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Infrastructure, environment, facilities

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Mr. Steven Scharf, P.E.
New York State Department of Environmental Conservation (NYSDEC)
Division of Environmental Remediation
625 Broadway
Albany, New York 12233-7015

ENVIRONMENT

Subject:
First and Second Quarters of 2007 Groundwater Monitoring Results,
Operable Unit 2,
Northrop Grumman Systems Corporation (Northrop Grumman) and
Naval Weapons Industrial Reserve Plant (NWIRP) Sites, Bethpage, New York.
(NYSDEC Site #s 1-30-003A and B)

Date:
September 27, 2007

Contact:
David E. Stern

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Email:
David.Stern@arcadis-us.com

Our ref:
NY001464.0407.00004

Dear Mr. Scharf:

On behalf of Northrop Grumman Systems Corporation (Northrop Grumman), ARCADIS is providing the NYSDEC with the results of the routine performance and environmental effectiveness (hydraulic and groundwater quality) monitoring that was conducted in accordance with the NYSDEC-accepted groundwater monitoring plan and the Public Water Supply Contingency Plan (PWSCP) (ARCADIS G&M, Inc. 2003; 2006). As you are aware, the Operation, Maintenance, and Monitoring (OM&M), the PWSCP monitoring, and environmental effectiveness groundwater monitoring programs are currently being performed on a voluntary basis. Based on the ongoing evaluation of OM&M data and long-term trends, ARCADIS has recommended that the quarterly reports for Year 2007 going forward consist of the presentation of data, as provided herein (see below). The Year 2007 and subsequent Annual Reports will continue to be prepared as comprehensive interpretive reports, and will be prepared in a manner consistent with the Year 2006 Annual Report (ARCADIS of New York, Inc. 2007). The content of the quarterly and annual reports will continue to be re-evaluated over time as additional data are generated.

The groundwater monitoring results for the First Quarter 2007 were provided to the NYSDEC in the May 18, 2007 letter. Enclosed, Table 1 provides OM&M performance data for the first two quarters of 2007. Tables 2 and 3 provide the complete validated results of monitoring for volatile organic compounds (VOCs) for remedial wells as well as monitoring and outpost wells for the Second Quarter 2007. Table 4 provides the results of the semi-annual water-level measurement round, completed in the First Quarter 2007. Figure 1 shows the site plan with key well locations.

Please contact us if you have any questions or comments.

Sincerely,

ARCADIS of New York, Inc.

David E. Stern
Senior Hydrogeologist

Carlo San Giovanni
Project Manager

Enclosures

Copies:
Andrew Musgrave, Bethpage Water District
Klaus Schmidke, Conestoga Rovers & Associates
John Mirando, Dvirka & Bartilucci
Richard J. Passmore, Glenn Springs Holdings Inc.
Gary Loesch, H2M Group
Rich Humann, H2M Group
Frank Flood, Massapequa Water Dist.
John Lovejoy, NCDOH
Walter Parrish, NYSDEC
Jacquelyn Nealon, NYSDOH
John Cofman, Northrop Grumman
Larry Leskovjan, Northrop Grumman
Lois Lovisolo, Bethpage Public Library
Anthony Sabino, Forchelli Curto
Susan Clarke, U.S. Navy
Paul Olivio, USEPA
Carla Struble, USEPA
Kevin Lumpe, Steel Equities
John Waltz, Brown AE&T Group

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Table 1. Summary of Operational Data and Water Balance for the On-Site Portion of the OU2 Groundwater Remedy, First And Second Quarters 2007, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Identification	Design Pumping/ Recharge Rate [a] (gpm)	Current Actual Average Pumping/Recharge Rate [b] (gpm)	Design Total Pumpage/Recharge (MG)	Current Actual Total Pumpage/Recharge (MG)	Current Percent of Design Pumpage/ Recharge	Current TCE Concentration (ug/L)	Current TVOC Concentration [c] ug/L	Cumulative Year 2007 Estimated VOC Mass Removed [d] (lbs)
Remedial Wells			**Groundwater Removed from Aquifer**					
Well 1	800	807	207.4	202.9	98%	450	560	946
Well 3	700	710	181.4	178.6	98%	3,100	3,210.0	4,774
Well 17	1,000	997	259.2	250.6	97%	340	359	749
Well 18	600	613	155.5	155.7	100%	130	140	182
Well 19	700	703	181.4	178.6	98%	180	208.7	310
Rounded Totals:	**3,800**	**3,830**	**985**	**966**	**98%**	**--**	**--**	**6,961**
Recharge Basins [a]			**Treated Water Recharged to Aquifer**					
West Recharge Basins	412	870	107	225.5	211%	--		--
South Recharge Basins	2,231	2,766	578.3	716.9	124%	--	--	--
Rounded Totals:	**2,643**	**3,636**	**685**	**942.4**	**138%**	**--**	**--**	**--**
Treated Water Sent to Calpine								
Calpine Demand	600-1000	186	77.8 - 131	46.8	--	--	--	--

