



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

Subject:
Results of Third Quarter 2011 Groundwater Monitoring,
Operable Unit 2, Northrop Grumman Systems Corporation and Naval Weapons
Industrial Reserve Plant (NWIRP) Sites, Bethpage, New York.
(NYSDEC Site #s 1-30-003A and B)

Dear Mr. Scharf:

On behalf of Northrop Grumman Systems Corporation (Northrop Grumman),
ARCADIS is providing the NYSDEC with the validated results of Operable Unit 2
(OU2) groundwater monitoring, performed in accordance with the approved
groundwater monitoring plan (ARCADIS G&M, Inc. 2006) and the Public Water
Supply Contingency Plan (PWSCP) (ARCADIS G&M, Inc. 2003). Table 1 provides
OU2 remedial system performance operational data and water balance. Tables 2
and 3 provide the validated analytical results of monitoring for this period. Figure 1
shows the site plan with well locations.

Please contact us if you have any questions or comments.

Sincerely,

ARCADIS of New York, Inc.

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Senior Hydrogeologist

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Project Manager

Enclosures

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ENVIRONMENT

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NY001496.0311.GWMI4

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Table 1. Operational Summary for the On-Site Portion of the Operable Unit 2 Groundwater Remedy, Third Quarter 2011, Northrop Grumman Systems Corporation, Bethpage, New York.

Identification	Design	Current Actual	Design	Current Actual	Current	Current	Current	3rd Quarter
	Pumping/ Recharge Rate ^(a) (gpm)	Average Pumping/Recharge Rate ^(b,h) (gpm)	Total Pumpage/Recharge (MG)	Total Pumpage/Recharge ^(h) (MG)	Percent of Design Pumpage/ Recharge	TCE Concentration (ug/L)	TVOC Concentration ^(c) (ug/L)	2011 Estimated VOC Mass Removed ^(d) (lbs)
Remedial Wells		Groundwater Removed from Aquifer						
Well 1	800	729	96.8	67.0	69%	430	510	285
Well 3	700	710	84.7	85.0	100%	2,100	2,424	1,716
Well 17	1,000	1,010	121.0	121.0	100%	260	306	308
Well 18	600	628	72.6	76.0	105%	77	101	64
Well 19	700	728	84.7	88.0	104%	200	236	173
Rounded Totals:	3,800	3,805	460	437	95%	--	--	2,546
Recharge Basins ^(a)		Treated Water Recharged to Aquifer						
West Recharge Basins	0	742	0	89.8	--	--	--	--
South Recharge Basins	2,231	2,691	269.9	325.5	121%	--	--	--
Rounded Totals:	2,231	3,433	270	415	--	--	--	--
Treated Water Sent to Calpine								
Calpine Demand	100-400	372	12 - 48	45.0	--	--	--	--
Treatment Efficiencies		Average SPDES Outfall TVOC Concentrations First Quarter 2011 (ug/L) ^(f)						
Tower 96 System Efficiency ^(e) :		>99.9%	--	<0.5	--	--	--	--
Tower 102 System Efficiency ^(e) :		>99.9%	--	<0.5	--	--	--	--

see footnotes on last page

Table 1. Operational Summary for the On-Site Portion of the Operable Unit 2 Groundwater Remedy, Third Quarter 2011, Northrop Grumman Systems Corporation, Bethpage, New York.

- (a) - Design remedial well pumping rates based on computer modeling (ARCADIS G& M, Inc. 2003c). Acceptable design recharge rates based on computer modeling (ARCADIS G&M, Inc. 2004b). Design pumping and recharge rates were modified in April 2005. Recharge includes remedial well pumpage (minus Calpine demand, Oxy biosparge system demand, incidental irrigation use, and pipe loss), plus incidental runoff from precipitation. Current average recharge rates have been determined using the entire 84-day span of time for the Recharge Basins as opposed to current average pumping rates, which account for varying amounts of downtime, as indicated below.
- (b) - OU2 wells were operational during the Third Quarter 2011, at the following percentages: Well-1 (76%), Well-3 (99%); Well-17 (99%), Well-18 (>99%), and Well-19 (>99%). 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 Third Quarter 2011 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-using the following formula:

