ARCADIS
Infrastructure, environment, facilities

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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:
August 2009 Monthly Progress Report,
Northrop Grumman Systems Corporation,
Operable Unit 3, NYSDEC Site ID # 1-30-003A, Bethpage, New York

Date:
September 3, 2009

Contact:
David Stern

Phone:
631-391-5284

Email:
David.Stern@arcadis-us.com

Our ref:
NY001493.0909.00007

Dear Steve:

In accordance with Section III of Administrative Order on Consent (AOC) Index # W1-0018-04-01, this letter reports the activities for Operable Unit 3 (OU3) performed by Northrop Grumman Systems Corporation (Northrop Grumman) during the month of August 2009; activities planned for September 2009 are also discussed. This report is the 41st OU3 monthly progress report since the AOC between Northrop Grumman and the New York State Department of Environmental Conservation (NYSDEC) was signed on June 24, 2005.

OU3 Activities Conducted During August 2009

Activities performed this period include:

On- and Off-Site RI/FS

- Validated data from OU3 RI vertical profile boring (VPB) VP-119 is enclosed (Table 1).
- Completed preparation of the Site Area Focused Feasibility Study (FFS) Report and submitted report to NYSDEC,
- Prepared response to NYSDEC comments on Site Area RI Report, Human Health Risk Assessment (HHRA), Schedule, and Preliminary Screening of Remedial Alternatives
- Continued preparation of off-site RI Report

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Soil Gas IRM

- Continued Operation, Maintenance, and Monitoring (OM&M) of the Soil Gas Interim Remedial Measure (IRM)

Groundwater IRM

- Worked on remedial system punch list items
- Continued OM&M of the Groundwater IRM
- Continued preparation of OM&M Manual

Other

- Prepared and submitted July 2009 AOC Monthly Progress Report

OU3 Activities Expected During September 2009

On- and Off-Site RI/FS

- Await NYSDEC comments on Site Area FFS Report
- Meet with NYSDEC to discuss comments on Site Area RI Report, HHRA, Schedule, and Preliminary Screening of Remedial Alternatives
- Continue to prepare off-site RI Report

Soil Gas IRM

- Continue OM&M of the Soil Gas IRM

Groundwater IRM

- Continue OM&M of the Groundwater IRM
- Continue preparation of OM&M Manual
- Work on remedial system punch list items

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Other

- Prepare and submit August 2009 AOC Monthly Progress Report.

Feel free to call us if you have any questions.

Sincerely,

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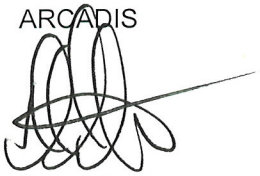

David E. Stern
Senior Scientist /Associate Project Manager

Enclosure

Copies:
C. San Giovanni, ARCADIS
M. Wolfert, ARCADIS
File, ARCADIS
J. Cofman, Northrop Grumman
K. Smith, Northrop Grumman
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Table 1. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Vertical Profile Boring VP-119, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

