ARCADIS
Infrastructure, environment, buildings

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ENVIRONMENT

Mr. Steven M. Scharf, P.E.
Project Engineer
New York State Department of Environmental Conservation (NYSDEC)
Division of Environmental Remediation
Remedial Action, Bureau A
625 Broadway
Albany, New York 12233-7015

Subject:
May 2010 Monthly Progress Report
Northrop Grumman Systems Corporation
Operable Unit 3, NYSDEC Site ID # 1-30-003A,
Bethpage, New York

Date:
June 10, 2010

Contact:
David Stern

Phone:
631-391-5284

Email:
David.Stern@arcadis-us.com

Our ref:
NY001496.0910.00007

Dear Steve:

In accordance with Section III of Administrative Order on Consent (AOC) Index # W1-0018-04-01, this letter reports Operable Unit 3 (OU3) activities performed by Northrop Grumman Systems Corporation (Northrop Grumman) during the month of May 2010. Activities planned for June 2010 are also discussed.

OU3 Activities Conducted During May 2010

Activities performed this period include:

On-Site and Off-Site Remedial Investigation/Feasibility Study (RI/FS)

- Submitted the revised Site Area Focused Feasibility Study (FFS) to New York State Department of Environmental Conservation (NYSDEC)
- Continued preparation of Study Area FFS
- Validated analytical data associated with the sampling of the Study Area Monitoring Wells MW-109-3, MW-111-4 and MW-116-5 are provided in Tables 1 through 3. Well locations are shown on Figure 1.

Soil Gas IRM

- Continued Operation, Maintenance, and Monitoring (OM&M) of the Soil Gas Interim Remedial Measure (IRM)
- Submitted First Quarter 2010 OM&M Report to NYSDEC

Groundwater IRM

- Continued OM&M of the Groundwater IRM.
- Completed rehabilitation of Remedial Well RW-2

Other

- Submitted April 2010 AOC Monthly Progress Report to NYSDEC

OU3 Activities Scheduled for June 2010

On-Site and Off-Site RI/FS

- Continue preparation of Study Area FFS

Soil Gas IRM

- Continue routine OM&M of the Soil Gas IRM
- Conduct Second Quarter 2010 OM&M sampling event

Groundwater IRM

- Continue routine OM&M of the Groundwater IRM
- Coordinate and complete air stripper cleaning
- Submit First Quarter 2010 OM&M Report

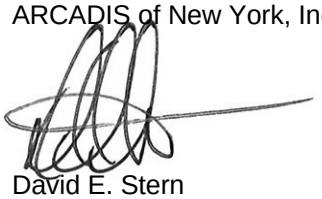
Other

- Submit May 2010 AOC Monthly Progress Report to NYSDEC

Feel free to call us if you have any questions.

Sincerely,

ARCADIS of New York, Inc.



David E. Stern
Senior Scientist /Associate Project Manager

Copies:
J. Cofman, Northrop Grumman
K. Smith, Northrop Grumman
Bethpage Public Library – Public Repository
C. San Giovanni, ARCADIS
M. Wolfert, ARCADIS
File, ARCADIS

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Table 1. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Monitoring Wells, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

Compound (ug/L)	MW109-3 4/14/2010	MW-111-4 4/14/2010	MW-116-5 3/11/2010	MW-116-5 4/26/2010
1,1,1-Trichloroethane	< 50	< 250	< 50	< 50
1,1,2,2-Tetrachloroethane	< 50	< 250	< 50	< 50
1,1,2-Trichloroethane	< 50	< 250	< 50	< 50
1,1-Dichloroethane	**16 J**	**34 J**	< 50	< 50
1,1-Dichloroethene	**5.4 J**	**26 J**	< 50	< 50
1,2-Dichloroethane	**6.2 J**	**18 J**	**7.0 J**	**7.7 J**
1,2-Dichloropropane	< 50	< 250	< 50	< 50
2-Butanone	< 500	< 2500	< 500	< 500
2-Hexanone	< 500	< 2500	< 500	< 500
4-methyl-2-pentanone	< 500	< 2500	< 500	< 500
Acetone	< 500	< 2500	< 500	< 500
Benzene	< 7	< 35	< 7	< 7
Bromodichloromethane	< 50	< 250	< 50	< 50
Bromoform	< 50	< 250	< 50	< 50
Bromomethane	< 50	< 250	< 50	< 50
Carbon Disulfide	< 50	< 250	< 50	< 50
Carbon tetrachloride	< 50	< 250	< 50	< 50
Chlorobenzene	< 50	< 250	< 50	< 50
Chlorodifluoromethane (Freon 22)	< 50	< 250	< 50	< 50
Chloroethane	< 50	< 250	< 50	< 50
Chloroform	**5.3 J**	< 250	**10 J**	**13J**
Chloromethane	< 50	< 250	< 50	< 50
cis-1,2-dichloroethene	**1000**	**1300**	**150**	**180**
cis-1,3-dichloropropene	< 50	< 250	< 50	< 50
Dibromochloromethane	< 50	< 250	< 50	< 50
Dichlorodifluoromethane (Freon 12)	< 50	< 250	< 50	< 50
Ethylbenzene	< 50	< 250	< 50	< 50
Methyl tert-Butyl Ether	< 50	< 250	< 50	< 50
Methylene Chloride	< 50	< 250	< 50	< 50
Styrene	< 50	< 250	< 50	< 50
Tetrachloroethene	**6.2 J**	< 250	< 50	< 50
Toluene	< 50	< 250	< 50	< 50
trans-1,2-dichloroethene	**3.7 J**	< 250	< 50	< 50
trans-1,3-dichloropropene	< 50	< 250	< 50	< 50
Trichloroethylene	**1500**	**6000**	**1700**	**1800**
Trichlorofluoromethane (Freon 11)	< 50	< 250	< 50	< 50
Trichlorotrifluoroethane (Freon 113)	< 50	< 250	< 50	< 50
Vinyl Chloride	**4.6 J**	< 100	< 20	<20
Xylene-o	< 50	< 250	< 50	< 50
Xylenes - m,p	< 50	< 250	< 50	< 50
TVOC	**2601.4**	**7378**	**1867.0**	**2000.7**