$$1 - \left[\left(\frac{\text{Average SPDES TVOC Concentration at Outfall}}{[(\text{TVOC}_{\text{Well 1}} \times \text{Q}_{\text{Well 1}}) + (\text{TVOC}_{\text{Well 3}} \times \text{Q}_{\text{Well 3}}) \text{ etc...}] / (\text{Q}_{\text{Well 1}} + \text{Q}_{\text{Well 3}} \text{ etc...})} \right) \right]$$
 - 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 102 and 96 outfalls are identified as Outfalls 005 and 006, respectively (commonly known as the South Recharge Basins and Plant 5 Recharge Basins, respectively). Complete SPDES reporting provided to NYSDEC by NGC under separate cover.
- (g) - Well 1 was off-line due to pump failure from August 22, 2011 until September 1, 2011. The well operated at a reduced flowrate from September 1, 2011 through the end of the reporting period due to limitations of a temporary pump. Starting September 14, 2011 the Well 1 temporary pump was taken off line, as needed, to perform well inspection and maintenance activities.
- (h) - The Calpine actual average demand rate and volume discharge and West Recharge Basin actual average discharge rate and volume discharge data for the Second Quarter 2011 were not available at the time of the issuance of that report and are included in this report, as follows: West Recharge Basin discharge rate (690 gpm); Calpine demand rate (210 gpm); West Recharge Basin volume discharge (97.4 MG); Calpine volume demand (29.6 MG).

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



Table 2. Concentrations of Volatile Organic Compounds Detected in Monitoring Wells and Groundwater Remedial Wells, Third Quarter 2011, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	Well:	GM-20I	GM-20D ⁽¹⁾	GM-21I	GM-21D	GM-33D2	GM-34D	GM-34D2
	Sample ID:	GM-20I	GM-20D	GM-21I	GM-21D	GM-33D2	GM-34D	GM-34D2
	Date:	8/11/2011	8/8/2011	7/26/2011	7/27/2011	7/27/2011	7/25/2011	7/25/2011
1,1,1-Trichloroethane	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
1,1,2,2-Tetrachloroethane	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
1,1,2-Trichloroethane	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
1,1-Dichloroethane	< 5	< 0.5	< 5	< 5	< 5	< 5	0.88 J	< 10
1,1-Dichloroethene	< 5	< 0.5	< 5	< 5	< 5	< 5	5.2 J	1.7 J
1,2-Dichloroethane	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
1,2-Dichloropropane	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
2-Butanone	< 50	--	< 50	< 50	< 50	< 50	< 130	< 100
2-Hexanone	< 50	--	< 50	< 50	< 50	< 50	< 130	< 100
4-methyl-2-pentanone	< 50	--	< 50	< 50	< 50	< 50	< 130	< 100
Acetone	< 50 B	--	< 50	< 50	< 50	< 50	< 130	2.7 J
Benzene	< 0.7	< 0.5	< 0.7	< 0.7	< 0.7	< 0.7	< 1.8	< 1.4
Bromodichloromethane	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
Bromoform	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
Bromomethane	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
Carbon Disulfide	< 5	--	< 5	< 5	< 5	< 5	< 13	< 10
Carbon tetrachloride	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
Chlorobenzene	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
Chlorodifluoromethane (Freon 22)	< 5	--	< 5	< 5	< 5	< 5	< 13	0.62 J
Chloroethane	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
Chloroform	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
Chloromethane	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
cis-1,2-dichloroethene	< 5	< 0.5	< 5	< 5	< 5	0.42 J	7.4 J	5 J
cis-1,3-dichloropropene	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
Dibromochloromethane	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
Dichlorodifluoromethane (Freon 12)	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
Ethylbenzene	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
Methylene Chloride	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
Styrene	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
Tetrachloroethene	< 5	< 0.5	< 5	< 5	< 5	6	5.2 J	8.8 J
Toluene	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
trans-1,2-dichloroethene	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
trans-1,3-dichloropropene	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
Trichloroethylene	< 5	< 0.5	< 5	< 5	0.5 J	34	360	240
Trichlorotrifluoroethane (Freon 113)	< 5	< 0.5	< 5	< 5	< 5	6.6	7.9 J	2.3 J
Vinyl Chloride	< 2	< 0.5	< 2	< 2	< 2	< 2	< 5	< 4
Xylene-o	< 5	< 0.5	< 5	< 5	< 5	< 5	< 13	< 10
Xylenes - m,p	< 5	< 1	< 5	< 5	< 5	< 5	< 13	< 10
Total VOCs		0	0	0	0.5	47	390	260

Note: Results rounded to two significant figures.