Sample Location:	VP-119	VP-119	VP-119	VP-119	VP-119	VP-119	VP-119	VP-119	VP-119
Sample Date:	54 - 54	104 - 104	159 - 159	209 - 209	259 - 259	309 - 309	359 - 359	409 - 409	429 - 429
CONSTITUENT Sample Depth (ft bls):	6/18/2009	6/18/2009	6/19/2009	6/22/2009	6/22/2009	6/23/2009	6/23/2009	6/23/2009	6/25/2009
(ug/L)									
1,1,1-Trichloroethane	**0.36 J**	< 5	< 5	< 5	**110**	< 5	< 5	< 5	< 5
1,1,2,2-Tetrachloroethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,1,2-Trichloroethane	< 5	< 5	< 5	< 5	**0.96 J**	< 5	< 5	< 5	< 5
1,1-Dichloroethane	< 5	< 5	< 5	**0.9 J**	**4 J**	**1.8 J**	**0.9 J**	< 5	< 5
1,1-Dichloroethene	< 5	< 5	< 5	< 5	**110**	**0.47 J**	< 5	< 5	< 5
1,2-Dichloroethane	< 5	< 5	< 5	< 5	**0.58 J**	< 5	< 5	< 5	< 5
1,2-Dichloropropane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2-Butanone	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2-Hexanone	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-methyl-2-pentanone	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Acetone	< 50 B	< 50 B	< 50	< 50 B	< 50 B	< 50 B	< 50 B	< 50 B	< 50 B
Benzene	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Bromodichloromethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromoform	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromomethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Carbon Disulfide	< 5	< 5	< 5	< 5 B	< 5	< 5	< 5	< 5	< 5
Carbon tetrachloride	< 5	< 5	< 5	**0.35 J**	< 5	< 5	< 5	< 5	< 5
Chlorobenzene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chlorodifluoromethane (Freon 22)	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chloroethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chloroform	**0.46 J**	< 5	< 5	**0.31 J**	**0.49 J**	< 5	< 5	< 5	< 5
Chloromethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
cis-1,2-dichloroethene	< 5	< 5	< 5	< 5	**1.2 J**	< 5	< 5	< 5	< 5
cis-1,3-dichloropropene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Dibromochloromethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Dichlorodifluoromethane (Freon 12)	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Methylene Chloride	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Styrene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Tetrachloroethene	< 5	< 5	< 5	< 5	**35**	< 5	< 5	< 5	< 5
Toluene	< 5	< 5	< 5	**0.44 J**	**1.5 J**	< 5	**0.55 J**	**0.4 J**	< 5
trans-1,2-dichloroethene	< 5	< 5	< 5	< 5	**0.82 J**	< 5	< 5	< 5	< 5
trans-1,3-dichloropropene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Trichloroethylene	**0.31 J**	**0.51 J**	**0.62 J**	**1.9 J**	**8.2**	< 5	< 5	< 5	< 5
Trichlorotrifluoroethane (Freon 113)	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Vinyl Chloride	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Xylene-o	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Xylenes - m,p	< 5	< 5	< 5	< 5	**0.52 J**	< 5	< 5	< 5	< 5
TVOCs	**1.13**	**0.51**	**0.62**	**3.9**	**271.77**	**2.27**	**1.45**	**0.4**	0

See Notes and Abbreviations on last page.

Table 1. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Vertical Profile Boring VP-119, Operable Unit 3 (Former Grumman Settling F Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

Sample Location:	VP-119	VP-119	VP-119	VP-119	VP-119	VP-119	VP-119	VP-119	VP-119
Sample Date:	454 - 454	504 - 504	524 - 525	484 - 5484	554 - 554	569 - 569	589 - 589	649 - 649	689 - 689
CONSTITUENT (ug/L) Sample Depth (ft bls):	6/25/2009	6/26/2009	6/26/2009	6/26/2009	6/29/2009	6/30/2009	6/30/2009	7/2/2009	7/7/2009
1,1,1-Trichloroethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,1,2,2-Tetrachloroethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,1,2-Trichloroethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2-Dichloroethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2-Dichloropropane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2-Butanone	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2-Hexanone	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
4-methyl-2-pentanone	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Acetone	< 50 B	< 50	< 50 B	< 50 B	< 50 B	< 50 B	< 50 B	< 50 B	< 50 B
Benzene	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Bromodichloromethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromoform	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromomethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Carbon Disulfide	< 5	< 5	< 5	< 5	< 5	< 5	**0.39 J**	< 5	< 5 B
Carbon tetrachloride	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chlorobenzene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chlorodifluoromethane (Freon 22)	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chloroethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chloroform	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chloromethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	**0.59 J**
cis-1,2-dichloroethene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
cis-1,3-dichloropropene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Dibromochloromethane	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Dichlorodifluoromethane (Freon 12)	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Methylene Chloride	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Styrene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Tetrachloroethene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Toluene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5 B
trans-1,2-dichloroethene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
trans-1,3-dichloropropene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Trichloroethylene	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Trichlorotrifluoroethane (Freon 113)	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Vinyl Chloride	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Xylene-o	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Xylenes - m,p	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
TVOCs	0	0	0	0	0	0	**0.39**	0	**0.59**

See Notes and Abbreviations on last page.