See notes on last page.

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Table 1. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Monitoring Wells, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

Notes:

Results validated following protocols specified in March 2006 RI/FS Work Plan (ARCADIS G&M, Inc. 2006).
Samples analyzed for the TCL VOCs using NYSDEC ASP Method 2000 OLM4.2.

Acronyms:

Bold value indicates a detection.

RI/FS	Remedial Investigation/Feasibility Study.
NYSDEC	New York State Department of Environmental Conservation.
TCL	Target compound list.
VOC	Volatile Organic Compound.
TVOC	Total Volatile Organic Compounds
ASP	Analytical services protocol.
SCGs	Standards, criteria, and guidance values.
ug/L	Micrograms per liter.
J	Value is estimated.

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Table 2. Concentrations of Metals in Groundwater Samples Collected from Monitoring Wells, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

COMPOUND (ug/L)	Sample Location:	MW-109-3	MW-111-4
	Sample Date:	4/14/2010	4/14/2010
Aluminum		< 100	**120**
Beryllium		< 5	< 5
Calcium		**9600**	**5700**
Copper		< 20	**48**
Iron		**410**	**3440**
Magnesium		**3400**	**2200**
Manganese		**29**	**100**
Nickel		< 40	**442**
Potassium		< 2000	< 2000
Silicon		**4500**	**4100**
Sodium		**39300**	**30800**
Zinc		**29**	**67**
Cadmium (total)		< 5	< 5
Chromium (total)		**42**	**643**
Chromium (dissolved)		**26**	**399**

Notes:

1. Results validated following protocols specified in March 2006 RI/FS Work Plan (ARCADIS G&M, Inc. 2006).
2. Samples analyzed for the TAL Metals using NYSDEC ASP Method 2000 ILM4.0.

Acronyms:

Bold value indicates a detection.

RI/FS Remedial Investigation/Feasibility Study
NYSDEC New York State Department of Environmental Conservation
SCGs Standards, criteria, and guidance values.
TAL Target Analyte List
ug/L Micrograms per liter

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Table 3. Water Quality Parameters in Groundwater Samples Collected from Monitoring Wells, Groundwater Interim Remedial Measure, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

Compound (mg/L)	Sample Location: / Sample Date:	MW-109-3 4/14/2010	MW-111-4 4/14/2010
Total Alkalinity		**2.8**	< 2
Chloride		**52.9**	**32.9**
Sulfate		**39.6**	**41.7**
Phosphorous		< 0.05	< 0.05
Nitrate/Nitrite		**3.02**	**2.15**
Total Dissolved Solids (TDS)		**183**	**142**
Total Organic Carbon (TOC)		**1.5**	**2**

Notes:

1. Results validated following protocols specified in March 2006 RI/FS Work Plan (ARCADIS G&M, Inc. 2006).
2. Samples analyzed for alkalinity using USEPA Method 310.1; nitrate/nitrite using USEPA Method 353.2, sulfate and chloride using USEPA Method 300.0;TDS using USEPA Method 160.1; TOC using USEPA Method 9060; and phosphorous using USEPA method 365.1.

Acronyms:

Bold value indicates a detection.

mg/L Milligrams per liter
RI/FS Remedial Investigation/Feasibility Study
NYSDEC New York State Department of Environmental Conservation
USEPA United States Environmental Protection Agency