Bold Constituent detected

VOCs Volatile Organic Compounds

ug/L Micrograms per liter

J Constituent value is estimated

B Constituent also detected in an associated blank

REP Replicate Sample

(1) GM-20D analyzed using USEPA Method 524.2

USEPA United States Environmental Protection Agency



Table 2. Concentrations of Volatile Organic Compounds Detected in Monitoring Wells and Groundwater Remedial Wells, Third Quarter 2011, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	Well:	GM-35D2	GM-75D2	GM-75D2	GM-79I	GM-79D	WELL 1	WELL 1
	Sample ID:	GM-35D2	GM-75D2	GM-75D2 (REP)	GM-79I	GM-79D	WELL 1	WELL 1 (REP)
	Date:	7/29/2011	7/27/2011	7/27/2011	7/26/2011	7/26/2011	8/8/2011	8/8/2011
1,1,1-Trichloroethane		< 5	< 5	< 5	< 5	< 5	0.7 J	0.68 J
1,1,2,2-Tetrachloroethane		< 5	< 5	< 5	< 5	< 5	< 13	< 13
1,1,2-Trichloroethane		< 5	< 5	< 5	< 5	< 5	< 13	< 13
1,1-Dichloroethane		< 5	< 5	< 5	< 5	< 5	0.9 J	0.95 J
1,1-Dichloroethene		0.5 J	0.68 J	0.56 J	< 5	< 5	2.5 J	3.4 J
1,2-Dichloroethane		< 5	< 5	< 5	< 5	< 5	< 13	< 13
1,2-Dichloropropane		< 5	< 5	< 5	< 5	< 5	5.6 J	5.7 J
2-Butanone		< 50	< 50	< 50	< 50	< 50	< 130	< 130
2-Hexanone		< 50	< 50	< 50	< 50	< 50	< 130	< 130
4-methyl-2-pentanone		< 50	< 50	< 50	< 50	< 50	< 130	< 130
Acetone		0.92 BJ	< 50	1.3 J	0.87 J	0.9 J	2.3 J	< 130 B
Benzene		< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 1.8	< 1.8
Bromodichloromethane		< 5	< 5	< 5	< 5	< 5	< 13	< 13
Bromoform		< 5	< 5	< 5	< 5	< 5	< 13	< 13
Bromomethane		< 5	< 5	< 5	< 5	< 5	< 13	< 13
Carbon Disulfide		< 5	< 5	< 5	< 5	< 5	< 13	< 13
Carbon tetrachloride		< 5	< 5	< 5	< 5	< 5	< 13	< 13
Chlorobenzene		< 5	< 5	< 5	< 5	< 5	< 13	< 13
Chlorodifluoromethane (Freon 22)		0.51 J	< 5	< 5	< 5	< 5	< 13	< 13
Chloroethane		< 5	< 5	< 5	< 5	< 5	< 13	< 13
Chloroform		< 5	< 5	< 5	< 5	< 5	< 13	< 13
Chloromethane		< 5	< 5	< 5	< 5	< 5	< 13	< 13
cis-1,2-dichloroethene		1.1 J	0.3 J	< 5	< 5	0.3 J	4.2 J	4 J
cis-1,3-dichloropropene		< 5	< 5	< 5	< 5	< 5	< 13	< 13
Dibromochloromethane		< 5	< 5	< 5	< 5	< 5	< 13	< 13
Dichlorodifluoromethane (Freon 12)		< 5	< 5	< 5	< 5	< 5	< 13	< 13
Ethylbenzene		< 5	< 5	< 5	< 5	< 5	< 13	< 13
Methylene Chloride		< 5	< 5	< 5	< 5	< 5	< 13	< 13
Styrene		< 5	< 5	< 5	< 5	< 5	< 13	< 13
Tetrachloroethene		7.7	2.5 J	2.4 J	< 5	0.51 J	59	63
Toluene		< 5	< 5	< 5	< 5	< 5	< 13	< 13
trans-1,2-dichloroethene		< 5	< 5	< 5	< 5	< 5	< 13	< 13
trans-1,3-dichloropropene		< 5	< 5	< 5	< 5	< 5	< 13	< 13
Trichloroethylene		130	67	69	< 5	26	430	450
Trichlorotrifluoroethane (Freon 113)		2.4 J	0.9 J	1 J	< 5	0.38 J	4.4 J	3.7 J
Vinyl Chloride		< 2	< 2	< 2	< 2	< 2	< 5	< 5
Xylene-o		< 5	< 5	< 5	< 5	< 5	< 13	< 13
Xylenes - m,p		< 5	< 5	< 5	< 5	< 5	< 13	< 13
Total VOCs		140	71	74	0.87	28	510	530

Note: Results rounded to two significant figures.