Treatment Efficiencies		**Average SPDES Outfall TVOC Concentrations (ug/L) [f]**	
Tower 96 System Efficiency [e]:	**99.9%**	**Outfall 006:**	**2.3**
Tower 102 System Efficiency [e]:	**99.6%**	**Outfall 005:**	**1.1**

see footnotes on last page

Table 1. Summary of Operational Data and Water Balance for the On-Site Portion of the OU2 Groundwater Remedy, First And Second Quarters 2007, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

(a) - Remedial well pumping rates based on computer modeling (ARCADIS G& M, Inc. 2003c). Acceptable minimum recharge rates based on computer modeling (ARCADIS G&M, Inc. 2004b).
Recharge includes remedial well pumpage (minus pipe loss) and incidental runoff from precipitation. Current average recharge rates have been determined using the entire 180-day span of time as opposed to current average pumping rates, which account for varying amounts of downtime, as indicated below.

(b) - Actual Average Pumping Rates were calculated based on Actual Total Pumpage and hours of operation from December 28, 2006 to June 25, 2007 (180 days).

- OU2 wells were operational during the First and Second Quarters 2007, at the following percentages: Well-1 (97%), Well-3 (97%); Well-17 (97%), Well-18 (98%), and Well-19 (98%). The Actual Average Pumping Rates and rate of treated water sent to Calpine are for when the wells are pumping.

(c) - The TVOC concentration for each well was calculated based on Second Quarter 2007 groundwater monitoring data (Table 2).

(d) - TVOC mass removed is based on the TVOC data given above and the following formula:

(TVOC concentration in ug/L) X (gallons pumped) X (3.785 L/gal) X (1 x 10^{-6} g/ug) X (2.2 x 10^{-3} lb/g)

(e) Air Stripping Efficiency calculated from values above and in Table 1 using the following formula:

$$1 - \left[\left(\frac{\text{Average SPDES TVOC Concentration at Outfall}}{\frac{[(\text{TVOC}_{\text{Well 1}} \times Q_{\text{Well 1}}) + (\text{TVOC}_{\text{Well 2}} \times Q_{\text{Well 2}})]}{(Q_{\text{Well 1}} + Q_{\text{Well 2}})}} \right) \right]$$

When non-detectable levels of VOCs are found in the effluent, a value of zero is used to estimate the efficiency of the air stripper.

(f) Towers 96 and 102 outfalls are identified as Outfalls 005 and 006, respectively (commonly known as the Plant 5 Recharge Basins and South Recharge Basins, respectively). Complete SPDES reporting provided to NYSDEC by NGC under separate cover.

--	Not Available or Not Applicable	lb/g	pounds per gram
TVOC	Total Volatile Organic Compounds	lbs	pounds
g/ug	grams per microgram	MG	Million Gallons
gpm	gallons per minute	ug/L	micrograms per liter
L/gal	Liters per gallon	OU2	Operable Unit 2
SPDES	State Pollutant Discharge Elimination System	Q	Pumping Rate
NGC	Northrop Grumman Corporation	NYSDEC	New York State Department of Environmental Conservation

