	< 0.1	< 0.101
Sum of Detections		0	**0.122**	**0.275**	**0.191**	0	**0.117**	**4.26**	**4.87**	**9.01**	**0.356**	0	0

Table 3
Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Constituents (mg/kg)	Boring ID: Starting Depth (ft. bls): Date: Sampled ID:	ZZA-26-17 0 10/3/2017 ZZA-26-17 (0-2)
	CAS	
Aroclor 1016	12674-11-2	< 0.685
Aroclor 1221	11104-28-2	< 1.39
Aroclor 1232	11141-16-5	< 0.685
Aroclor 1242	53469-21-9	**4.69**
Aroclor 1248	12672-29-6	< 0.685
Aroclor 1254	11097-69-1	< 0.685
Aroclor 1260	11096-82-5	< 0.685
Sum of Detections		**4.69**

Table 3
Foot Notes: Concentrations of Polychlorinated Biphenyls (PCBs) in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Notes and Abbreviations:

1. Results validated following protocols specified in June 2016 Quality Assurance Project Plan (QAPP)
2. Samples submitted to fixed based laboratory were analyzed for PCBs using USEPA method 8082.
3. Samples analyzed on a dry weight basis.
4. Samples were collected per the Pre-Design Sampling Work Plan for PCBs (EMAGIN 2014)
5. For PCB Results:

Results exceeding the standard of 1 mg/kg in soil samples 0-2 ft bgs are shaded gray

Results exceeding the standard of 10mg/kg in samples collected 2-10ft bgs are shaded yellow

Results exceeding the standard of 50mg/kg in soils samples collected at all depths are printed in red font

Bold value indicates a detection for all results

RI/FS	Remedial Investigation/Feasibility Study
TCL	Target compound list
ft. bls	Feet below original land surface that existed prior to the Town of Oyster Bay bringing in cover material.
mg/kg	Milligrams per kilogram

Laboratory Qualifiers and Definitions:

J	Value is estimated
RL	Reporting Limit
S	Surrogate
MDL	Adjusted Method Detection Limit
ND	Not Detected at or above adjusted reporting limit
DF	Dilution Factor
REP	Sample Replicate
CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery. R1
R1	RPD value was outside control limits.
R	The sample restls are rejected

Table 4
Concentrations of Metals in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	A-11-17 0 9/29/2017 A-11-17 (0-2)	A-11-17 2 9/29/2017 A-11-17 (2-4)	A-11-17 4 9/29/2017 A-11-17 (4-6)	A-11-17 6 9/29/2017 A-11-17 (6-8)	A-11-17 8 9/29/2017 A-11-17 (8-10)	A-20-17 0 9/29/2017 A-20-17 (0-2)
	CAS						
Arsenic	7440-38-2	**2.0**	**1.7**	**3.2**	**2.6**	**2.6**	**2.8**
Cadmium	7440-43-9	**0.34**	**1.9**	**1.4**	**4.0**	**3.9**	**0.81**
Chromium	7440-47-3	**17.4**	**112**	**60.5**	**269**	**279**	**46.0**

Table 4
Concentrations of Metals in Soil Samples
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Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	A-4-17 0 9/28/2017 A-4-17 (0-2)	A-4-17 2 9/28/2017 A-4-17 (2-4)	A-4-17 4 9/28/2017 A-4-17 (4-6)	A-4-17 6 9/28/2017 A-4-17 (6-8)	A-4-17 8 9/28/2017 A-4-17 (8-10)	AJ-17-17 0 9/27/2017 AJ-17-17 (0-2)	AK-19-17 0 9/27/2017 AK-19-17 (0-2)	AT-26-17 0 10/3/2017 AT-26-17 (0-2)
	CAS								
Arsenic	7440-38-2	**8.1**	**6.5**	**5.7**	**3.5**	**1.8**	< 6.0 B	**9.9**	**--**
Cadmium	7440-43-9	**2.0**	**1.0**	**4.1**	**4.4**	**0.34**	**0.26**	**0.42**	**--**
Chromium	7440-47-3	**51.8**	**33.1**	**230**	**216**	**1.2**	**17.1**	**15.4**	**8.6**

Table 4
Concentrations of Metals in Soil Samples
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Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	AU-25-17 0 10/3/2017 AU-25-17 (0-2)	AX-26-17 0 10/3/2017 AX-26-17 (0-2)	AX-4-17 0 9/27/2017 AX-4-17 (0-2)	B-17-17 0 9/21/2017 B-17-17 (0-2)	B-17-17 2 9/21/2017 B-17-17 (2-4)	B-17-17 4 9/21/2017 B-17-17 (4-6)	B-17-17 6 9/21/2017 B-17-17 (6-8)	B-17-17 8 9/21/2017 B-17-17 (8-10)
	CAS								
Arsenic	7440-38-2	--	--	< 4.2 B	7.0	4.1	3.4	4.6	12.4
Cadmium	7440-43-9	--	--	0.29	0.72	0.99	1.0	5.5	2.9
Chromium	7440-47-3	429 D6M1	6.9	16.3	33.4	37.6	41.4	367	230