Bold Constituent detected

VOCs Volatile Organic Compounds

ug/L Micrograms per liter

J Constituent value is estimated

B Constituent also detected in an associated blank

REP Replicate Sample

(1) GM-20D analyzed using USEPA Method 524.2

USEPA United States Environmental Protection Agency



Table 2. Concentrations of Volatile Organic Compounds Detected in Monitoring Wells and Groundwater Remedial Wells, Third Quarter 2011, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	Well:	WELL 3	96 EFFLUENT	WELL 17	WELL 18	WELL 19	102 EFFLUENT
	Sample ID:	WELL 3	96 EFFLUENT	WELL 17	WELL 18	WELL 19	102 EFFLUENT
	Date:	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
1,1,1-Trichloroethane	< 100	< 5	0.78 J	1.3 J	0.69 J	< 5	< 5
1,1,2,2-Tetrachloroethane	< 100	< 5	< 10	< 5	< 5	< 5	< 5
1,1,2-Trichloroethane	< 100	< 5	< 10	< 5	< 5	< 5	< 5
1,1-Dichloroethane	< 100	< 5	1.4 J	1.2 J	0.97 J	< 5	< 5
1,1-Dichloroethene	11 J	< 5	2.6 J	4.4 J	1.6 J	< 5	< 5
1,2-Dichloroethane	< 100	< 5	< 10	< 5	0.63 J	< 5	< 5
1,2-Dichloropropane	< 100	< 5	< 10	< 5	< 5	< 5	< 5
2-Butanone	< 1000	< 50	< 100	< 50	< 50	< 50	< 50
2-Hexanone	< 1000	< 50	< 100	< 50	< 50	< 50	< 50
4-methyl-2-pentanone	< 1000	< 50	< 100	< 50	< 50	< 50	< 50
Acetone	18 J	1.2 J	< 100 B	< 50	< 50	< 50	< 50
Benzene	< 14	< 0.7	< 1.4	< 0.7	< 0.7	< 0.7	< 0.7
Bromodichloromethane	< 100	< 5	< 10	< 5	< 5	< 5	< 5
Bromoform	< 100	< 5	< 10	< 5	< 5	< 5	< 5
Bromomethane	< 100	< 5	< 10	< 5	< 5	< 5	< 5
Carbon Disulfide	< 100	< 5	< 10	< 5	< 5	< 5	< 5
Carbon tetrachloride	< 100	< 5	< 10	< 5	< 5	< 5	< 5
Chlorobenzene	< 100	< 5	< 10	< 5	< 5	< 5	< 5
Chlorodifluoromethane (Freon 22)	< 100	< 5	< 10	0.37 J	0.48 J	< 5	< 5
Chloroethane	6.8 J	< 5	< 10	< 5	< 5	< 5	< 5
Chloroform	< 100	< 5	< 10	0.32 J	0.61 J	< 5	< 5
Chloromethane	< 100	< 5	< 10	< 5	< 5	< 5	< 5
cis-1,2-dichloroethene	15 J	< 5	5.1 J	1.8 J	23	< 5	< 5
cis-1,3-dichloropropene	< 100	< 5	< 10	< 5	< 5	< 5	< 5
Dibromochloromethane	< 100	< 5	< 10	< 5	< 5	< 5	< 5
Dichlorodifluoromethane (Freon 12)	< 100	< 5	< 10	< 5	< 5	< 5	< 5
Ethylbenzene	< 100	< 5	< 10	< 5	< 5	< 5	< 5
Methylene Chloride	< 100	< 5	< 10	< 5	< 5	< 5	< 5
Styrene	< 100	< 5	< 10	< 5	< 5	< 5	< 5
Tetrachloroethene	72 J	< 5	30	13	7.4	< 5	< 5
Toluene	< 100	< 5	< 10	< 5	< 5	< 5	< 5
trans-1,2-dichloroethene	< 100	< 5	< 10	< 5	< 5	< 5	< 5
trans-1,3-dichloropropene	< 100	< 5	< 10	< 5	< 5	< 5	< 5
Trichloroethylene	2,100	0.5 J	260	77	200	< 5	< 5
Trichlorotrifluoroethane (Freon 113)	11 J	< 5	6.2 J	1.6 J	0.9 J	< 5	< 5
Vinyl Chloride	190	< 2	< 4	< 2	< 2	< 2	< 2
Xylene-o	< 100	< 5	< 10	< 5	< 5	< 5	< 5
Xylenes - m,p	< 100	< 5	< 10	< 5	< 5	< 5	< 5
Total VOCs	2400	1.7	300	101	240	0	

Note: Results rounded to two significant figures.

