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Second and Third Quarter 2006 Groundwater Monitoring Report

Operable Unit 2
Northrop Grumman Systems Corporation, Bethpage, New York
NYSDEC Site #1-30-003A

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Second and Third Quarter 2006 Groundwater Monitoring Report

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Northrop Grumman Systems Corporation, Bethpage, New York NYSDEC Site #1-30-003A

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Date:
March 22, 2007

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1. Introduction

This groundwater monitoring report was prepared to document the operation, maintenance, and monitoring (OM&M) activities for the Operable Unit 2 (OU2) groundwater remedy at the Northrop Grumman Corporation (NG) Bethpage, New York facility. These activities are currently being conducted by NG, in accordance with the New York State Department of Environmental Conservation (NYSDEC)-approved OU2 Groundwater Monitoring Plan (ARCADIS Geraghty & Miller, Inc. 2001), as modified in June 2004 and June 2006 (ARCADIS G&M Inc. 2004; 2006a) and the Public Water Supply Contingency Plan (PWSCP) (ARCADIS G&M Inc. 2003a) to meet the remedial objectives set forth in the March 2001 OU2 Record of Decision (ROD) (NYSDEC 2001).

This report describes the operational (remedial well/treatment system performance) and effectiveness (hydraulic and groundwater quality) monitoring of the on-site portion of the OU2 groundwater remedy for the period from March 30, 2006 through October 11, 2006, which is referred to in this report as the Second and Third Quarter 2006 report period. The Annual Report, which is issued after the completion of each calendar year, includes an evaluation of long-term data trends. The contents of the OM&M reports, as well as the findings and conclusions made, will continue to be re-evaluated in future reports as additional data become available.

2. Monitoring Program

The results obtained from monitoring activities conducted for this report period are provided in Tables 1 through 14 and are described and discussed in the following sections of this report: Remedial System Operational Monitoring (Section 3), Groundwater Flow (Section 4), and Groundwater Quality (Section 5).

Except as described on Tables 1 through 14 and in Sections 3, 4, and 5 of this report, the procedures, methodologies, and monitoring network utilized for the subject report period are consistent with procedures and methodologies used previously (as described in ARCADIS G&M, Inc. 2003b) and the NYSDEC-approved OU2 Groundwater Monitoring Plan (ARCADIS Geraghty & Miller, Inc. 2001; ARCADIS G&M, Inc. 2004; 2006a). The complete description of the procedures to collect groundwater samples from outpost wells and evaluate and document the results is provided in the PWSCP (ARCADIS G&M, Inc. 2003b). Remedial system operational monitoring is currently being performed on a voluntary basis.

The locations of the NG site, the OU2 groundwater remedy, the neighboring properties (i.e., the Naval Weapons Industrial Reserve Plant [NWIRP] and Occidental Chemical Corporation [OCC]/RUCO Polymer Corporation sites), and existing wells utilized in the monitoring programs are shown on Figure 1. This report also includes the following appendices: Appendix A (water-level measurement logs); Appendix B (groundwater sampling logs); and Appendix C (chain-of-custody records).

3. Remedial System Operational Monitoring

This section of the report summarizes the routine operational monitoring tasks conducted during the Second and Third Quarter 2006 for the on-site portion of the OU2 groundwater remedy, which included the following: (1) treatment system effluent water quality monitoring, remedial well water quality monitoring, treatment systems efficiency monitoring and determination of volatile organic compound (VOC) mass removal from the aquifer, and (2) monitoring of remedial well pumpage and treatment systems treated effluent discharge to on-site recharge basins.

Also summarized in this section are the remedial system/well troubleshooting and non-routine maintenance activities performed by ARCADIS and NG during the Second and Third Quarter 2006.

3.1 Water Quality, Treatment Efficiencies, and Mass Removal

Tables 1, 2 and 11 provide the total VOC (TVOC) concentrations detected in the OU2 remedial wells. Table 1 provides TVOC concentrations and TVOC mass removed by the remedial wells, and treatment efficiencies for the Tower 96 (previously referred to as GP-1) and Tower 102 (previously referred to as ONCT) remedial treatment system air strippers. Updated remedial well/treatment system nomenclature is provided in the 2005 Annual Report (ARCADIS G&M, Inc. 2006b).

TVOC concentrations from the remedial wells ranged from 145 micrograms per liter (µg/L) (in Well 18) to 4,057 µg/L (in Well 3). A total of approximately 7,176 pounds of VOCs were removed from the aquifer by the remedial wells during the Second and Third Quarter 2006.

NG's State Pollutant Discharge Elimination System (SPDES) discharge monitoring results (Permit No. NY0096792) are used as the final treated water quality in calculating remedial system treatment efficiency and documenting the quality of water returned to the aquifer. SPDES discharge monitoring data are documented on a

monthly basis by NG to NYSDEC under separate cover in Discharge Monitoring Reports (DMRs) (Northrop Grumman Corporation 2006a; 2006b; and 2006c) and the average VOC concentration entering the two site outfalls this period are provided in Table 1. NG Outfalls 005 and 006 represent the termini of the Tower 96 and Tower 102 system effluent water (i.e., inlets to the West Recharge Basins and South Recharge Basins) respectively. Based on the ratio of influent VOC concentrations to the average quarterly VOC concentrations in SPDES discharge monitoring, the efficiencies of the Tower 96 and Tower 102 systems for the Second Quarter 2006 are calculated to be 99.9 percent and 99.4 percent, respectively (Table 1). Based on the ratio of influent VOC concentrations to the average quarterly VOC concentrations in SPDES discharge monitoring, the efficiencies of the Tower 96 and Tower 102 systems for the Thrid Quarter 2006 are calculated to be 99.9 percent and 99.3 percent, respectively (Table 2).

3.2 Remedial System Pumpage and Discharge

Table 1 and 2 summarizes the remedial well pumpage for the Second and Third Quarter 2006 and comparison to design criteria. Remedial Wells 1, 3, 17, 18, and 19 collectively pumped approximately 984 million gallons (MG) of groundwater, which is equivalent to approximately 91 percent of the design pumpage volume of groundwater.

On April 14, 2005, the NYSDEC approved the design pumpage rate for Remedial Well 3 of 700 gallons per minute (gpm). Additionally, the NYSDEC approved the revised design rate for Remedial Well 1 of 800 gpm (NYSDEC 2005; ARCADIS G&M, Inc. 2005). During the Second Quarter 2006, NG completed modifications to the pumps and controls altering the totalizer meters as identified in Table 1; NG is currently implementing modifications to the Tower 96 remedial treatment system to accommodate the additional VOC mass loadings. Once these modifications are completed, the pumping rates for Wells 1 and 3 will be modified described herein.