Table 4
Concentrations of Metals in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	B-20-17 0 9/21/2017 B-20-17 (0-2)	B-23-17 0 10/3/2017 B-23-17 (0-2)	B-9-17 0 9/21/2017 B-9-17 (0-2)	B-9-17 2 9/21/2017 B-9-17 (2-4)	B-9-17 4 9/21/2017 B-9-17 (4-6)	B-9-17 6 9/21/2017 B-9-17 (6-8)	B-9-17 8 9/21/2017 B-9-17 (8-10)
	CAS							
Arsenic	7440-38-2	**10.1**	**--**	**7.5**	**3.9**	**7.5**	**3.5**	**4.8**
Cadmium	7440-43-9	**1.7**	**--**	**0.40**	**0.48**	**3.0**	**2.9**	**4.7**
Chromium	7440-47-3	**67.3**	**52.2**	**34.7**	**42.3**	**76.6**	**143**	**117**

Table 4
Concentrations of Metals in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	BE-21-17 0 9/26/2017 BE-21-17 (0-2)	BE-21-17 2 9/26/2017 BE-21-17 (2-4)	BE-21-17 4 9/26/2017 BE-21-17 (4-6)	BE-21-17 6 9/26/2017 BE-21-17 (6-8)	BE-21-17 8 9/26/2017 BE-21-17 (8-10)
	CAS					
Arsenic	7440-38-2	**2.2**	**1.7**	**2.5**	**3.0**	**1.6**
Cadmium	7440-43-9	**0.16**	**6.1**	**1.2**	< 0.13	< 0.13
Chromium	7440-47-3	**11.1**	**438**	**90.2**	**1.8**	**1.2 D6**

Table 4
Concentrations of Metals in Soil Samples
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Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	C-19-17 0 9/29/2017 C-19-17 (0-2)	C-19-17 2 9/29/2017 C-19-17 (2-4)	C-19-17 4 9/29/2017 C-19-17 (4-6)	C-19-17 6 9/29/2017 C-19-17 (6-8)	C-19-17 8 9/29/2017 C-19-17 (8-10)	C-21-17 0 9/21/2017 C-21-17 (0-2)	C-2-17 0 10/2/2017 C-2-17 (0-2)	D-22-17 0 9/21/2017 D-22-17 (0-2)
	CAS								
Arsenic	7440-38-2	**2.4**	**1.5**	**1.6**	**2.7**	**2.9**	**5.6**	**1.7 D6**	**4.7**
Cadmium	7440-43-9	**1.4**	**0.60**	**1.9**	**2.4**	**4.7**	**1.2**	**0.29**	**0.64**
Chromium	7440-47-3	**106**	**21.9**	**95.6**	**142**	**431**	**51.3**	**14.7 M1**	**38.8**

Table 4
Concentrations of Metals in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	E-2-17 0 10/2/2017 E-2-17 (0-2)	E-25-17 0 10/3/2017 E-25-17 (0-2)	F-26-17 0 10/3/2017 F-26-17 (0-2)	G-25-17 0 10/3/2017 G-25-17 (0-2)	H-22-17 0 9/22/2017 H-22-17 (0-2)	H-23-17 0 10/3/2017 H-23-17 (0-2)	H-26-17 0 10/3/2017 H-26-17 (0-2)
	CAS							
Arsenic	7440-38-2	**3.6**	--	--	--	**4.5**	--	--
Cadmium	7440-43-9	**1.9**	--	--	--	**1.7**	--	--
Chromium	7440-47-3	**86.7**	**26.8**	**15.1**	**12.9**	**62.0**	**134**	**10.5**

Table 4
Concentrations of Metals in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	H-3-17 0 9/26/2017 H-3-17 (0-2)	H-3-17 2 9/26/2017 H-3-17 (2-4)	H-3-17 4 9/26/2017 H-3-17 (4-6)	H-3-17 6 9/26/2017 H-3-17 (6-8)	H-3-17 8 9/26/2017 H-3-17 (8-10)	I-2-17 0 10/2/2017 I-2-17 (0-2)	I-25-17 0 10/3/2017 I-25-17 (0-2)	K-22-17 0 9/22/2017 K-22-17 (0-2)	K-23-17 0 9/22/2017 K-23-17 (0-2)
	CAS									
Arsenic	7440-38-2	**7.1**	**2.9**	**2.9**	**1.4**	**1.6**	**4.2**	**--**	**5.2**	**--**
Cadmium	7440-43-9	**1.1**	< 0.13	< 0.12	< 0.13	< 0.12	**0.33**	**--**	**2.9 J**	**--**
Chromium	7440-47-3	**61.1**	**4.4**	**9.0**	**10.1**	**10.1**	**17.0**	**23.0**	**161**	**197**

Table 4
Concentrations of Metals in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	L-25-17 0 10/3/2017 L-25-17 (0-2)	O-17-17 0 9/22/2017 O-17-17 (0-2)	O-17-17 2 9/22/2017 O-17-17 (2-4)	O-17-17 4 9/22/2017 O-17-17 (4-6)	O-17-17 6 9/22/2017 O-17-17 (6-8)	O-17-17 8 9/22/2017 O-17-17 (8-10)	P-13-17 0 9/25/2017 P-13-17 (0-2)
	CAS							
Arsenic	7440-38-2	--	**8.3**	**2.5**	**3.2**	**2.2**	**1.3**	**3.1**
Cadmium	7440-43-9	--	**0.47 J**	**0.28 J**	**1.1 J**	**0.46 J**	< 0.15 J	**0.44**
Chromium	7440-47-3	**163**	**48.1**	**19.5**	**91.3**	**3.5**	**1.5**	**26.0**