Bold Constituent detected
VOCs Volatile Organic Compounds
ug/L Micrograms per liter
J Constituent value is estimated
B Constituent also detected in an associated blank
REP Replicate Sample
(1) GM-20D analyzed using USEPA Method 524.2
USEPA United States Environmental Protection Agency



Table 3. Concentrations of Site-Related Volatile Organic Compounds Detected in Outpost Wells, Third Quarter 2011, Operable Unit 2, Northrop Grumman Systems Corporation, Bethpage, New York.

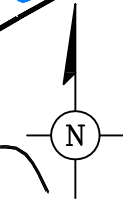
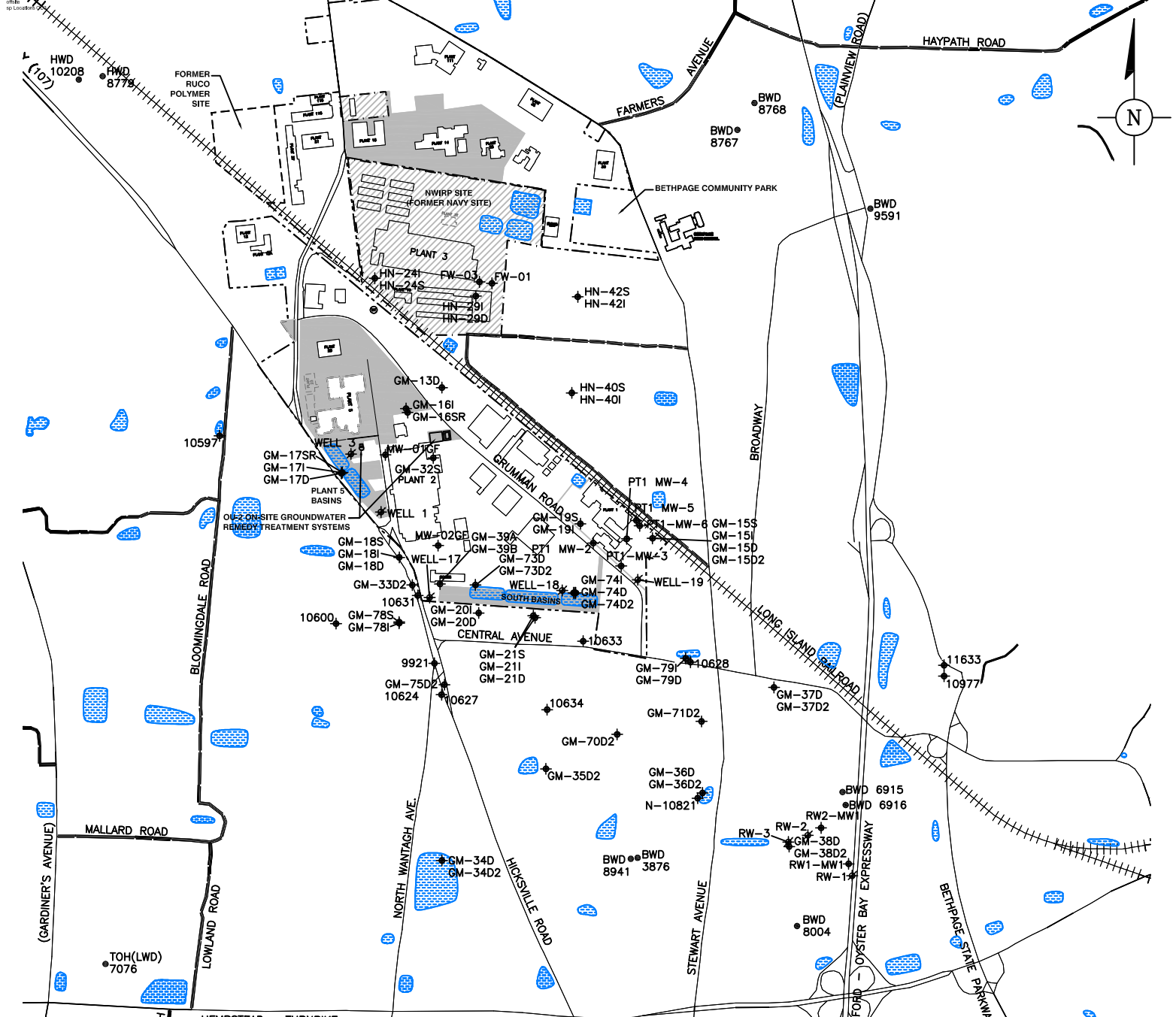
CONSTITUENT (Units in ug/L)	Well:	BPOW 1-1 ⁽³⁾	BPOW 1-2 ⁽³⁾	BPOW 1-3 ⁽³⁾	BPOW 2-1 ⁽⁴⁾	BPOW 2-2	BPOW 3-1	BPOW 3-2	BPOW 4-1	BPOW 4-2
	Sample ID:	BPOW 1-1	BPOW 1-2	BPOW 1-3	BPOW 2-1	BPOW 2-2	BPOW 3-1	BPOW 3-2	BPOW 4-1	BPOW 4-2
	Date:	8/5/2011	8/5/2011	8/5/2011	8/3/2011	8/2/2011	8/2/2011	8/1/2011	8/4/2011	8/4/2011
1,1,1-Trichloroethane	0.4 J	0.46 J	< 0.5	< 0.5	< 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	< 0.5
1,1,2-Trichloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethane	< 0.5	0.22 J	< 0.5	< 0.5	0.76	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethene	0.24 J	0.28 J	< 0.5	< 0.5	0.34 J	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 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	< 0.5
Chlorobenzene	< 0.5	< 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	< 0.5	< 0.5	< 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	< 0.5
Trichlorotrifluoroethane (Freon 113)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.1	0.36 J	
Tetrachloroethene	< 0.5	< 0.5	< 0.5	< 0.5	< 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	
Trichloroethene	0.94	0.38 J	< 0.5	< 0.5	0.77	< 0.5	< 0.5	< 0.5	< 0.5	
Total Site-Related VOCs⁽¹⁾ :	1.6	1.3	0	0	1.9	0	0	1.1	0.36	
TVOC Trigger Value⁽²⁾ :	0.60	0.60	0.60	NE	NE	1.5	1.5	1.5	1.5	