Based on weekly measurements collected by ARCADIS, the South Recharge Basins collectively received the treated effluent discharge from the Tower 102 remedial system (approximately 2,231 gallons per minute [gpm]), along with incidental stormwater runoff and contribution from Tower 96 remedial system, totaling an additional 412 gpm, for a total of approximately 2,643 gpm discharged this period.

As approved by NYSDEC, a portion of the treated water from the Tower 96 remedial system is provided to the adjacent Calpine Energy facility's new "peaker unit", dependent, on demand, for consumptive use. The demand rate is controlled by a "Cla-Val" located within a new subsurface transmission pipeline between Tower 96 and the

Calpine facility. Based on the "peaker unit" activity, the demand rate is expected to fluctuate between 600 and 1,000 gpm. The actual Calpine demand rate for this report period is currently unavailable since the meter is located on Calpine property in a below grade vault; for the purpose of this report, the minimum demand rate of 600 gpm to Calpine has been assumed for calculating the water balance this period (Table 1 and 2). NG is currently pursuing obtaining records of the demand rate from Calpine; these data will be incorporated into the quarterly reports when they become available. Assuming a Calpine demand rate of 600 gpm, the West Recharge Basins received an average discharge rate from the Tower 96 remedial system of approximately 503.5 gpm.

3.3 Remedial Wells Specific Capacities

Table 4 summarizes the water-level measurement data, corresponding instantaneous pumping rates, calculated drawdown values, and specific capacities for the remedial wells for the Second and Third Quarter 2006. Based on the data presented herein, the specific capacities of the measured remedial wells exceeded the minimum values needed to maintain the design pumping rates.

3.4 Troubleshooting and Non-Routine Maintenance

This section describes the troubleshooting/non-routine maintenance activities that occurred in the Second and Third Quarter 2006. NG is currently implementing modifications to the Tower 96 remedial treatment system to accommodate the additional VOC mass loadings.

Short-term periods of well/system downtime occurred during the Second Quarter 2006 (for both the Tower 96 and Tower 102 Systems); these were due to short-term repairs to system components, inspections, and temporary power outages.

4. Groundwater Flow

This report section describes the results of hydraulic monitoring performed during the Third Quarter 2006 (i.e., measured on October 12, 2006). The evaluation of the hydraulic data was performed using methods described in previous quarterly reports.

4.1 Shallow and Intermediate Zones

The water-level measurement data for the Third Quarter 2006 are provided in Table 4. Vertical hydraulic gradients calculated for select well pairs and comparison to model-predicted gradients (see Appendix B of the OU2 Feasibility Study; ARCADIS Geraghty & Miller 2000; ARCADIS G&M, 2003c) was performed (Table 5). Figure 2 depicts the water-table configuration and groundwater flow directions in the shallow zone, and Figure 3 depicts the potentiometric surface elevation and groundwater flow directions in the intermediate zone.

Vertical hydraulic gradients in shallow-intermediate well pairs are oriented downward and are close to or greater than model predicted values (Table 5). Figures 2 and 3 show the extent of the mounding of the water table and potentiometric surface in the shallow and intermediate zones, respectively, during the Second and Third Quarter 2006. The observed mounding extends around and beneath the South Recharge Basins and across the NGC site southern boundary. The extent of the mounding is consistent with prior rounds and is typical of the conditions that produce a hydraulic barrier to groundwater flow in the shallow and intermediate zones during normal operation of the on-site portion of the OU2 groundwater remedy.

The hydraulic data described above support the conclusion that shallow recharge at the South Recharge Basins is sufficient to maintain the hydraulic barrier to groundwater flow that continues to be effective in achieving the OU2 remedial goal of preventing the off-site migration of VOC-impacted groundwater in the shallow and intermediate zones.

4.2 Deep and D2 Zones

Vertical hydraulic gradients (see Table 5) in intermediate-deep and deep-deep2 (D2) well pairs are oriented downward and are close to or are greater than the model predicted values. These data support the conclusion that groundwater is flowing in a predominantly vertical direction in the deep zone along the NG site southern boundary.

Figure 4 depicts the potentiometric surface elevation in the D2 zone that illustrates the cumulative capture zone formed by the combined pumpage of the OU2 remedial wells during the Third Quarter 2006. The capture zone extends across the entire NG site southern boundary and approximately 800 ft downgradient of Remedial Well 17.

These data are consistent with previous water-level rounds and support the conclusion that the pumpage of the remedial wells forms a hydraulic barrier to groundwater flow that continues to be effective in preventing the off-site migration of VOC-impacted groundwater in the deep and D2 zones.

4.3 Summary

Based on the data presented above, the combination of shallow recharge at the South Recharge Basins coupled with pumpage of the OU2 remedial wells in the D2 zone forms a hydraulic barrier to groundwater flow that continues to be effective in achieving the OU2 remedial goal of preventing the off-site migration of VOC-impacted groundwater.

5. Groundwater Quality

This report section describes the analytical results of the various groundwater quality monitoring activities for the Second and Third Quarter 2006 that are specified in and required under the NYSDEC-approved Groundwater Monitoring Plan (ARCADIS G&M, Inc. 2001; ARCADIS G&M, Inc. 2004; 2006a), and the PWSCP (ARCADIS G&M Inc., 2003a). Analytical results are summarized in Tables 6 through 14 and described in the following sections.

5.1 Volatile Organic Compounds

The evaluation of VOC concentrations is presented based on consideration of the following factors: (1) proximity to the hydraulic barrier formed by the on-site portion of the OU2 groundwater remedy (i.e., upgradient, along the NG site southern boundary, and downgradient of the hydraulic barrier), (2) hydrogeologic zone (i.e., shallow, intermediate, deep, and D2 zones), and (3) NYSDEC Standards, Criteria, and Guidance (SCG) Values. A discussion of the expected effect on groundwater quality from operating the on-site portion of the OU2 groundwater remedy is provided in the 2002 Annual Report (ARCADIS G&M, Inc. 2003b).

A summary of total VOCs detected in the select wells at the NG site southern perimeter and a comparison to SCGs is provided in Tables 6 and 7.

5.1.1 Shallow and Intermediate Zones

The Second and Third Quarter 2006 groundwater quality analytical results for shallow and intermediate monitoring wells are provided in Tables 8 and 9, respectively. In general, the water quality data from the shallow and intermediate wells sampled this quarter continue to support the interpretation of hydraulic data from the current and previous quarters and confirm that the operation of the on-site portion of the OU2 groundwater remedy has formed an effective hydraulic barrier that prevents the off-site migration of VOC-impacted groundwater in the shallow and intermediate zones. The current data show no exceedences of SCGs near the NG site boundary in the shallow and intermediate zones.