Table 4
Concentrations of Metals in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	P-22-17 0 9/26/2017 P-22-17 (0-2)	P-22-17 2 9/26/2017 P-22-17 (2-4)	P-22-17 4 9/26/2017 P-22-17 (4-6)	P-22-17 6 9/26/2017 P-22-17 (6-8)	P-22-17 8 9/26/2017 P-22-17 (8-10)
	CAS					
Arsenic	7440-38-2	**6.4**	**3.6**	**3.2**	**2.4**	**1.3**
Cadmium	7440-43-9	**0.90**	**0.76**	**0.81**	**0.16**	**0.13**
Chromium	7440-47-3	**50.0**	**57.9**	**49.1**	**8.0**	**5.7**

Table 4
Concentrations of Metals in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	Q-14-17 0 9/20/2017 Q-14-17 (0-2)	Q-14-17 2 9/20/2017 Q-14-17 (2-4)	Q-14-17 4 9/20/2017 Q-14-17 (4-6)	Q-14-17 6 9/20/2017 Q-14-17 (6-8)	Q-14-17 8 9/20/2017 Q-14-17 (8-10)	R-11-17 0 9/27/2017 R-11-17 (0-2)	R-13-17 0 9/20/2017 R-13-17 (0-2)
	CAS							
Arsenic	7440-38-2	**3.9**	**3.6**	**4.3**	**1.5**	**1.2**	**4.7**	**5.5**
Cadmium	7440-43-9	**0.34**	**0.68**	**3.0**	< 0.13	< 0.13	**2.2**	**0.53**
Chromium	7440-47-3	**22.5**	**55.4**	**117**	**1.4**	**1.3**	**82.7 D6M1**	**34.3 D6**

Table 4
Concentrations of Metals in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	R-15-17 0 9/20/2017 R-15-17 (0-2)	R-15-17 2 9/20/2017 R-15-17 (2-4)	R-15-17 4 9/20/2017 R-15-17 (4-6)	R-15-17 6 9/20/2017 R-15-17 (6-8)	R-15-17 8 9/20/2017 R-15-17 (8-10)
	CAS					
Arsenic	7440-38-2	**5.1**	**4.6**	**3.8**	**2.0**	**1.7**
Cadmium	7440-43-9	**1.0**	**1.2**	**2.2**	< 0.16	< 0.13
Chromium	7440-47-3	**324**	**57.1**	**236**	**10.9**	**1.3**

Table 4
Concentrations of Metals in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	R-17-17 0 9/26/2017 R-17-17 (0-2)	R-17-17 2 9/26/2017 R-17-17 (2-4)	R-17-17 4 9/26/2017 R-17-17 (4-6)	R-17-17 6 9/26/2017 R-17-17 (6-8)	R-17-17 8 9/26/2017 R-17-17 (8-10)
	CAS					
Arsenic	7440-38-2	**5.0**	**2.8**	**2.4**	**2.1**	**2.2**
Cadmium	7440-43-9	**0.86**	**0.73**	**0.87**	< 0.14	< 0.13
Chromium	7440-47-3	**108**	**144**	**60.6**	**10.7**	**3.2**

Table 4
Concentrations of Metals in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

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Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	R-21-17 0 9/26/2017 R-21-17 (0-2)	R-21-17 2 9/26/2017 R-21-17 (2-4)	R-21-17 4 9/26/2017 R-21-17 (4-6)	R-21-17 6 9/26/2017 R-21-17 (6-8)	R-21-17 8 9/26/2017 R-21-17 (8-10)	R-24-17 0 10/2/2017 R-24-17 (0-2)	S-12-17 0 9/20/2017 S-12-17 (0-2)	S-14-17 0 9/20/2017 S-14-17 (0-2)
	CAS								
Arsenic	7440-38-2	**3.6 D6**	**7.3**	**4.1**	**2.0**	**1.5**	--	**28.4**	**16.3**
Cadmium	7440-43-9	**0.68**	**2.4**	**0.86**	< 0.13	< 0.12	--	**0.89**	**0.84**
Chromium	7440-47-3	**49.6**	**56.9**	**49.3**	**6.0**	**4.8**	**291**	**30.7**	**71.4**

Table 4
Concentrations of Metals in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Constituents (mg/kg)	Boring ID: / Starting Depth (ft. bls): / Date: / Sampled ID:	S-16-17 / 0 / 9/20/2017 / S-16-17 (0-2)	ZZA-22-17 / 0 / 10/3/2017 / ZZA-22-17 (0-2)	ZZA-26-17 / 0 / 10/3/2017 / ZZA-26-17 (0-2)
	CAS			
Arsenic	7440-38-2	**7.2**	--	--
Cadmium	7440-43-9	**1.2**	--	--
Chromium	7440-47-3	**99.5**	**26.4**	**6.8**

Table 4
Foot Notes: Concentrations of Metals in Soil Samples
Addendum to Pre-Design Sampling and Remedial
Alternative Evaluation Report for PCBs and Metals in Soil
Operable Unit 3 (Former Gumman Settling Ponds)
Northrop Grumman Systems Corporation, Bethpage, New York