Table 1. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Vertical Profile Boring VP-119, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

Sample Location:	VP-119	VP-119	VP-119	VP-119	VP-119
Sample Date:	709 - 709	729 - 729	774 - 774	794 - 794	804 - 804
CONSTITUENT Sample Depth (ft bls):	7/7/2009	7/8/2009	7/9/2009	7/9/2009	7/10/2009
(ug/L)					
1,1,1-Trichloroethane	< 5	< 5	< 5	< 5	< 5
1,1,2,2-Tetrachloroethane	< 5	< 5	< 5	< 5	< 5
1,1,2-Trichloroethane	< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethane	< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethene	< 5	< 5	< 5	< 5	< 5
1,2-Dichloroethane	< 5	< 5	< 5	< 5	< 5
1,2-Dichloropropane	< 5	< 5	< 5	< 5	< 5
2-Butanone	< 50	< 50	< 50	< 50	< 50
2-Hexanone	< 50	< 50	< 50	< 50	< 50
4-methyl-2-pentanone	< 50	< 50	< 50	< 50	< 50
Acetone	< 50 B	< 50 B	< 50 B	< 50 B	< 50 B
Benzene	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Bromodichloromethane	< 5	< 5	< 5	< 5	< 5
Bromoform	< 5	< 5	< 5	< 5	< 5
Bromomethane	< 5	< 5	< 5	< 5	< 5
Carbon Disulfide	< 5	< 5	< 5	< 5	< 5 B
Carbon tetrachloride	< 5	< 5	< 5	< 5	< 5
Chlorobenzene	< 5	< 5	< 5	< 5	< 5
Chlorodifluoromethane (Freon 22)	< 5	< 5	< 5	< 5	< 5
Chloroethane	< 5	< 5	< 5	< 5	< 5
Chloroform	< 5	< 5	< 5	< 5	< 5
Chloromethane	< 5	< 5	< 5	< 5	< 5
cis-1,2-dichloroethene	< 5	< 5	< 5	< 5	< 5
cis-1,3-dichloropropene	< 5	< 5	< 5	< 5	< 5
Dibromochloromethane	< 5	< 5	< 5	< 5	< 5
Dichlorodifluoromethane (Freon 12)	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	< 5	< 5	< 5	< 5	< 5
Methylene Chloride	< 5	< 5	< 5	< 5	< 5
Styrene	< 5	< 5	< 5	< 5	< 5
Tetrachloroethene	< 5	< 5	< 5	< 5	< 5
Toluene	< 5 B	< 5	**0.54 J**	< 5	< 5
trans-1,2-dichloroethene	< 5	< 5	< 5	< 5	< 5
trans-1,3-dichloropropene	< 5	< 5	< 5	< 5	< 5
Trichloroethylene	< 5	< 5	< 5	< 5	< 5
Trichlorotrifluoroethane (Freon 113)	< 5	< 5	< 5	< 5	< 5
Vinyl Chloride	< 2	< 2	< 2	< 2	< 2
Xylene-o	< 5	< 5	< 5	< 5	< 5
Xylenes - m,p	< 5	< 5	< 5	< 5	< 5
TVOCs	0	0	**0.54**	0	0

See Notes and Abbreviations on last page.

Table 1. Concentrations of Volatile Organic Compounds in Groundwater Samples Collected from Vertical Profile Boring VP-119, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York.

Notes and Abbreviations:

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

Bold value indicates a detection

RI/FS	Remedial Investigation/Feasibility Study
TCL	Target compound list
VOC	Volatile organic compound
ASP	Analytical services protocol
ft bls	Feet below land surface
ug/L	Micrograms per liter
TVOC	Total volatile organic compounds
J	Value is estimated
B	Constituent detected in associated blank