5.1.2 Deep Zone

In general, the water quality data from the deep wells sampled during the Second and Third Quarter 2006 continue to support the interpretation of the hydraulic data from the current and previous quarters and confirm that the operation of the on-site portion of the OU2 groundwater remedy has formed an effective hydraulic barrier that prevents the off-site migration of VOC-impacted groundwater in the deep zone.

Four deep wells (GM-18D, GM-39D_A, GM-39D_B, and GM-73D) located on-site, along the NG site southern boundary, and upgradient of the remedial wells (Table 10 and Figure 1), exhibited SCG exceedences. Based on evaluation of the hydraulic data, these monitoring wells are within the capture zone of the remedial wells and, therefore, groundwater in this area is hydraulically contained and, over time, will be extracted and treated by the on-site portion of the OU2 groundwater remedy. The remaining three on-site deep wells (GM-15D, GM-17D, and GM-74D) exhibited no or trace VOC detections and no SCG exceedences.

Three off-site deep wells (N-10627, GM-20D and GM-21D) located immediately downgradient of the NG site southern boundary (Figure 1 and Tables 6, 7 and 10) exhibited no or trace VOC detections and no SCG exceedences. Well GM-79D exhibited a single SCG exceedence this round.

Deep wells GM-13D, GM-34D and GM-38D located either on-site and upgradient or off-site and further downgradient of the hydraulic barrier exhibited TVOC concentrations ranging from 634 to 1,125 µg/L (Table 10). These data are consistent

with the expected concentrations in the portions of the groundwater VOC plume in the deep zone that is not actively remediated.

5.1.3 Deep2 Zone

Groundwater monitoring data from the D2 zone are summarized in Table 11. In general, water quality data from the D2 wells sampled during the Second and Third Quarter 2006 continue to support the interpretation of hydraulic data from the current and previous quarters and confirm that the operation of the on-site portion of the OU2 groundwater remedy has formed an effective hydraulic barrier that prevents the migration of VOC-impacted groundwater in the D2 zone.

Along the line of remedial wells, total VOC concentrations were highest in Remedial Well 3 (4,057 µg/L) (Table 9). Monitoring Wells GM-15D2, GM-33D2, GM-73D2, and GM-74D2 exhibited one or more exceedences of SCGs (Table 11). Based on hydraulic data, the on-site wells near the NG site southern boundary are within the capture zone of the remedial wells (screened in the D2 zone) and therefore groundwater in this area is hydraulically contained and, over time, will be extracted and treated by the on-site portion of the OU2 groundwater remedy.

The four off-site D2 wells monitored this period exhibited SCG exceedences with total VOC concentrations ranging from 269 (Well GM-34D2) to 1,217.1 µg/L (Well GM-38D2). These data are consistent with the expected concentrations in the off-site portion of the VOC plume in the D2 zone that is not actively remediated. The Navy is currently preparing the design for groundwater extraction and treatment in the GM-38 Area.

5.2 Outpost Monitoring

The results of the Second and Third Quarter 2006 outpost well monitoring round discussion of trigger value exceedences are provided in Table 12. VOCs were not detected in Outpost Wells OW1-2, OW3-1, OW3-2, OW4-1, and OW4-2 during the Second and Third Quarter 2006 rounds. Outpost Wells OW1-1, OW1-3, and OW2-2 exhibited one or more detections of site-related VOCs, with one SCG exceedances at 5.3 µg/L (OW1-3). Well OW2-1 continue to exhibit detections of two non-site-related VOCs. As no new exceedences of outpost well trigger values occurred this quarter, the requirements for notification/reporting of the initial trigger value exceedences, as outlined in the PWSCP (ARCADIS G&M, Inc., 2003b), have already been met.

5.3 Vinyl Chloride Monomer

Vinyl chloride monomer (VCM) concentrations in groundwater samples collected during the Second and Third Quarter 2006 are provided in Tables 8 through 11. VCM continues to be present in Well 3 (140 and 160 µg/L during the Second and Third Quarters of 2006, respectively), but was not detected in the other remedial wells or monitoring wells sampled in the Second or Third Quarter 2006 sampling rounds. Additional groundwater monitoring of the extent of the VCM subplume and evaluation of remedial options for VCM is being performed by OCC/RUCO.

5.4 Cadmium and Chromium

The results of the quarterly monitoring of wells analyzed for cadmium and chromium (Cd/Cr) are provided in Table 11. Well 10631 exhibited a Cd concentration that exceeded the SCG during the Third Quarter 2006 sampling round (Figure 1 and Table 13). The data indicate that Cr concentrations exceeded the SCG in three of the nine wells analyzed during the Third Quarter 2006 sampling round.

5.5 Tentatively Identified Compounds

Tentatively Identified Compounds (TICs) were not detected during the Second and Third Quarter 2006 monitoring period.

5.6 QA/QC Samples and Data Validation

The results of analysis of field blanks and trip blanks are provided in Table 14.

ARCADIS performed validation of all groundwater quality data collected (including TICs) by following the contract laboratory program national functional guidelines for organic and inorganic data review (USEPA 1999). The quality of the data is considered acceptable with the qualifications indicated on Tables 8 through 14.

6. Summary and Conclusions

The findings of the OM&M activities performed during the Second and Third Quarter 2006 are summarized below.

1. The remedial system pumpage data show that the OU2 remedial wells pumped 984 MG, or approximately 91 percent of the design volume of groundwater. Recharge

basins received a collective total of approximately 850.1 MG of treated water this period.

2. OU2 remedial well specific capacities remain above the minimum required to sustain the design pumping rates.

3. Approximately 7,176 lbs of VOCs were removed from the aquifer and treated by the on-site portion of the OU2 groundwater remedy.

4. The air stripper efficiencies of both groundwater remedial systems are at or above 99.3 percent.

5. The groundwater quality and hydraulic data indicate conditions that are consistent with previous rounds and that remedial goals continue to be met.

6. In the shallow, intermediate and deep zones, the majority of wells located along the NGC site perimeter show trace or non-detectable concentrations of VOCs.

7. Site-related VOCs continue to be detected in Outpost Wells OW1-1, OW1-3, and OW2-2. The remaining outpost wells exhibited no VOC detections.

8. Cd/Cr SCG exceedences are limited to on-site areas.

7. Recommendation

ARCADIS makes no recommendation for modification of the groundwater monitoring program at this time.