Notes and Abbreviations:

1. Results validated following protocols specified in June 2016 Quality Assurance Project Plan (QAPP)
2. Samples submitted to fixed based laboratory were analyzed for Metals using USEPA method 6010
3. Samples analyzed on a dry weight basis.
4. Samples were collected per the Pre-Design Sampling Work Plan for Metals (EMAGIN 2014)
5. For Metals Results:

Results exceeding the standard of 16 mg/kg for Arsenic are printed in red font

Results exceeding the standard of 4.3 mg/kg for Cadmium are printed in red font

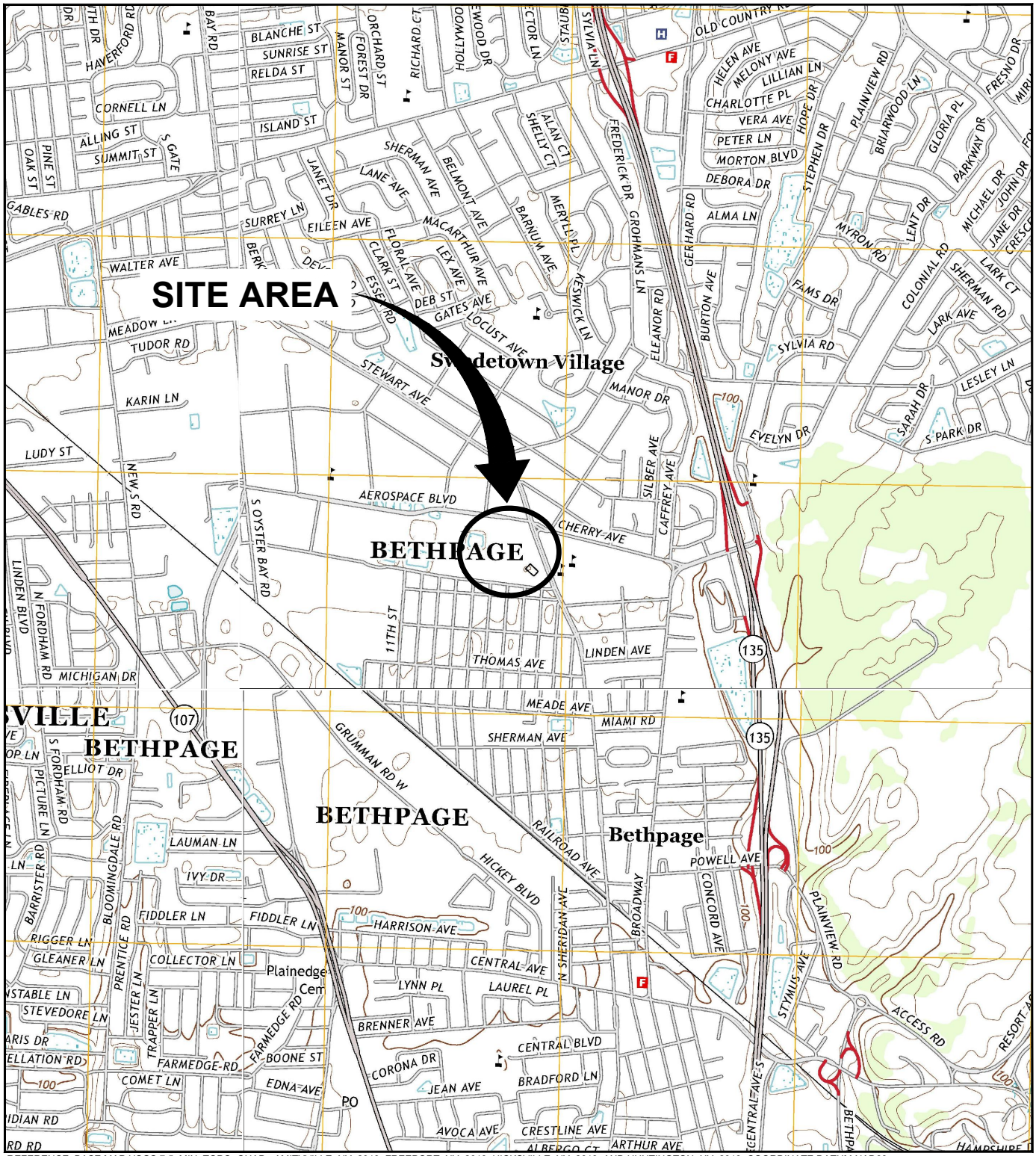
Results exceeding the standard of 180 mg/kg for Chromium are printed in red font

Bold value indicates a detection for all results

RI/FS	Remedial Investigation/Feasibility Study
TCL	Target compound list
ft	Feet below original land surface that existed prior to the Town of Oyster Bay bringing in cover material.
mg/kg	Milligrams per kilogram

Laboratory Qualifiers and Definitions:

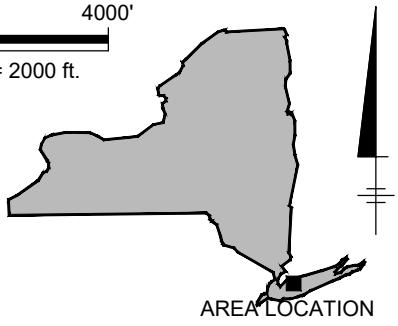
J	Value is estimated
RL	Reporting Limit
S	Surrogate
MDL	Adjusted Method Detection Limit
ND	Not Detected at or above adjusted reporting limit
DF	Dilution Factor
REP	Sample Replicate
D6	The precision between the sample and sample duplicate exceeded laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery. R1



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., AMITYVILLE, NY, 2013, FREEPORT, NY, 2013, HICKSVILLE, NY, 2013, AND HUNTINGTON, NY, 2013, COORDINATE DATUM NAD83.