CITY:Melville-NY DIV/GROUP:SER1 DB:A.Sanchez LD: PIC: PM:C.S.Giovanni TM:D.Stern LYR:ON=*;OFF=*REF*
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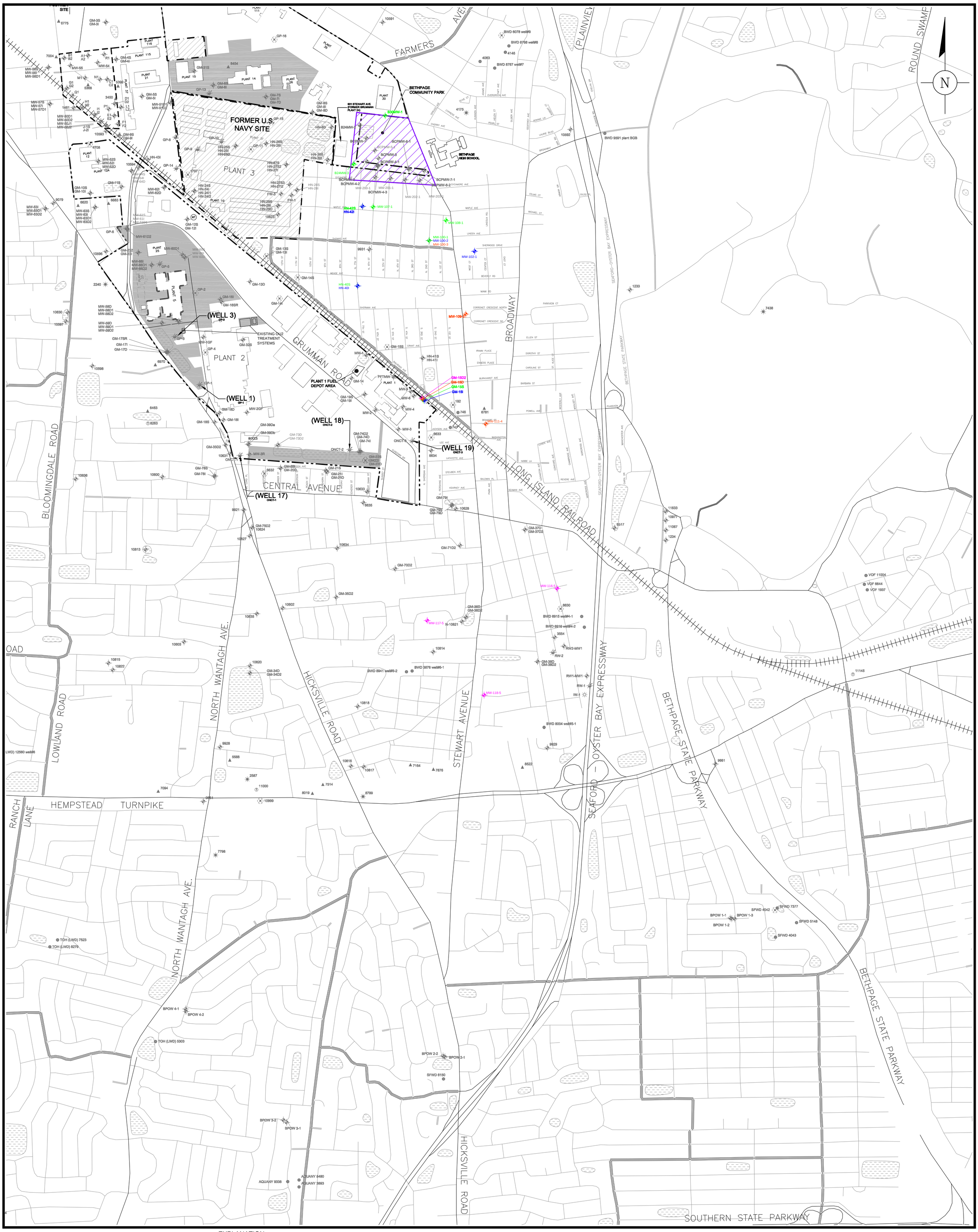

EXPLANATION:

- PROPERTY BOUNDARY OF THE FORMER GRUMMAN AEROSPACE PROPERTY
- PROPERTY BOUNDARY OF THE FORMER U.S. NAVY PROPERTY
- PROPERTY BOUNDARY OF THE FORMER OCC PROPERTY
- LONG ISLAND RAILROAD
- DENOTES NORTHROP GRUMMAN OWNED PROPERTY
- DENOTES FORMER U.S. NAVY OWNED PROPERTY
- RECHARGE BASIN
- SITE AREA
- OBSERVATION, MONITORING WELL
- INDUSTRIAL WELL
- PUBLIC SUPPLY WELL
- IRRIGATION WELL
- INJECTION WELL
- NORTHROP GRUMMAN OR NAVY PRODUCTION WELL
- ABANDONED WELL

DESIGNATION OF HYDROGEOLOGIC ZONE FOR MONITORING WELL SCREENED INTERVALS (ARCADIS 2003)

- SHALLOW
- INTERMEDIATE
- DEEP
- DEEP2

NOTES:

1. HYDROGEOLOGIC ZONE BASED ON MODEL LAYER ELEVATIONS PRESENTED IN COMPREHENSIVE GROUNDWATER MODEL (ARCADIS 2003).

0 800' 1600'
SCALE IN FEET

ALL COORDINATES REFERENCED TO NORTH AMERICAN DATUM 1983

NORTHROP GRUMMAN SYSTEMS CORPORATION
OPERABLE UNIT 3
(FORMER GRUMMAN SETTLING PONDS)
BETHPAGE, NEW YORK

STUDY AREA SHOWING MONITORING WELL LOCATIONS

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FIGURE
1