8. References

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Table 1. Summary of Operational Data and Water Balance for the On-Site Portion of the OU2 Groundwater Remedy, Second Quarter 2006, Operable Unit 2, Northrop Grumman 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	Current Estimated VOC Mass Removed [d] (lbs)
Remedial Wells			**Groundwater Removed from Aquifer**					
Well 1	1,075	719	154.8	82.8	53%	550	703	485
Well 3	425	556	61.2	72.1	118%	3,800	4,057	2,436
Well 17	1,000	974	144.0	140.2	97%	470	506	590
Well 18	600	649	86.4	93.5	108%	130	145	113
Well 19	700	644	100.8	92.8	92%	140	171	132
Rounded Totals:	**3,800**	**3,542**	**547**	**481**	**88%**	--	--	**3,756**
Recharge Basins [a]			**Treated Water Recharged to Aquifer**					
West Recharge Basins	412	489	59	70.4	119%	--	--	--
South Recharge Basins	2,231	2,453	321.3	353.3	110%	--	--	--
Rounded Totals:	**2,643**	**2,942**	**380**	**423.7**	**112%**	--	--	--
Treated Water Sent to Calpine								
Calpine Demand	600-1000	600	77.8 - 131	79.5	--	--	--	--
Treatment Efficiencies			**Average SPDES Outfall TVOC Concentrations (ug/L) [f]**					
Tower 96 System Efficiency [e]:			**99.9%**	**1.7**				
Tower 102 System Efficiency [e]:			**99.4%**	**1.9**				

see footnotes on last page

Table 1. Summary of Operational Data and Water Balance for the On-Site Portion of the OU2 Groundwater Remedy, Second Quarter 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

(a) - Remedial well pumping rates based on computer modeling (ARCADIS, Inc. 2003c). Acceptable minimum recharge rates based on computer modeling (ARCADIS G&M, Inc. 2004b). Design pumping and recharge rates were modified in April, 2005 and will be shown herein when procured equipment is installed and the wells returned to service at NYSDEC-approved modified pumping rates. Recharge includes remedial well pumpage (minus pipe loss) and incidental runoff from precipitation. Current average recharge rates have been determined using the entire 91-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 March 27, 2006 to July 4, 2006 (100 days).

- OU2 wells were operational during the Second Quarter 2006, at the following percentages: Well-1 (80%), Well-3 (90%); Well-17 (100%), Well-18 (100%), and Well-19 (100%). 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 2006 groundwater monitoring data (Table 10).

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

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

(e) Air Stripping Efficiency calculated from values above and in Table 9 using the following formula:

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

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 NG 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
NG	Northrop Grumman Corporation	NYSDEC	New York State Department of Environmental Conservation

Table 2. Summary of Operational Data and Water Balance for the On-Site Portion of the OU2 Groundwater Remedy, Third Quarter 2006, Operable Unit 2, Northrop Grumman 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	Current Estimated VOC Mass Removed [d] (lbs)
Remedial Wells			**Groundwater Removed from Aquifer**					
Well 1	1,075	997	151.7	133.7	88%	530	705	785
Well 3	425	403	60.0	55.1	92%	3,600	3,854	1,768
Well 17	1,000	956	141.1	133.5	95%	460	504	557
Well 18	600	636	84.7	88.8	105%	160	179	131
Well 19	700	655	98.8	91.5	93%	190	228	174
Rounded Totals:	**3,800**	**3,647**	**536**	**503**	**94%**	--	--	**3,415**
Recharge Basins [a]			**Treated Water Recharged to Aquifer**					
West Recharge Basins	412	518	58	73.1	126%	--	--	--
South Recharge Basins	2,231	2,529	314.8	353.3	112%	--	--	--
Rounded Totals:	**2,643**	**3,047**	**373**	**426.4**	**114%**	--	--	--
Treated Water Sent to Calpine								
Calpine Demand	600-1000	600	77.8 - 131	82.1	--	--	--	--

Treatment Efficiencies	**Average SPDES Outfall TVOC Concentrations (ug/L) [f]**	
Tower 96 System Efficiency [e]:	**99.9%**	**1.4**
Tower 102 System Efficiency [e]:	**99.3%**	**2.2**

see footnotes on last page

Table 2. Summary of Operational Data and Water Balance for the On-Site Portion of the OU2 Groundwater Remedy, Third Quarter 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

(a) - Remedial well pumping rates based on computer modeling (ARCADIS, Inc. 2003c). Acceptable minimum recharge rates based on computer modeling (ARCADIS G&M, Inc. 2004b). Design pumping and recharge rates were modified in April, 2005 and will be shown herein when procured equipment is installed and the wells returned to service at NYSDEC-approved modified pumping rates. Recharge includes remedial well pumpage (minus pipe loss) and incidental runoff from precipitation. Current average recharge rates have been determined using the entire 91-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 July 5, 2006 to October 11, 2006 (98 days).

- OU2 wells were operational during the Third Quarter 2006, at the following percentages: Well-1 (95%), Well-3 (97%); 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 2006 groundwater monitoring data (Table 10).

(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 9 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 NG 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
NG	Northrop Grumman Corporation	NYSDEC	New York State Department of Environmental Conservation

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Table 3. Summary of OU2 Remedial Well Performance Data, Baseline and Third Quarter 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

	Baseline (1)		Third Quarter 2006				
Well Identification	Static Depth to Water (ft bmp)	Specific Capacity (gpm/ft)	Date of Pumping and Water-Level Measurements	Pumping Depth to Water (ft bmp)	Drawdown (ft)	Instantaneous Pumping Rate[2] (gpm)	Specific Capacity (gpm/ft)
Well 1	55.75	28.57	10/12/2006	90.00	34.25	990	28.9
Well 3	54.4	10.10	10/12/2006	--	--	455	--
Well 17	44.12	44.03	10/12/2006	60.00	15.88	957	60.3
Well 18	50.15	38.09	10/12/2006	--	--	540	--
Well 19	49.13	40.12	10/12/2006	63.48	14.35	669	46.6

(1) For Wells 17, 18, and 19 baseline static depth to water measurements were collected in 1997 prior to OU2 system start-up; baseline pumping depth-to water and rate measurements (not shown) used with baseline static depth to water measurements to calculate baseline specific capacities, were collected in 1999 during OU2 system operation.
For Well 1, baseline static depth to water and specific capacity measurements were collected in 2001, during pump replacement.
For Well 3, baseline static depth to water and specific capacity measurements were collected in March-April 2005, during re-development activities.

(2) Pumping rate determined at time of depth to water measurement.