0 2000' 4000'

Approximate Scale: 1 in. = 2000 ft.



NORTHROP GRUMMAN SYSTEMS CORPORATION
BETHPAGE PARK, NEW YORK

SITE LOCATION
ADDENDUM TO PRE-DESIGN SAMPLING AND REMEDIAL ALTERNATIVE EVALUATION REPORT FOR PCBS AND METALS IN SOIL

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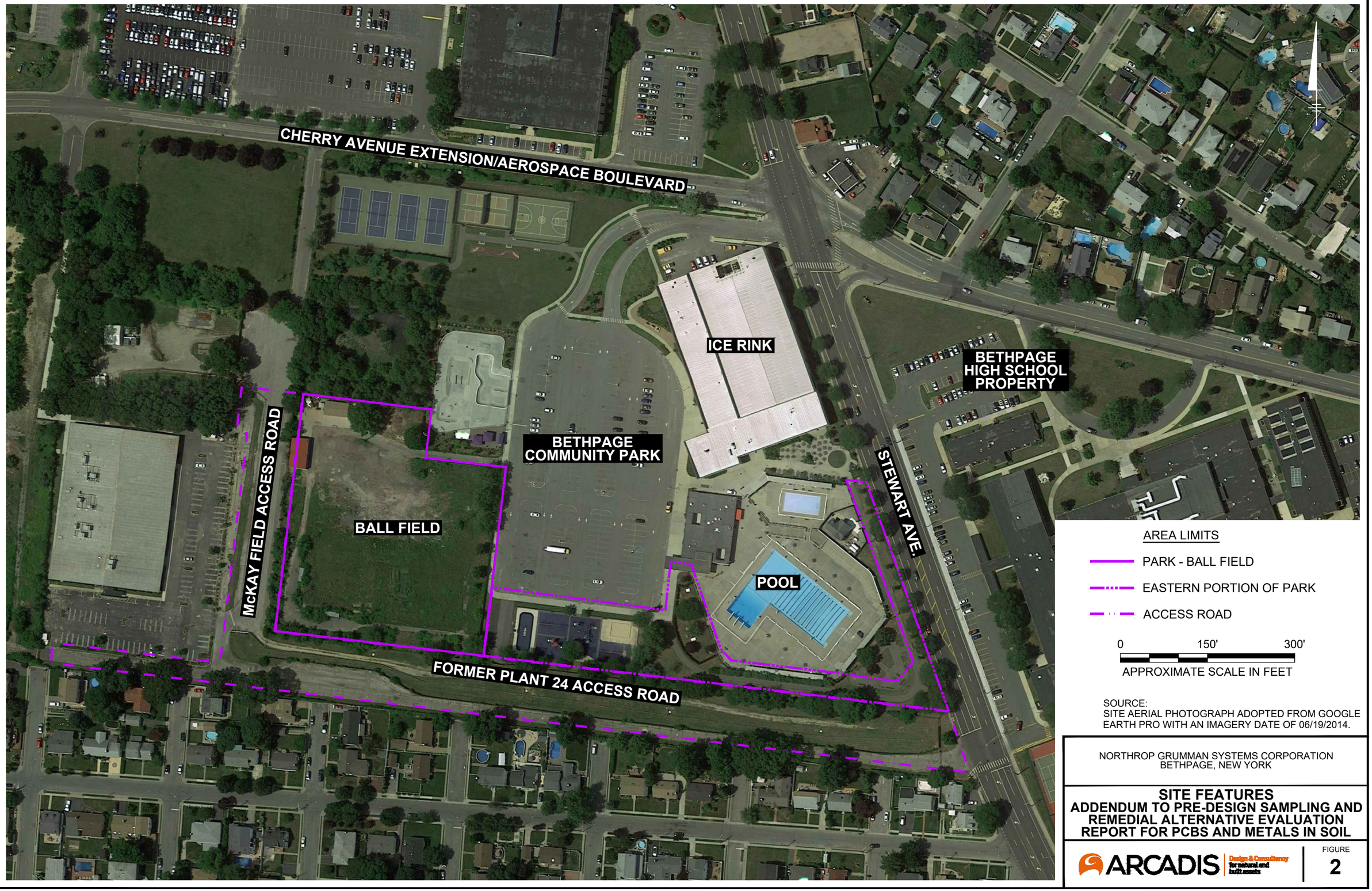
FIGURE 1

CITY:SYRACUSE-NY DIV/GROUP:ENV DB:A.SANCHEZ LD:ALS PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
C:\Users\alsandnez\OneDrive - ARCADIS\BIM 360 Docs\NORTHROP GRUMMAN\NGC-BETHPAGE PARK-SITE LOCATION MAP.dwg LAYOUT: PARK SOILS SAVED: 2/22/2018 2:58 PM ACADVER: 21.0S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 2/22/2018 3:38 PM BY: SANCHEZ, ADRIAN
XREFS: IMAGES: PROJECTNAME: ---
2013Amityville.jpg
2013Freeport.jpg
2013Hicksville.jpg
2013Huntington.jpg



AREA LIMITS

- PARK - BALL FIELD
- EASTERN PORTION OF PARK
- ACCESS ROAD

0 150' 300'

APPROXIMATE SCALE IN FEET

SOURCE:
SITE AERIAL PHOTOGRAPH ADOPTED FROM GOOGLE EARTH PRO WITH AN IMAGERY DATE OF 06/19/2014.