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Table 2. Concentrations of Volatile Organic Compounds Detected in Monitoring Wells and Groundwater Remedial Wells, Second Quarter 2007, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	WELL: GM-20I SAMPLE ID: GM-20I DATE: 6/5/2007	GM-20D GM-20D 6/5/2007	GM-21I GM-21I 6/1/2007	GM-21D GM-21D 6/1/2007	GM-33D2 GM-33D 6/14/2007
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 (MEK)	< 50	< 50	< 50	< 50	< 50
2-HEXANONE	< 50	< 50	< 50	< 50	< 50
4-METHYL-2-PENTANONE (MIBK)	< 50	< 50	< 50	< 50	< 50
ACETONE	< 50	< 50	< 50	< 50	< 50
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	< 50	< 50	< 50	< 50	< 50
CARBON TETRACHLORIDE	< 5	< 5	< 5	< 5	< 5
CHLOROBENZENE	< 5	< 5	< 5	< 5	< 5
CHLORODIBROMOMETHANE	< 5	< 5	< 5	< 5	< 5
CHLOROETHANE	< 5	< 5	< 5	< 5	< 5
CHLOROFORM	< 7	< 7	< 7	< 7	< 7
CHLOROMETHANE	< 5	< 5	< 5	< 5	< 5
CIS-1,2-DICHLOROETHENE	< 5	< 5	< 5	< 5	< 5
CIS-1,3-DICHLOROPROPENE	< 5	< 5	< 5	< 5	< 5
ETHYLBENZENE	< 5	< 5	< 5	< 5	< 5
FREON 113	< 5	< 5	< 5	< 5	**60**
METHYLENE CHLORIDE	< 5	< 5	< 5	< 5	< 5
STYRENE	< 5	< 5	< 5	< 5	< 5
TETRACHLOROETHENE	< 5	< 5	< 5	< 5	**19**
TOLUENE	< 5	< 5	< 5	< 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	**100**
VINYL CHLORIDE	< 2	< 2	< 2	< 2	< 2
XYLENE-O	< 5	< 5	< 5	< 5	< 5
XYLENES - M,P	< 5	< 5	< 5	< 5	< 5
TOTAL VOCs	0	0	0	0	**179**

ug/L	Micrograms per Liter
D	Constituent identified at a secondary dilution
J	Estimated value
Bold	Constituent detected

Table 2. Concentrations of Volatile Organic Compounds Detected in Monitoring Wells and Groundwater Remedial Wells, Second Quarter 2007, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	GM-34D GM-34D 6/8/2007	GM-34D2 GM-34D2 6/8/2007	GM-35D2 GM-35D2 6/14/2007	GM-75D2 GM-75D2 6/8/2007	GM-79I GM-79I 6/5/2007	GM-79D GM-79D 6/5/2007
1,1,1-TRICHLOROETHANE	< 25	< 13	< 5	< 5	< 5	< 5
1,1,2,2-TETRACHLOROETHANE	< 25	< 13	< 5	< 5	< 5	< 5
1,1,2-TRICHLOROETHANE	< 25	< 13	< 5	< 5	< 5	< 5
1,1-DICHLOROETHANE	< 25	< 13	< 5	< 5	< 5	< 5
1,1-DICHLOROETHENE	< 25	< 13	< 5	< 5	< 5	< 5
1,2-DICHLOROETHANE	< 25	< 13	< 5	< 5	< 5	< 5
1,2-DICHLOROPROPANE	< 25	< 13	< 5	< 5	< 5	< 5
2-BUTANONE (MEK)	< 250	< 130	< 50	< 50	< 50	< 50
2-HEXANONE	< 250	< 130	< 50	< 50	< 50	< 50
4-METHYL-2-PENTANONE (MIBK)	< 250	< 130	< 50	< 50	< 50	< 50
ACETONE	< 250	< 130	< 50	< 50	< 50	< 50
BENZENE	< 3.5	< 1.8	< 0.7	< 0.7	< 0.7	< 0.7
BROMODICHLOROMETHANE	< 25	< 13	< 5	< 5	< 5	< 5
BROMOFORM	< 25	< 13	< 5	< 5	< 5	< 5
BROMOMETHANE	< 25	< 13	< 5	< 5	< 5	< 5
CARBON DISULFIDE	< 250	< 130	< 50	< 50	< 50	< 50
CARBON TETRACHLORIDE	< 25	< 13	< 5	< 5	< 5	< 5
CHLOROBENZENE	< 25	< 13	< 5	< 5	< 5	< 5
CHLORODIBROMOMETHANE	< 25	< 13	< 5	< 5	< 5	< 5
CHLOROETHANE	< 25	< 13	< 5	< 5	< 5	< 5
CHLOROFORM	< 35	< 18	< 7	< 7	< 7	< 7
CHLOROMETHANE	< 25	< 13	< 5	< 5	< 5	< 5
CIS-1,2-DICHLOROETHENE	< 25	< 13	< 5	< 5	< 5	< 5
CIS-1,3-DICHLOROPROPENE	< 25	< 13	< 5	< 5	< 5	< 5
ETHYLBENZENE	< 25	< 13	< 5	< 5	< 5	< 5
FREON 113	< 25	< 13	**6.1**	< 5	< 5	< 5
METHYLENE CHLORIDE	< 25	< 13	< 5	< 5	< 5	< 5
STYRENE	< 25	< 13	< 5	< 5	< 5	< 5
TETRACHLOROETHENE	< 25	**14**	**9.1**	**6.8**	< 5	< 5
TOLUENE	< 25	< 13	< 5	< 5	< 5	< 5
TRANS-1,2-DICHLOROETHENE	< 25	< 13	< 5	< 5	< 5	< 5
TRANS-1,3-DICHLOROPROPENE	< 25	< 13	< 5	< 5	< 5	< 5
TRICHLOROETHYLENE	**780**	**350**	**250 D**	**240**	< 5	**38**
VINYL CHLORIDE	< 10	< 5	< 2	< 2	< 2	< 2
XYLENE-O	< 25	< 13	< 5	< 5	< 5	< 5
XYLENES - M,P	< 25	< 13	< 5	< 5	< 5	< 5
TOTAL VOCs	**780**	**364**	**265.2**	**246.8**	0	**38**

