



Infrastructure, environment, facilities

Mr. Steven Scharf, P.E.
New York State Department of Environmental Conservation (NYSDEC)
Division of Environmental Remediation
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Subject:

Results of Fourth Quarter 2006 Outpost Well Groundwater Monitoring, 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)

ENVIRONMENT

Dear Mr. Scharf:

Date:
April 12, 2007

Pursuant to the July 2003 Public Water Supply Contingency Plan (PWSCP) (ARCADIS G&M, Inc. 2003) and on behalf of Northrop Grumman, ARCADIS is providing the NYSDEC with the validated results of groundwater monitoring performed for the outpost wells for the Fourth Quarter of 2006. Table 1 summarizes the analytical results of monitoring for site-related volatile organic compounds (VOCs), as outlined in the PWSCP, for this period. Figure 1 shows the site plan with outpost well locations.

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During the Fourth Quarter 2006, groundwater samples were collected from the nine outpost wells using the methodology described in the PWSCP. Based on the trigger values for site-related TVOC concentrations established in the PWSCP, there are no new exceedences of trigger values. Wells in Clusters OW-1 and OW-2 continue to exhibit site-related TVOC concentrations above their respective trigger values, which were initially detected in samples collected during the First and Second Quarters of 2004.

Our ref:
NY001464.0407.00004

Please contact us if you have any questions or comments.

Sincerely,

ARCADIS of New York, Inc.

David E. Stern
Senior Scientist

Carlo San Giovanni
Project Manager

Enclosures

Copies:

See Attached Distribution List
Imagine the result

ARCADIS

Steven Scharf, P.E.
April 12, 2007

Copies:

Water Parish - New York State Department of Environmental Conservation
John Cofman - Northrop Grumman
Larry Leskovjan - Northrop Grumman
Susan Clarke - U.S. Navy Northern Division
James Colter - U.S. Navy Northern Division
John Lovejoy - Nassau County Department of Health
Jacqueline Nealon - New York State Department of Health
Frank Flood - Massapequa Water District
Matt Snyder - New York Water Service
Anthony J. Sabino - Town of Oyster Bay
William Bier - South Farmingdale Water District
David Brayack - TetraTech NUS, Inc.
Arnold Palleschi - Town of Hempstead Water District
Kevin Lumpe - Steel Equities
Lois Lovisolo - Bethpage Public Library (Public Repository)
Andrew Musgrave - Bethpage Water District

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Table 1 Concentrations of Site-Related Volatile Organic Compounds Detected in Outpost Wells, Fourth Quarter 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York. ⁽¹⁾

CONSTITUENT (Units in ug/L)	WELL:		OW1-1		OW1-2		OW1-3		OW 2-1		OW2-2		OW3-1		OW3-2		OW4-1		OW4-2				
	SAMPLE ID:	DATE:	REP	12-6-06	BPOW1-2	12/1/2006	BPOW1-2	12/1/2006	BPOW 1-3	12/1/2006	BPOW 2-1	12/1/2006	BPOW 2-2	12/1/2006	BPOW 3-1	12/8/2006	BPOW 3-2	12/8/2006	BPOW 4-1	12/1/2006	BPOW 4-2	12/1/2006	
Chlorobenzene			<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50
1,1-Dichloroethene	1.8		1.8		<0.50		3.1		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50
1,1-Dichloroethane	1.5		1.4		<0.50		1.4		<0.50		<0.50		0.67		<0.50		<0.50		<0.50		<0.50		<0.50
trans-1,2-Dichloroethene	<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50
cis-1,2-Dichloroethene	<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50
Chloroform	<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50
1,2-Dichloroethane	<0.50		<0.50		<0.50		<0.50		<0.50		2.2		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50
1,1,1-Trichloroethane	3.1J		3.1J		<0.50		4.7J		<0.50		0.62J		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50
Carbon tetrachloride	<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50
Trichloroethene	2		2		<0.50		0.93		<0.50		1.4		0.77		<0.50		<0.50		<0.50		<0.50		<0.50
1,1,2-Trichloroethane	<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50
Tetrachloroethene	<0.50		<0.50		<0.50		<0.50		<0.50		0.93		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50
Freon-113 *	<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50
1,1,2,2-Tetrachloroethane	<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50		<0.50
Total Site-Related VOCs ⁽¹⁾:	8.4⁽²⁾		8.3⁽²⁾		0		10.13⁽³⁾		135.15⁽⁴⁾		1.44		1.44		0		0		0		0		0
TVOC Trigger Value ⁽²⁾:	0.6		0.6		0.6		0.6		NE		NE		NE		1.5		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⁾ The TVOC Trigger Value for Cluster 2 was initially exceeded on May 3, 2004; confirmatory sampling and reporting was conducted as per the PWSCP (ARCADIS G&M, Inc. 2003).
TVOC concentration includes benzene (130 ug/L) and MTBE (10 ug/L), which are not site related VOCs.