Notes:

- (1) Site-related VOCs were established in the Public Water Supply Contingency Plan (PWSCP) (ARCADIS G&M, Inc. 2003). Results adjusted to two significant figures.
- (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) Benzene, which is not a site-related VOC, was detected in Outpost Well OW 2-1 at 0.21 ug/L.

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

PROJECT NAME: NY101496031



- EXPLANATION**
- PROPERTY BOUNDARY OF THE FORMER GRUMMAN AEROSPACE SITE
 - PROPERTY BOUNDARY OF THE FORMER U.S. NAVY SITE
 - LIMITS OF THE FORMER OCC/RUCO SITE
 - +++++ LONG ISLAND RAILROAD
 - DENOTES NORTHROP GRUMMAN OWNED PROPERTY (AS OF 2003)
 - ▨ DENOTES U.S. NAVY OWNED PROPERTY (AS OF 1997)
 - RECHARGE BASIN
 - 10592 ◆ OBSERVATION/MONITORING WELL
 - 9591 ● PUBLIC SUPPLY WELL
 - WELL-17 * NORTHROP GRUMMAN OR NAVY PRODUCTION WELL
 - NWIRP NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
 - TOH (LWD) TOWN OF HEMPSTEAD LEVITOWN WATER DISTRICT
 - HWD HICKSVILLE WATER DISTRICT
 - SFWD SOUTH FARMINGDALE WATER DISTRICT
 - BWD BETHPAGE WATER DISTRICT
 - AQUA AQUA NEW YORK
 - OW OUTPOST WELL

NOTE:
 THIS FIGURE DEPICTS MONITORING WELLS INCLUDED IN OJ-2 GROUNDWATER MONITORING PROGRAM AND SELECTED OTHER WELLS.

0 1000' 2000'
 SCALE IN FEET

NORTHROP GRUMMAN SYSTEMS CORPORATION
 BETHPAGE, NEW YORK
 OPERABLE UNIT 2

LOCATION OF ON-SITE GROUNDWATER REMEDIATION WELLS

ARCADIS

FIGURE 1