ug/L	Micrograms per Liter
D	Constituent identified at a secondary
J	Estimated value
Bold	Constituent detected

Table 2. Concentrations of Volatile Organic Compounds Detected in Monitoring Wells and Groundwater Remedial Wells, Second Quarter 2007, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	WELL 17 WELL 17 6/13/2007	WELL 18 WELL 18 6/13/2007	WELL 19 WELL 19 6/13/2007	TOWER 102 EFL TOWER 102 EFFLUENT 6/13/2007
1,1,1-TRICHLOROETHANE	< 13	< 5	< 5	< 5
1,1,2,2-TETRACHLOROETHANE	< 13	< 5	< 5	< 5
1,1,2-TRICHLOROETHANE	< 13	< 5	< 5	< 5
1,1-DICHLOROETHANE	< 13	< 5	< 5	< 5
1,1-DICHLOROETHENE	< 13	< 5	< 5	< 5
1,2-DICHLOROETHANE	< 13	< 5	< 5	< 5
1,2-DICHLOROPROPANE	< 13	< 5	< 5	< 5
2-BUTANONE (MEK)	< 130	< 50	< 50	< 50
2-HEXANONE	< 130	< 50	< 50	< 50
4-METHYL-2-PENTANONE (MIBK)	< 130	< 50	< 50	< 50
ACETONE	< 130	< 50	< 50	< 50
BENZENE	< 1.8	< 0.7	< 0.7	< 0.7
BROMODICHLOROMETHANE	< 13	< 5	< 5	< 5
BROMOFORM	< 13	< 5	< 5	< 5
BROMOMETHANE	< 13	< 5	< 5	< 5
CARBON DISULFIDE	< 130	< 50	< 50	< 50
CARBON TETRACHLORIDE	< 13	< 5	< 5	< 5
CHLOROBENZENE	< 13	< 5	< 5	< 5
CHLORODIBROMOMETHANE	< 13	< 5	< 5	< 5
CHLOROETHANE	< 13	< 5	< 5	< 5
CHLOROFORM	< 18	< 7	< 7	< 7
CHLOROMETHANE	< 13	< 5	< 5	< 5
CIS-1,2-DICHLOROETHENE	< 13	< 5	**20**	< 5
CIS-1,3-DICHLOROPROPENE	< 13	< 5	< 5	< 5
ETHYLBENZENE	< 13	< 5	< 5	< 5
FREON 113	< 13	< 5	< 5	< 5
METHYLENE CHLORIDE	< 13	< 5	< 5	< 5
STYRENE	< 13	< 5	< 5	< 5
TETRACHLOROETHENE	**19**	**10**	**8.7**	< 5
TOLUENE	< 13	< 5	< 5	< 5
TRANS-1,2-DICHLOROETHENE	< 13	< 5	< 5	< 5
TRANS-1,3-DICHLOROPROPENE	< 13	< 5	< 5	< 5
TRICHLOROETHYLENE	**340**	**130**	**180**	< 5
VINYL CHLORIDE	< 5	< 2	< 2	< 2
XYLENE-O	< 13	< 5	< 5	< 5
XYLENES - M,P	< 13	< 5	< 5	< 5
TOTAL VOCs	**359**	**140**	**208.7**	0