OU2 Operable Unit 2
gpm gallons per minute
ft bmp feet below measuring point
ft feet
gpm/ft gallons per minute per foot of drawdown
-- Not available/anomalous measurement

Table 4. Water-Level Measurement Data, October 12, 2006, Operable Unit 2, Northrop Grumman 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	54.90	69.40
N-9921	94.23	31.65	62.58
N-10597	109.85	39.05	70.80
N-10600	102.41	38.04	64.37
N-10631	103.47	37.34	66.13
N-10633	103.80	38.36	65.44
N-10634	101.20	39.29	61.91
N-10821	91.58	34.35	57.23
GM-15S	109.44	43.88	65.56
GM-16SR	115.86	46.97	68.89
GM-17SR	115.79	46.74	69.05
GM-18S	107.60	40.66	66.94
GM-19S	109.86	41.34	68.52
GM-21S	105.81	34.58	71.23
GM-78S	104.94	40.28	64.66
GM-79S (N-10628)	100.88	36.01	64.87
HN-24S	120.32	51.10	69.22
HN-40S	116.35	47.95	68.40
HN-42S	120.32	50.04	70.28
MW-3R	101.45	33.51	67.94
Intermediate Wells			
N-10624	93.61	31.22	62.39
GM-15I	109.25	43.76	65.49
GM-16I	115.81	47.04	68.77
GM-17I	115.83	46.84	68.99
GM-18I	109.03	41.99	67.04
GM-19I	109.86	42.25	67.61
GM-20I	103.88	34.78	69.10
GM-21I	105.72	36.54	69.18
GM-74I	107.42	38.66	68.76
GM-78I	105.06	40.56	64.50
GM-79I	100.88	39.81	61.07
HN-24I	125.80	54.50	71.30
HN-40I	115.91	47.75	68.16
HN-42I	119.61	49.50	70.11

See notes on last page

Table 4. Water-Level Measurement Data, October 12, 2006, Operable Unit 2, Northrop Grumman 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	31.58	62.12
GM-13D	113.97	45.15	68.82
GM-15D	109.84	46.13	63.71
GM-17D	115.68	48.85	66.83
GM-18D	108.88	44.43	64.45
GM-20D	103.92	37.20	66.72
GM-21D	105.66	41.96	63.70
GM-34D[5]	71.19	13.62	57.57
GM-36D	91.63	34.92	56.71
GM-37D	97.26	38.95	58.31
GM-38D	91.75	38.45	53.30
$GM\text{-}39D_A$[4]	102.23	37.89	64.34
$GM\text{-}39D_B$[4]	102.08	40.65	61.43
GM-73D	104.87	42.94	61.93
GM-74D	107.43	44.15	63.28
GM-79D	101.25	41.14	60.11
HN-29D	115.11		115.11
Deep2 Wells			
GM-15D2	109.78	48.48	61.30
GM-33D2	106.85	48.20	58.65
GM-34D2[5]	71.19	15.54	55.65
GM-35D2	96.28	39.05	57.23
GM-36D2	91.60	37.39	54.21
GM-37D2	97.17	39.67	57.50
GM-38D2	91.56	44.52	47.04
GM-70D2	99.58	40.66	58.92
GM-71D2	98.45	41.29	57.16
GM-73D2	104.62	44.84	59.78
GM-74D2	107.36	50.07	57.29
GM-75D2	93.63	34.52	59.11
Well 1 [1]	116.78	90.00	26.78
Well 3 [2]	117.78	--	--
Well 17 [3]	104.10	60.00	44.10
Well 18 [3]	110.00	--	--
Well 19	108.70	63.48	45.22

See notes on last page

Table 4. Water-Level Measurement Data, October 12, 2006, Operable Unit 2, Northrop Grumman 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	29.05	44.60
BPOW1-2	73.54	29.65	43.89
BPOW1-3	73.37	29.61	43.76
BPOW2-1	60.06	20.08	39.98
BPOW2-2	59.96	19.88	40.08
BPOW3-1	63.19	26.05	37.14
BPOW3-2	63.72	27.36	36.36
BPOW4-1	67.34	25.42	41.92
BPOW4-2	67.18	25.31	41.87

(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 April 21, 2006.

ft msl feet relative to mean sea level

ft bmp feet below measuring point

Table 5. Comparison of October 12, 2006, Vertical Hydraulic Gradients to Model-Predicted Gradients, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

Well Pair ID	Well Screen Midpoint Elevation (ft msl)	Water-Level Elevation (ft msl)	Vertical Gradient [2] (ft/ft) * 10^{-3}	Model-Predicted, OU2 Steady-State Vertical Gradient (ft/ft) * 10^{-3}	Increase Compared to Model-Predicted, Steady-State Vertical Gradient
Shallow-Intermediate Wells					
GM-15S	34.53	65.56			
GM-15I	9.29	65.49	2.77	4.20	-1.43
GM-16SR	66.77	68.89			
GM-16I	-24.19	68.77	1.32	1.11	0.21
GM-17SR	50.79	69.05			
GM-17I	5.83	68.99	1.33	4.50	-3.17
GM-19S	59.36	68.52			
GM-19I	-25.14	67.61	10.77	2.44	8.33
GM-21S	40.81	71.23			
GM-21I	-29.28	69.18	29.25	18.44	10.81
GM-78S	39.94	64.66			
GM-78I	5.56	64.50	4.65	8.73	-4.08
GM-79S	35.88	64.87			
GM-79I	-73.91	61.07	34.61	0.91	33.70
Intermediate-Deep Wells					
GM-15I	9.29	65.49			
GM-15D	-227.34	63.71	7.52	6.52	1.00
GM-17I	5.83	68.99			
GM-17D	-172.32	66.83	12.12	7.86	4.26
GM-18I	9.03	67.04			
GM-18D	-186.12	64.45	13.27	7.74	5.53
GM-20I	3.88	69.10			
GM-20D	-117.08	66.72	19.68	18.22	1.46
GM-21I	-29.28	69.18			
GM-21D	-177.34	63.70	37.01	43.97	-6.96
GM-74I	8.42	68.76			
GM-74D	-192.57	63.28	27.27	20.17	7.10
GM-79I	-73.91	61.07			
GM-79D	-183.75	60.11	8.74	15.48	-6.74

See notes on last page

Table 5. Comparison of October 12, 2006, Vertical Hydraulic Gradients to Model-Predicted Gradients, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

Well Pair ID	Well Screen Midpoint Elevation (ft msl)	Water-Level Elevation (ft msl)	Vertical Gradient [2] (ft/ft) * 10^{-3}	Model-Predicted, OU2 Steady-State Vertical Gradient (ft/ft) * 10^{-3}	Increase Compared to Model-Predicted, Steady-State Vertical Gradient
Deep-Deep 2 Wells					
GM-15D	-227.34	63.71			
GM-15D2	-436.41	61.30	11.53	14.19	-2.66
GM-18D	-186.12	64.45			
GM-33D2	-403.15	58.65	26.72	12.30	14.42
GM-34D	-242.81	57.57			
GM-34D2	-443.81	55.65	9.55	2.33	7.22
GM-36D	-117.37	56.71			
GM-36D2	-443.40	54.21	7.67	2.75	4.92
GM-37D	-154.74	58.31			
GM-37D2	-282.83	57.50	6.32	3.88	2.44
GM-38D	-238.25	53.30			
GM-38D2	-393.44	47.04	40.34	6.08	34.26
GM-39D_A [1]	-169.77	64.34			
GM-39D_B [1]	-312.92	61.43	20.33	13.46	6.87
GM-73D	-301.13	61.93			
GM-73D2	-437.38	59.78	15.78	18.78	-3.00
GM-74D	-192.57	63.28			
GM-74D2	-444.64	57.29	23.76	28.26	-4.50
N-10627	-198.80	62.12			
GM-75D2	-421.37	59.11	13.52	2.25	11.27

(1) Wells GM-39D_A and GM-39D_B are screened at the approximate midpoint and basal portion of the deep zone, respectively.

ft msl feet relative to mean sea level

(2) Vertical hydraulic gradients are calculated as follows:

$$\frac{(\text{Water-Level Elevation}_1 - \text{Water-Level Elevation}_2)}{(\text{Screen Midpoint Elevation}_1 - \text{Screen Midpoint Elevation}_2)}$$

$_1$ - Shallower well of pairing

$_2$ - Deeper well of pairing

A positive "+" gradient value indicates a downward hydraulic gradient.