NORTHROP GRUMMAN SYSTEMS CORPORATION
BETHPAGE, NEW YORK

SITE FEATURES
ADDENDUM TO PRE-DESIGN SAMPLING AND REMEDIAL ALTERNATIVE EVALUATION REPORT FOR PCBS AND METALS IN SOIL

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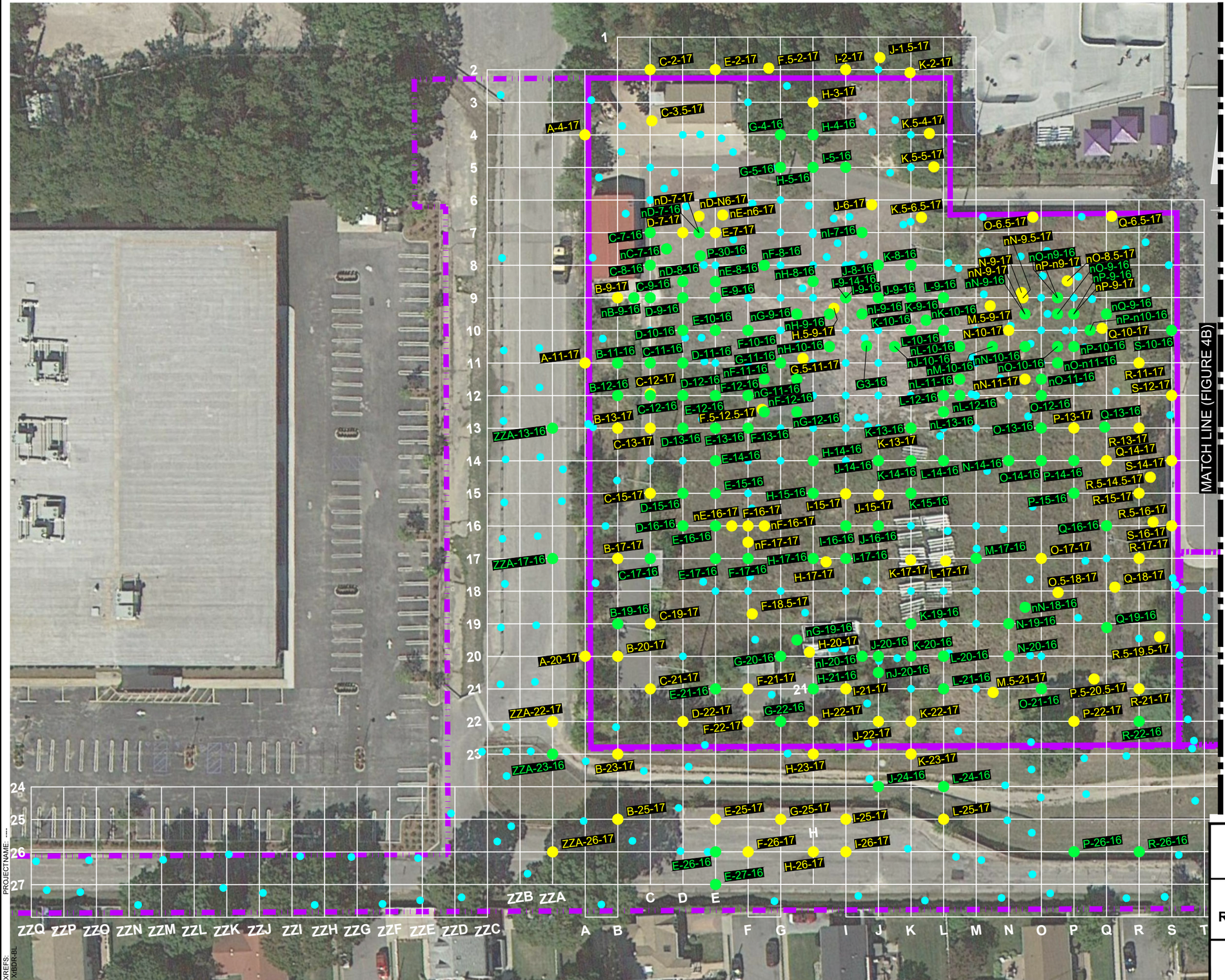
FIGURE
2



NORTHROP GRUMMAN SYSTEMS CORPORATION
BETHPAGE, NEW YORK

PCB SAMPLE LOCATIONS
ADDENDUM TO PRE-DESIGN SAMPLING AND REMEDIAL ALTERNATIVE EVALUATION REPORT FOR PCBS AND METALS IN SOIL

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FIGURE
3A

MATCH LINE (FIGURE 4A)

LEGEND:

- HISTORICAL PCB SAMPLE LOCATION (PRE 2016)
- PCB SAMPLE LOCATIONS (2016)
- PCB SAMPLE LOCATIONS (2017)

AREA LIMITS

- PARK - BALL FIELD
- EASTERN PORTION OF PARK
- ACCESS ROAD

0 60' 120'

APPROXIMATE SCALE IN FEET

SOURCE:
SITE AERIAL PHOTOGRAPH ADOPTED FROM GOOGLE EARTH PRO WITH AN IMAGERY DATE OF 06/19/2014.