ug/L	Micrograms per Liter
D	Constituent identified at a secondary
J	Estimated value
Bold	Constituent detected

Table 2. Concentrations of Volatile Organic Compounds Detected in Monitoring Wells and Groundwater Remedial Wells, Second Quarter 2007, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	WELL GP 1 WELL GP 1 6/13/2007	WELL GP 3 WELL GP 3 6/13/2007	TOWER 96 EFF TOWER 96 EFFLUENT 6/13/2007
1,1,1-TRICHLOROETHANE	< 13	< 100	< 5
1,1,2,2-TETRACHLOROETHANE	< 13	< 100	< 5
1,1,2-TRICHLOROETHANE	< 13	< 100	< 5
1,1-DICHLOROETHANE	< 13	< 100	< 5
1,1-DICHLOROETHENE	< 13	< 100	< 5
1,2-DICHLOROETHANE	< 13	< 100	< 5
1,2-DICHLOROPROPANE	< 13	< 100	< 5
2-BUTANONE (MEK)	< 130	< 1000	< 50
2-HEXANONE	< 130	< 1000	< 50
4-METHYL-2-PENTANONE (MIBK)	< 130	< 1000	< 50
ACETONE	< 130	< 1000	< 50
BENZENE	< 1.8	< 14	< 0.7
BROMODICHLOROMETHANE	< 13	< 100	< 5
BROMOFORM	< 13	< 100	< 5
BROMOMETHANE	< 13	< 100	< 5
CARBON DISULFIDE	< 130	< 1000	< 50
CARBON TETRACHLORIDE	< 13	< 100	< 5
CHLOROBENZENE	< 13	< 100	< 5
CHLORODIBROMOMETHANE	< 13	< 100	< 5
CHLOROETHANE	< 13	< 100	< 5
CHLOROFORM	< 18	< 140	< 7
CHLOROMETHANE	< 13	< 100	< 5
CIS-1,2-DICHLOROETHENE	< 13	< 100	< 5
CIS-1,3-DICHLOROPROPENE	< 13	< 100	< 5
ETHYLBENZENE	< 13	< 100	< 5
FREON 113	< 13	< 100	< 5
METHYLENE CHLORIDE	< 13	< 100	< 5
STYRENE	< 13	< 100	< 5
TETRACHLOROETHENE	**110**	< 100	< 5
TOLUENE	< 13	< 100	< 5
TRANS-1,2-DICHLOROETHENE	< 13	< 100	< 5
TRANS-1,3-DICHLOROPROPENE	< 13	< 100	< 5
TRICHLOROETHYLENE	**450**	**3100**	< 5
VINYL CHLORIDE	< 5	**110**	< 2
XYLENE-O	< 13	< 100	< 5
XYLENES - M,P	< 13	< 100	< 5
TOTAL VOCs	**560**	**3210**	0

ug/L	Micrograms per Liter
D	Constituent identified at a secondary
J	Estimated value
Bold	Constituent detected

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Table 3. Concentrations of Site-Related Volatile Organic Compounds Detected in Outpost Wells, Second Quarter 2007, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York