A negative "-" gradient value indicates an upward hydraulic gradient.

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Table 6. Summary of Total Volatile Organic Compound and Cadmium/Chromium Concentrations and Comparison to SCGs for Select Site Boundary Monitoring Wells, Second Quarter 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York. [1][2]

Shallow Zone

Well Identification:	N-10631	N-10634	GM-17SR	GM-18S	GM-21S	GM-78S	MW-3R
Second Quarter TVOC Concentration (ug/L):	NS	NS	NS	NS	NS	NS	NS
No. of Second Quarter VOC SCG Exceedences:	NS	NS	NS	NS	NS	NS	NS
Second Quarter Total Cd Concentration (ug/L):	NS	NS	NS	NS	NS	NS	NS
Second Quarter Total Cd SCG Exceedences:	NS	NS	NS	NS	NS	NS	NS
Second Quarter Total Cr Concentration (ug/L):	NS	NS	NS	NS	NS	NS	NS
Second Quarter Total Cr SCG Exceedences:	NS	NS	NS	NS	NS	NS	NS

Intermediate Zone

Well Identification:	N-10624	GM-17I	GM-18I	GM-20I	GM-21I	GM-74I	GM-78I	GM-79I
Second Quarter TVOC Concentration (ug/L):	NS	NS	NS	ND	ND	NS	NS	ND
No. Second Quarter VOC SCG Exceedences:	NS	NS	NS	None	None	NS	NS	None
Second Quarter Total Cd Concentration (ug/L):	NS	NS	NS	NS	NS	NS	NS	NS
Second Quarter Total Cd SCG Exceedences:	NS	NS	NS	NS	NS	NS	NS	NS
Second Quarter Total Cr Concentration (ug/L):	NS	NS	NS	NS	NS	NS	NS	NS
Second Quarter Total Cr SCG Exceedences:	NS	NS	NS	NS	NS	NS	NS	NS

Deep Zone

Well Identification:	GM-17D	GM-18D	GM-20D	GM-21D
Second Quarter TVOC Concentration (ug/L):	NS	NS	ND	1.0
No. Second Quarter VOC SCG Exceedences:	NS	NS	None	None

(1) Wells are shown on Figure 1. VOC analytical results from shallow, intermediate, and deep wells are provided in Tables 6 through 8, respectively; Cr and Cd were not analyzed for during the second quarter.

(2) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent value listed.

VOC Volatile Organic Compound
NS Not Sampled
ND Not Detected
-- Not Applicable
Cd Cadmium
Cr Chromium
NYSDEC New York State Department of Environmental Conservation
TOGS Technical and Operational Guidance Series
TVOC Total Volatile Organic Compound

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Table 7. Summary of Total Volatile Organic Compound and Cadmium/Chromium Concentrations and Comparison to SCGs for Select Site Boundary Monitoring Wells, Third Quarter 2006 Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York. [1] [2]

Shallow Zone

Well Identification:	N-10631	GM-21S	GM-78S
Third Quarter TVOC Concentration (ug/L):	ND	ND	0.9
No. of Third Quarter VOC SCG Exceedences:	None	None	None
Third Quarter Total Cd Concentration (ug/L):	11	NS	ND
Third Quarter Total Cd SCG Exceedences:	1	NS	ND
Third Quarter Total Cr Concentration (ug/L):	39.9	NS	2.1
Third Quarter Total Cr SCG Exceedences:	0	NS	0

Intermediate Zone

Well Identification:	N-10624	GM-17I	GM-18I	GM-20I	GM-21I	GM-74I	GM-78I	GM-79I
Third Quarter TVOC Concentration (ug/L):	0.6	ND	0.5	ND	ND	ND	0.6	ND
No. Third Quarter VOC SCG Exceedences:	None	None	None	None	None	None	None	None
Third Quarter Total Cd Concentration (ug/L):	NS	NS	NS	NS	NS	NS	ND	NS
Third Quarter Total Cd SCG Exceedences:	NS	NS	NS	NS	NS	NS	ND	NS
Third Quarter Total Cr Concentration (ug/L):	NS	NS	NS	NS	NS	NS	ND	NS
Third Quarter Total Cr SCG Exceedences:	NS	NS	NS	NS	NS	NS	ND	NS

Deep Zone

Well Identification:	GM-17D	GM-18D	GM-20D	GM-21D
Third Quarter TVOC Concentration (ug/L):	ND	11.6	ND	1.0
No. Third Quarter VOC SCG Exceedences:	None	1	None	None

(1) Wells are shown on Figure 1. VOC analytical results from shallow, intermediate, and deep wells are provided in Tables 6 through 8, respectively.

(2) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent value listed.

(3) For wells installed after November 1998, VOC SCG exceedences are shown for the period of record.

NS Not Sampled
ND Not Detected
– Not Applicable
Cd Cadmium
Cr Chromium
NYSDEC New York State Department of Environmental Conservation
TOGS Technical and Operational Guidance Series
TVOC Total Volatile Organic Compound