ug/L Micrograms per liter

Bold Constituent detected

TVOC Total Volatile Organic Compounds

NE Not Established

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Table 1 Concentrations of Site-Related Volatile Organic Compounds Detected in Outpost Wells, Fourth Quarter 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York. ⁽¹⁾

CONSTITUENT (Units in ug/L)	WELL: TRIP BLANK		TRIP BLANK		TRIP BLANK		TRIP BLANK	
	SAMPLE ID:	DATE:	TB 12-1-06	TB 12-6-06	TB 12-6-06	TB 12-7-06	TB 12-8-06	TB 12-8-06
Chlorobenzene			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethene			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethane			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
trans-1,2-Dichloroethene			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,2-Dichloroethene			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloroform			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1-Trichloroethane			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon tetrachloride			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethene			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethene			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Freon-113 *			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Total Site-Related VOCs ⁽¹⁾:			0	0	0	0	0	0

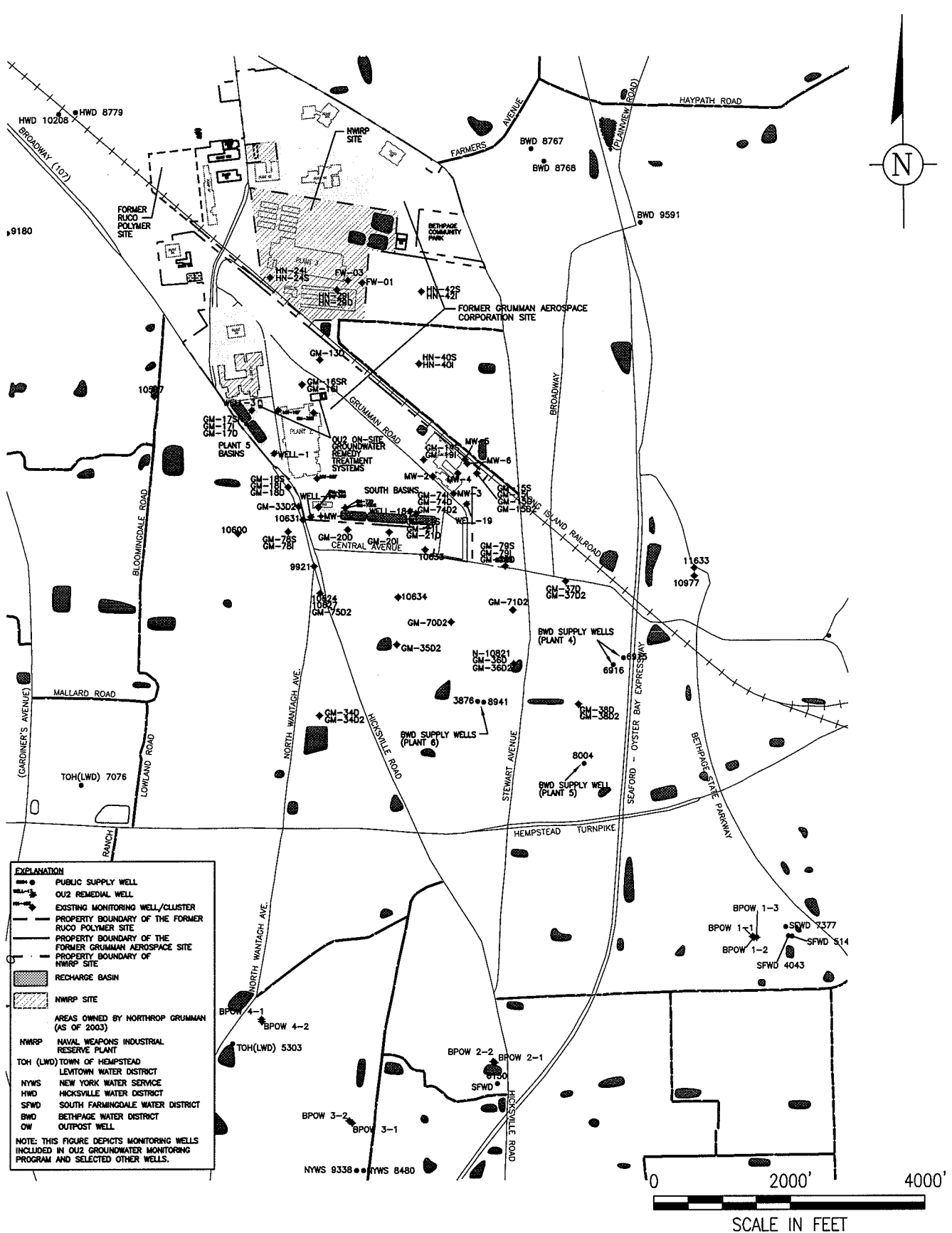
⁽¹⁾ Site-related VOCs were established in the Public Water Supply Contingency Plan (PWSCP) (ARCADIS G&M, Inc. 2003).
⁽²⁾ TVOC Trigger Values were established in the PWSCP (ARCADIS G&M, Inc. 2003).
⁽³⁾ The TVOC Trigger Value for Cluster 1 was initially exceeded on April 23, 2004; confirmatory sampling and reporting was conducted as per the PWSCP (ARCADIS G&M, Inc. 2003).
⁽⁴⁾ The TVOC Trigger Value for Cluster 2 was initially exceeded on May 3, 2004; confirmatory sampling and reporting was conducted as per the PWSCP (ARCADIS G&M, Inc. 2003).