CONSTITUENT (Units in ug/L)	WELL: / SAMPLE ID: / DATE:	BPOW-1-1 BPOW 1-1 6/18/2007	BPOW-1-2 BPOW 1-2 6/19/2007	BPOW-1-3 BPOW 1-3 6/18/2007	BPOW-2-1 BPOW 2-1 6/19/2007	BPOW-2-2 BPOW 2-2 6/19/2007	BPOW-3-1 BPOW 3-1 6/19/2007	BPOW-3-2 BPOW 3-2 6/19/2007	BPOW-4-1 BPOW 4-1 6/20/2007	BPOW-4-2 BPOW 4-2 6/20/2007
1,1,1-TRICHLOROETHANE		**1.9**	< 0.5	**7.0**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2,2-TETRACHLOROETHANE		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-TRICHLOROETHANE		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-DICHLOROETHANE		**1.2**	< 0.5	**2.4**	**2.0**	**0.55**	< 0.5	< 0.5	< 0.5	< 0.5
1,1-DICHLOROETHENE		**1.3**	< 0.5	**5.3**	**0.53**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-DICHLOROETHANE		< 0.5	< 0.5	< 0.5	**3.5**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
CARBON TETRACHLORIDE		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
CHLOROBENZENE		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
CHLOROFORM		< 0.5	< 0.5	< 0.5	**0.59**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
CIS-1,2-DICHLOROETHENE		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
TETRACHLOROETHENE		< 0.5	< 0.5	< 0.5	**1.2**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
TRANS-1,2-DICHLOROETHENE		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
TRICHLOROETHYLENE		**1.6**	< 0.5	**1.3**	**1.9**	**0.59**	< 0.5	< 0.5	< 0.5	< 0.5
Total Site-Related VOCs [1]:		**6 [3]**	0	**16 [3]**	**8.52 [4] [5]**	**1.14 [4]**	0	0	0	0
TVOC Trigger Value [2]:		**0.6**	**0.6**	**0.6**	**NE**	**NE**	**1.5**	**1.5**	**1.5**	**1.5**

(1) Site-related VOCs were established in the Public Water Supply Contingency Plan (PWSCP) (ARCADIS G&M, Inc. 2003).

(2) TVOC Trigger Values were established in the PWSCP (ARCADIS G&M, Inc. 2003)

(3) The TVOC Trigger Value for Cluster 1 was initially exceeded on April 23, 2004; confirmatory sampling and reporting was conducted as per the PWSCP (ARCADIS G&M, Inc. 2003)

(4) Trace concentrations of VOCs initially detected in Well Cluster 2 on May 3, 2004. Based on discussion with Navy, re-sampling was conducted that confirmed the result. Reporting was conducted as per the PWSCP (ARCADIS G&M, Inc. 2003)

(5) Benzene and Methyl tert-butyl ether (MTBE), which are not site-related VOCs, were detected in Outpost Well OW 2-1 at 220 ug/L and 19 ug/L, respectively.

ug/L Micrograms per liter

Bold Constituent detected

TVOC Total Volatile Organic Compounds

NE Trigger Value Not Established

Table 4. Water-Level Measurement Data, March 5, 2007, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Well Identification	Measuring Point Elevation (ft msl)	Depth to Water (ft bmp)	Water-Level Elevation (ft msl)
Shallow Wells			
FW-03	124.30	54.05	70.25
N-9921	94.23	30.59	63.64
N-10597	109.85	39.68	70.17
N-10600	102.41	37.36	65.05
N-10631	103.47	36.24	67.23
N-10633	103.80	37.34	66.46
N-10634	101.20	38.15	63.05
N-10821[6]	91.58	--	--
GM-15S	109.44	42.79	66.65
GM-16SR	115.86	46.08	69.78
GM-17SR	115.79	45.57	70.22
GM-18S	107.60	39.11	68.49
GM-19S	109.86	40.50	69.36
GM-21S	105.81	33.30	72.51
GM-78S	104.94	39.18	65.76
GM-79S (N-10628)	100.88	38.06	62.82
HN-24S	120.32	50.35	69.97
HN-40S	116.35	47.07	69.28
HN-42S	120.32	49.13	71.19
MW-3R	101.45	31.91	69.54
Intermediate Wells			
N-10624	93.61	30.13	63.48
GM-15I	109.25	42.60	66.65
GM-16I	115.81	46.03	69.78
GM-17I	115.83	45.81	70.02
GM-18I	109.03	40.48	68.55
GM-19I	109.86	41.69	68.17
GM-20I	103.88	33.63	70.25
GM-21I	105.72	35.50	70.22
GM-74I	107.42	37.80	69.62
GM-78I	105.06	39.45	65.61
GM-79I	100.88	38.60	62.28
HN-24I	125.80	53.68	72.12
HN-40I	115.91	46.82	69.09
HN-42I	119.61	48.41	71.20