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Table 8. Concentrations of Volatile Organic Compounds Detected in Shallow Wells, Third Quarter 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[1]	WELL: / SAMPLE ID: / DATE:	10631 N-10621 10/2/2006	FW-03 FW-03 10/5/2006	GM-15S GM-15S 9/28/2006	GM-21S GM-21S 9/28/2006	GM-78S GM-78S 9/26/2006
Chloromethane	5		<5	<5	<5	<5	<5
Bromomethane	5		<5	<5	<5	<5	<5
Vinyl Chloride	2		<2	<2	<2	<2	<2
Chloroethane	5		<5	<5	<5	<5	<5
Methylene chloride	5		<5	<5	<5	<5	<5
Acetone	50		<10	<10	<10	<10	<10
Carbon disulfide	50		<5	<5	<5	<5	<5
1,1-Dichloroethene	5		<5	<5	<5	<5	<5
1,1-Dichloroethane	5		<5	<5	<5	<5	<5
cis-1,2-Dichloroethene	5		<5	<5	<5	<5	<5
trans-1,2-Dichloroethene	5		<5	<5	<5	<5	<5
Chloroform	7		<5	<5	<5	<5	<5
1,2-Dichloroethane	5		<5	<5	<5	<5	<5
2-Butanone	50		<10	<10	<10	<10	<10
1,1,1-Trichloroethane	5		<5	<5	<5	<5	<5
Carbon tetrachloride	5		<5	<5	<5	<5	<5
Bromodichloromethane	50		<5	<5	<5	<5	<5
1,2-Dichloropropane	5		<5	<5	<5	<5	<5
cis-1,3-Dichloropropene	5		<5	<5	<5	<5	<5
Trichloroethene	5		<5	**3J**	**11**	<5	**0.9J**
Dibromochloromethane	5		<5	<5	<5	<5	<5
1,1,2-Trichloroethane	5		<5	<5	<5	<5	<5
Benzene	0.7		<0.7	<0.7	<0.7	<0.7	<0.7
trans-1,3-Dichloropropene	5		<5	<5	<5	<5	<5
Bromoform	50		<5	<5	<5	<5	<5
4-Methyl-2-pentanone	50		<10	<10	<10	<10	<10
2-Hexanone	50		<10	<10	<10	<10	<10
Tetrachloroethene	5		<5	**8**	<5	<5	<5
1,1,2,2-Tetrachloroethane	5		<5	<5	<5	<5	<5
Toluene	5		<5	<5	<5	<5	<5
Chlorobenzene	5		<5	<5	<5	<5	<5
Ethylbenzene	5		<5	<5	<5	<5	<5
Styrene	5		<5	<5	<5	<5	<5
Xylene (total)	5		<5	<5	<5	<5	<5
Vinyl Acetate	NE		<5	<5	<5	<5	<5
Freon-113 *	5		<5	<5	<5	<5	<5
Total VOCs			0	**11**	**11**	0	**0.9**

(1) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent value listed.

VOCs Volatile organic compounds

ug/L Micrograms per liter

J Estimated value

NYSDEC New York State Department of Environmental Conservation

* Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane.

Value exceeds associated SCG value.

NE No SCG established

TOGS Technical and Operational Guidance Series

Bold value indicates a detection.

Table 8. Concentrations of Volatile Organic Compounds Detected in Shallow Wells, Third Quarter 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[1]	WELL: / SAMPLE ID: / DATE:	HN-40S HN-40S 9/27/2006	HN-42S HN-42S 9/27/2006
Chloromethane	5		<5	<5
Bromomethane	5		<5	<5
Vinyl Chloride	2		<2	<2
Chloroethane	5		<5	<5
Methylene chloride	5		<5	<5
Acetone	50		<10	<10
Carbon disulfide	50		<5	<5
1,1-Dichloroethene	5		<5	<5
1,1-Dichloroethane	5		<5	<5
cis-1,2-Dichloroethene	5		<5	<5
trans-1,2-Dichloroethene	5		<5	<5
Chloroform	7		<5	<5
1,2-Dichloroethane	5		<5	<5
2-Butanone	50		<10	<10
1,1,1-Trichloroethane	5		<5	<5
Carbon tetrachloride	5		<5	<5
Bromodichloromethane	50		<5	<5
1,2-Dichloropropane	5		<5	<5
cis-1,3-Dichloropropene	5		<5	<5
Trichloroethene	5		<5	<5
Dibromochloromethane	5		<5	<5
1,1,2-Trichloroethane	5		<5	<5
Benzene	0.7		<0.7	<0.7
trans-1,3-Dichloropropene	5		<5	<5
Bromoform	50		<5	<5
4-Methyl-2-pentanone	50		<10	<10
2-Hexanone	50		<10	<10
Tetrachloroethene	5		<5	<5
1,1,2,2-Tetrachloroethane	5		<5	<5
Toluene	5		<5	<5
Chlorobenzene	5		<5	<5
Ethylbenzene	5		<5	<5
Styrene	5		<5	<5
Xylene (total)	5		<5	<5
Vinyl Acetate	NE		<5	<5
Freon-113 *	5		<5	<5
Total VOCs			0	0

[1]	Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent value listed.
VOCs	Volatile organic compounds
ug/L	Micrograms per liter
J	Estimated value
NYSDEC	New York State Department of Environmental Conservation
*	Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane.
	Value exceeds associated SCG value.
NE	No SCG established
TOGS	Technical and Operational Guidance Series

Bold value indicates a detection.

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Table 9. Concentrations of Volatile Organic Compounds Detected in Intermediate Wells, Second and Thrid Quarters of 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[1]	WELL:	GM-15I	GM-17I	GM-18I	GM-20I	GM-20I	GM-21I
		SAMPLE ID:	GM-15I	GM-17I	GM-18I	GM-20I	GM-20I	GM-21I
		DATE:	9/20/2006	9/15/2006	9/22/2006	7/21/2006	9/20/2006	7/5/2006
Chloromethane	5		<5	<5	<5	<5	<5	<5
Bromomethane	5		<5	<5	<5	<5	<5	<5
Vinyl Chloride	2		<2	<2	<2	<2	<2	<2
Chloroethane	5		<5	<5	<5	<5	<5	<5
Methylene chloride	5		<5	<5	<5	<5	<5	<5
Acetone	50		<10	<10	<10	<10	<10	<10
Carbon disulfide	50		<5	<5	<5	<5	<5	<5
1,1-Dichloroethene	5		<5	<5	<5	<5	<5	<5
1,1-Dichloroethane	5		<5	<5	<5	<5	<5	<5
cis-1,2-Dichloroethene	5		<5	<5	<5	<5	<5	<5
trans-1,2-Dichloroethene	5		<5	<5	<5	<5	<5	<5
Chloroform	7		<5	<5	<5	<5	<5	<5
1,2-Dichloroethane	5		<5	<5	<5	<5	<5	<5
2-Butanone	50		<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane	5		<5	<5	<5	<5	<5	<5
Carbon tetrachloride	5		<5	<5	<5	<5	<5	<5
Bromodichloromethane	50		<5	<5	<5	<5	<5	<5
1,2-Dichloropropane	5		<5	<5	<5	<5	<5	<5
cis-1,3-Dichloropropene	5		<5	<5	<5	<5	<5	<5
Trichloroethene	5		**1J**	<5	**0.5J**	<5	<5	<5
Dibromochloromethane	5		<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane	5		<5	<5	<5	<5	<5	<5
Benzene	0.7		<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
trans-1,3-Dichloropropene	5		<5	<5	<5	<5	<5	<5
Bromoform	50		<5	<5	<5	<5	<5	<5
4-Methyl-2-pentanone	50		<10	<10	<10	<10	<10	<10
2-Hexanone	50		<10	<10	<10	<10	<10	<10
Tetrachloroethene	5		<5	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	5		<5	<5	<5	<5	<5	<5
Toluene	5		<5	<5	<5	<5	<5	<5
Chlorobenzene	5		<5	<5	<5	<5	<5	<5
Ethylbenzene	5		<5	<5	<5	<5	<5	<5
Styrene	5		<5	<5	<5	<5	<5	<5
Xylene (total)	5		<5	<5	<5	<5	<5	<5
Vinyl Acetate	NE		<5	<5	<5	<5	<5	<5
Freon-113 *	5		<5	<5	<5	<5	<5	<5
Total VOCs			**1**	0	**0.5**	0	0	0