NORTHROP GRUMMAN SYSTEMS CORPORATION
BETHPAGE, NEW YORK

PCB SAMPLE LOCATIONS
ADDENDUM TO PRE-DESIGN SAMPLING AND REMEDIAL ALTERNATIVE EVALUATION REPORT FOR PCBS AND METALS IN SOIL

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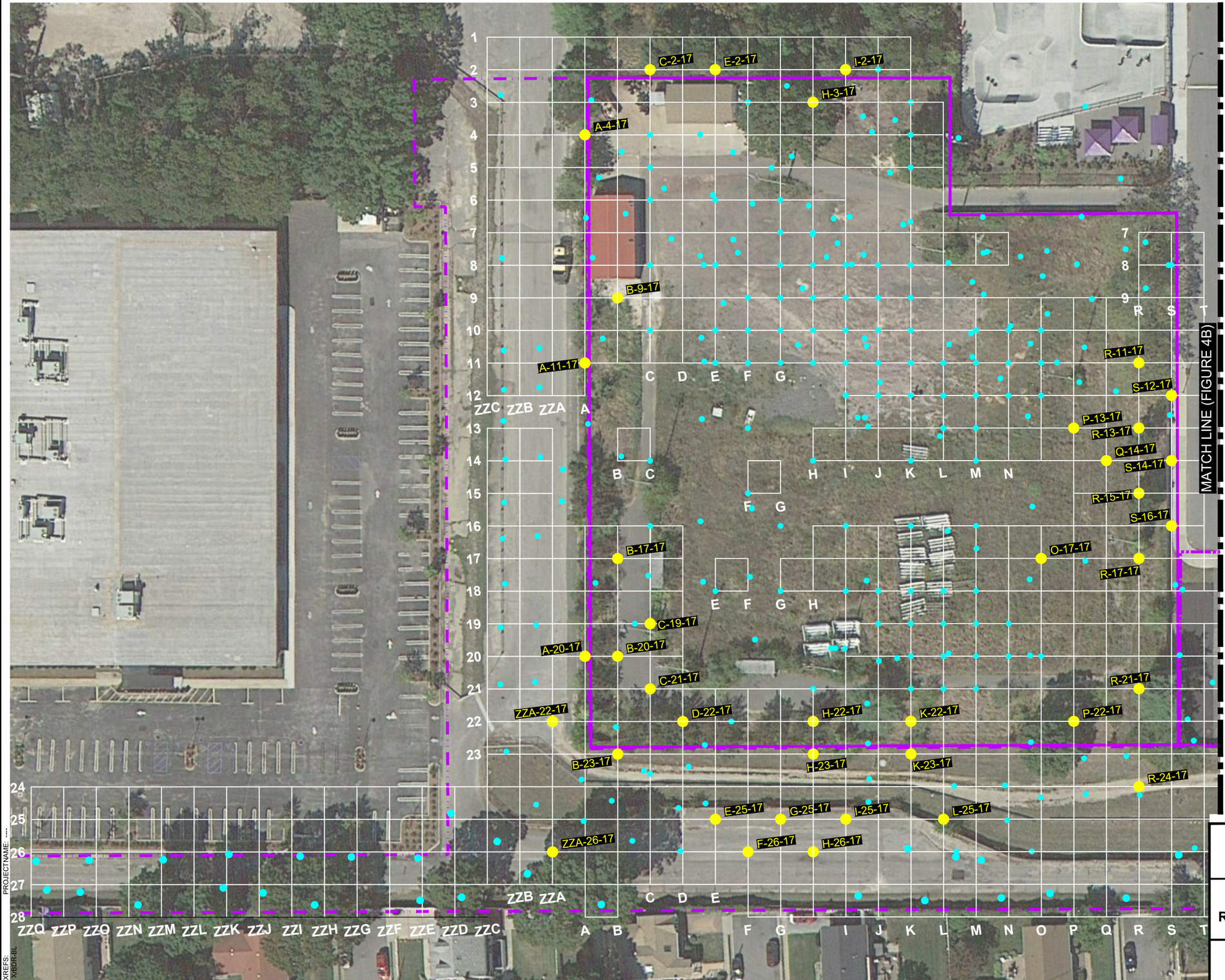
FIGURE 3B



LEGEND:

- HISTORICAL METALS SAMPLE LOCATION (PRE 2016)
- METALS SAMPLE LOCATIONS (2017)

AREA LIMITS

- PARK - BALL FIELD
- EASTERN PORTION OF PARK
- ACCESS ROAD

SOURCE:
SITE AERIAL PHOTOGRAPH ADOPTED FROM GOOGLE EARTH PRO WITH AN IMAGERY DATE OF 06/19/2014.