See notes on last page

Table 4. Water-Level Measurement Data, March 5, 2007, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Well Identification	Measuring Point Elevation (ft msl)	Depth to Water (ft bmp)	Water-Level Elevation (ft msl)
Deep Wells			
N-10627	93.70	30.56	63.14
GM-13D	113.97	44.21	69.76
GM-15D	109.84	45.07	64.77
GM-17D	115.68	48.09	67.59
GM-18D	108.88	43.37	65.51
GM-20D	103.92	35.95	67.97
GM-21D	105.66	40.97	64.69
GM-34D[5]	71.19	36.75	34.44
GM-36D	91.63	33.60	58.03
GM-37D	97.26	37.59	59.67
GM-38D	91.75	36.79	54.96
GM-39D$_A$[4]	102.23	36.17	66.06
GM-39D$_B$[4]	102.08	39.64	62.44
GM-73D	104.87	41.90	62.97
GM-74D	107.43	43.12	64.31
GM-79D	101.25	39.91	61.34
HN-29D	115.11	Not taken	--
Deep2 Wells			
GM-15D2	109.78	47.66	62.12
GM-33D2	106.85	47.38	59.47
GM-34D2[5]	71.19	29.50	41.69
GM-35D2	96.28	37.93	58.35
GM-36D2	91.60	35.80	55.80
GM-37D2	97.17	38.26	58.91
GM-38D2	91.56	39.08	52.48
GM-70D2	99.58	39.42	60.16
GM-71D2	98.45	39.91	58.54
GM-73D2	104.62	43.89	60.73
GM-74D2	107.36	49.38	57.98
GM-75D2	93.63	33.51	60.12
Well 1 [1]	116.78	78.00	38.78
Well 3 [2]	117.78	85.00	32.78
Well 17 [3]	104.10	60.00	44.10
Well 18 [3]	110.00	60.00	50.00
Well 19	108.70	64.10	44.60

See notes on last page

Table 4. Water-Level Measurement Data, March 5, 2007, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

Well Identification	Measuring Point Elevation (ft msl)	Depth to Water (ft bmp)	Water-Level Elevation (ft msl)
Outpost Wells			
BPOW1-1	73.65	27.96	45.69
BPOW1-2	73.54	30.09	43.45
BPOW1-3	73.37	29.90	43.47
BPOW2-1	60.06	18.49	41.57
BPOW2-2	59.96	18.50	41.46
BPOW3-1	63.19	24.58	38.61
BPOW3-2	63.72	25.80	37.92
BPOW4-1	67.34	25.49	41.85
BPOW4-2	67.18	24.80	42.38

(1) Water level was measured by inflating airline set at 120 ft bmp (gauge at wellhead) and subtracting the reading on the gauge from 120 to obtain the depth to water in ft bmp.

(2) Water level was measured by inflating an airline set at 150 ft bmp (gauge at well head) and subtracting the reading on the gauge from 150 to obtain the depth to water in ft bmp.

(3) Water level was measured by inflating airline set at 110 ft bmp (gauge at wellhead) and subtracting the reading on the gauge from 110 to obtain the depth to water in ft bmp.