ug/L Micrograms per liter
Bold Constituent detected
 TVOC Total Volatile Organic Compounds
 NE Not Established

Current Plotstyle : ByColor
Layout Tab: 8.8x11

Acad Version : R17.0s (LWS Tbed)\Time : Thu, 12 Apr 2007 10:33:38pm
User Name : alsanchez Path Name : G:\PROJECT\Northrop_Grumman\Cadd\OU2_2007\001_OnSite_Locations.dwg

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EXPLANATION	
	PUBLIC SUPPLY WELL
	OU2 REMEDIAL WELL
	EXISTING MONITORING WELL/CLUSTER
	PROPERTY BOUNDARY OF THE FORMER RUCCO POLYMER SITE
	PROPERTY BOUNDARY OF THE FORMER GRUMMAN AEROSPACE SITE
	PROPERTY BOUNDARY OF NWRP SITE
	RECHARGE BASIN
	NWRP SITE
	AREAS OWNED BY NORTHROP GRUMMAN (AS OF 2003)
	NWRP NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
	TOH (LWD) TOWN OF HEMPSTEAD
	LEVITTOWN WATER DISTRICT
	NEW YORK WATER SERVICE
	HICKSVILLE WATER DISTRICT
	SOUTH FARMINGDALE WATER DISTRICT
	BETHPAGE WATER DISTRICT
	OW OUTPOST WELL
NOTE: THIS FIGURE DEPICTS MONITORING WELLS INCLUDED IN OUR GROUNDWATER MONITORING PROGRAM AND SELECTED OTHER WELLS.	

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PROJECT MANAGER C. SAN GIOVANNI	DEPARTMENT MANAGER M. WOLFERT	LEAD DESIGN PROF.	CHECKED BY P. WEST
SHEET TITLE LOCATION OF OU2 ON-SITE GROUNDWATER REMEDIATION AND WELLS		TASK/PHASE NUMBER 00004	DRAWN BY A. SANCHEZ
		PROJECT NUMBER NY001464.0407	DRAWING NUMBER 1