0 60' 120'

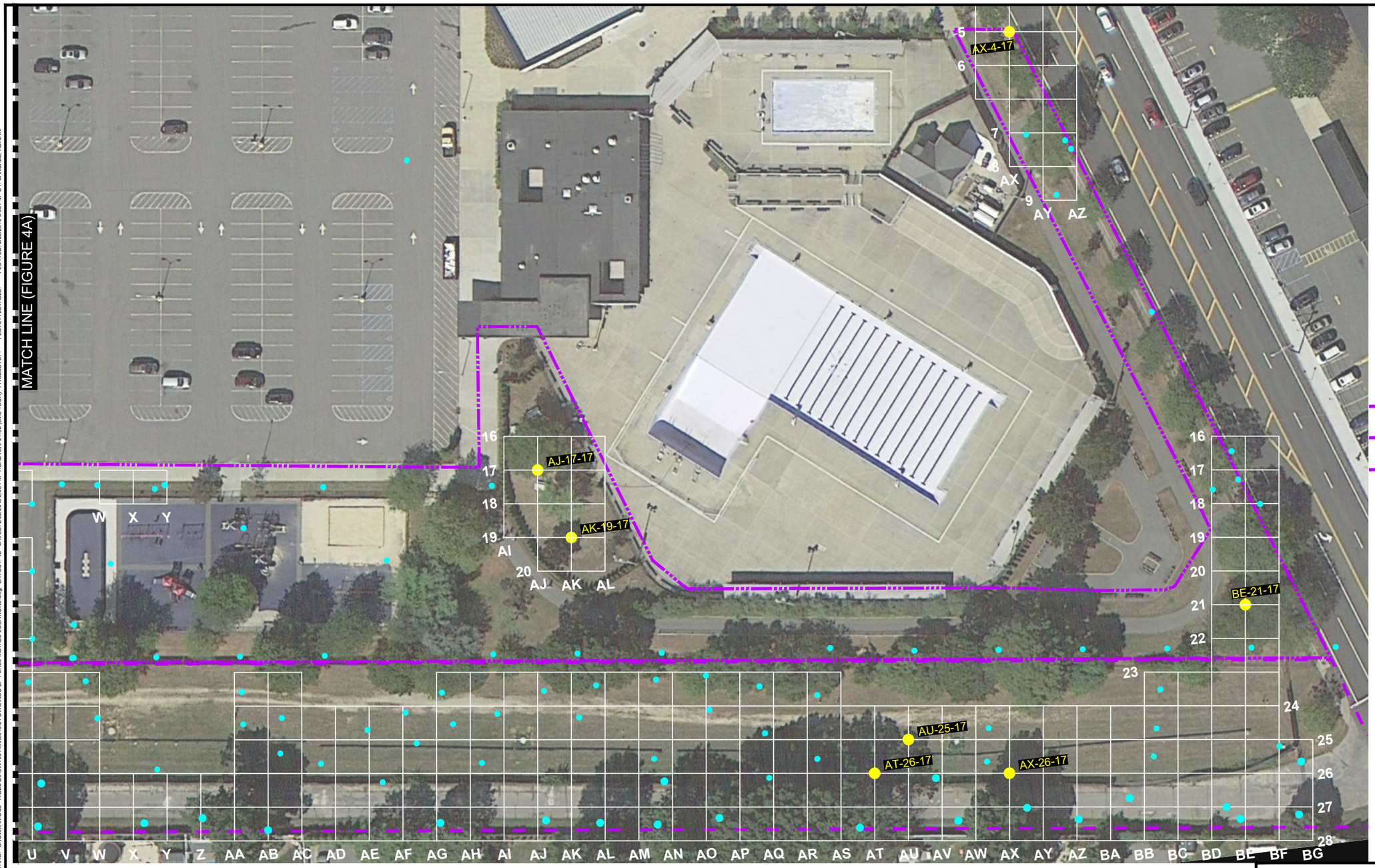
APPROXIMATE SCALE IN FEET

NORTHROP GRUMMAN SYSTEMS CORPORATION
BETHPAGE, NEW YORK

METALS SAMPLE LOCATIONS
ADDENDUM TO PRE-DESIGN SAMPLING AND REMEDIAL ALTERNATIVE EVALUATION REPORT FOR PCBS AND METALS IN SOIL

ARCADIS Design & Consultancy for natural and built assets

FIGURE 4A



LEGEND:

- HISTORICAL METALS SAMPLE LOCATION (PRE 2016)
- METALS SAMPLE LOCATIONS (2017)

AREA LIMITS

- PARK - BALL FIELD
- EASTERN PORTION OF PARK
- ACCESS ROAD

0 60' 120'

APPROXIMATE SCALE IN FEET

SOURCE:
SITE AERIAL PHOTOGRAPH ADOPTED FROM GOOGLE EARTH PRO WITH AN IMAGERY DATE OF 06/19/2014.

NORTHROP GRUMMAN SYSTEMS CORPORATION
BETHPAGE, NEW YORK

METALS SAMPLE LOCATIONS
ADDENDUM TO PRE-DESIGN SAMPLING AND REMEDIAL ALTERNATIVE EVALUATION REPORT FOR PCBS AND METALS IN SOIL

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FIGURE 4B