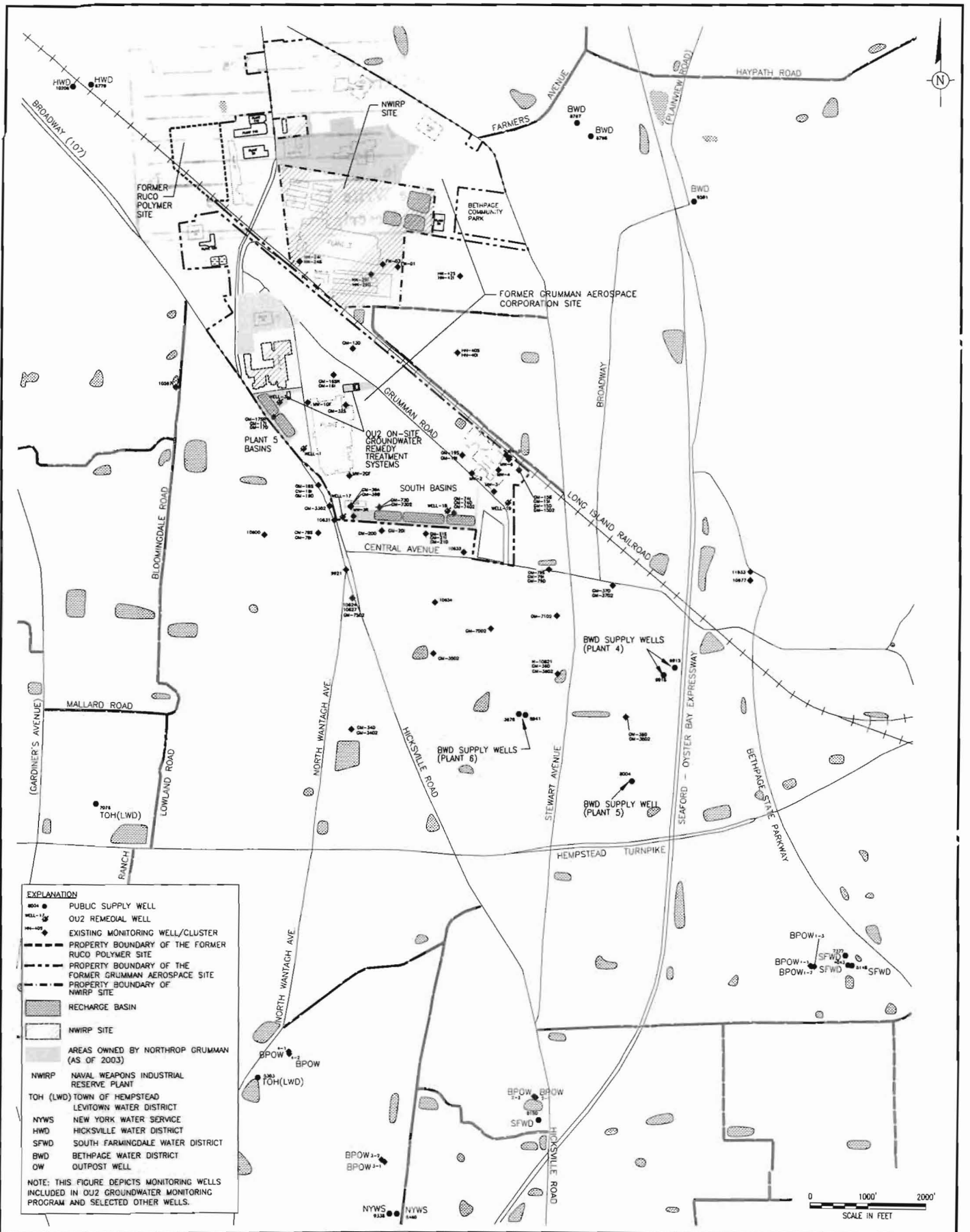
(4) Wells GM-39_A and GM-39_B are screened at the approximate midpoint and basal portion of the deep zone, respectively.

(5) Water level measurement was collected on March 6, 2007.

(6) Well not accessible.

ft msl feet relative to mean sea level

ft bmp feet below measuring point



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User Name : alsanchez Path\Name : G:\DAPROJECTS\Northrop Grumman\Cad\dOU2\2007\D01_OnSite Locations.dwg
Current Plotstyle : ByColor
Layout Tab: REMEDIAL

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PROJECT TITLE
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NORTHROP GRUMMAN
SYSTEMS CORPORATION
BETHPAGE, NEW YORK

PROJECT MANAGER	DEPARTMENT MANAGER	LEAD DESIGNER	CHECKED BY
C. SAN GIOVANNI	M. WOLFERT		M. REINOL

SHEET TITLE
LOCATION OF OU2 ON-SITE GROUNDWATER REMEDY AND WELLS

TASK/PHASE NUMBER	DRAWN BY
00004	A. SANCHEZ
PROJECT NUMBER	DRAWING NUMBER
NY001464.0407	1