(1) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibi (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most string

VOCs Volatile organic compounds

ug/L Micrograms per liter

NYSDEC New York State Department of Environmental Conservation

* Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane.

NE No SCG established

TOGS Technical and Operational Guidance Series

Table 9. Concentrations of Volatile Organic Compounds Detected in Intermediate Wells, Second and Thrid Quarters of 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[1]	WELL: / SAMPLE ID: / DATE:	GM-21I GM-21I 9/20/2006	GM-74I GM-74I 9/14/2006	GM-78I GM-78I 9/26/2006	GM-79I GM-79I 7/6/2006	GM-79I GM-79I 9/12/2006	10624 N-10624 10/2/2006
Chloromethane	5		<5	<5	<5	<5	<5	<5
Bromomethane	5		<5	<5	<5	<5	<5	<5
Vinyl Chloride	2		<2	<2	<2	<2	<2	<2
Chloroethane	5		<5	<5	<5	<5	<5	<5
Methylene chloride	5		<5	<5	<5	<5	<5	<5
Acetone	50		<10	<10	<10	<10	<10	<10
Carbon disulfide	50		<5	<5	<5	<5	<5	<5
1,1-Dichloroethene	5		<5	<5	<5	<5	<5	<5
1,1-Dichloroethane	5		<5	<5	<5	<5	<5	<5
cis-1,2-Dichloroethene	5		<5	<5	<5	<5	<5	<5
trans-1,2-Dichloroethene	5		<5	<5	<5	<5	<5	<5
Chloroform	7		<5	<5	<5	<5	<5	<5
1,2-Dichloroethane	5		<5	<5	<5	<5	<5	<5
2-Butanone	50		<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane	5		<5	<5	<5	<5	<5	<5
Carbon tetrachloride	5		<5	<5	<5	<5	<5	<5
Bromodichloromethane	50		<5	<5	<5	<5	<5	<5
1,2-Dichloropropane	5		<5	<5	<5	<5	<5	<5
cis-1,3-Dichloropropene	5		<5	<5	<5	<5	<5	<5
Trichloroethene	5		<5	<5	**0.6J**	<5	<5	**0.6J**
Dibromochloromethane	5		<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane	5		<5	<5	<5	<5	<5	<5
Benzene	0.7		<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
trans-1,3-Dichloropropene	5		<5	<5	<5	<5	<5	<5
Bromoform	50		<5	<5	<5	<5	<5	<5
4-Methyl-2-pentanone	50		<10	<10	<10	<10	<10	<10
2-Hexanone	50		<10	<10	<10	<10	<10	<10
Tetrachloroethene	5		<5	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	5		<5	<5	<5	<5	<5	<5
Toluene	5		<5	<5	<5	<5	<5	<5
Chlorobenzene	5		<5	<5	<5	<5	<5	<5
Ethylbenzene	5		<5	<5	<5	<5	<5	<5
Styrene	5		<5	<5	<5	<5	<5	<5
Xylene (total)	5		<5	<5	<5	<5	<5	<5
Vinyl Acetate	NE		<5	<5	<5	<5	<5	<5
Freon-113 *	5		<5	<5	<5	<5	<5	<5
Total VOCs			0	0	**0.6**	0	0	**0.6**

[1]	Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasib
]ent value listed.	(ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most string
VOCs	Volatile organic compounds
ug/L	Micrograms per liter
B	Compound identified in associated blank.
H	Alternate peak selection upon analytical review.
J	Estimated value
M	Manually integrated compound
U	Compound not detected
NYSDEC	New York State Department of Environmental Conservation
*	Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane.
	Value exceeds associated SCG value.
NE	No SCG established
TOGS	Technical and Operational Guidance Series

Bold value indicates a detection.

Table 9. Concentrations of Volatile Organic Compounds Detected in Intermediate Wells, Second and Thrid Quarters of 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[1]	WELL:	HN-24I	HN-40I	HN-42I
		SAMPLE ID:	HN-24I	HN-40I	HN-42I
		DATE:	9/29/2006	9/27/2006	9/27/2006
Chloromethane	5		<5	<5	<5
Bromomethane	5		<5	<5	<5
Vinyl Chloride	2		<2	<2	<2
Chloroethane	5		<5	<5	<5
Methylene chloride	5		<5	<5	<5
Acetone	50		<10	<10	<10
Carbon disulfide	50		<5	<5	<5
1,1-Dichloroethene	5		<5	<5	<5
1,1-Dichloroethane	5		<5	<5	<5
cis-1,2-Dichloroethene	5		<5	<5	<5
trans-1,2-Dichloroethene	5		<5	<5	<5
Chloroform	7		<5	<5	<5
1,2-Dichloroethane	5		<5	<5	<5
2-Butanone	50		<10	<10	<10
1,1,1-Trichloroethane	5		<5	<5	<5
Carbon tetrachloride	5		<5	<5	<5
Bromodichloromethane	50		<5	<5	<5
1,2-Dichloropropane	5		<5	<5	<5
cis-1,3-Dichloropropene	5		<5	<5	<5
Trichloroethene	5		**15**	**0.5J**	**2J**
Dibromochloromethane	5		<5	<5	<5
1,1,2-Trichloroethane	5		<5	<5	<5
Benzene	0.7		<0.7	<0.7	<0.7
trans-1,3-Dichloropropene	5		<5	<5	<5
Bromoform	50		<5	<5	<5
4-Methyl-2-pentanone	50		<10	<10	<10
2-Hexanone	50		<10	<10	<10
Tetrachloroethene	5		<5	<5	<5
1,1,2,2-Tetrachloroethane	5		<5	<5	<5
Toluene	5		<5	<5	<5
Chlorobenzene	5		<5	<5	<5
Ethylbenzene	5		<5	<5	<5
Styrene	5		<5	<5	<5
Xylene (total)	5		<5	<5	<5
Vinyl Acetate	NE		<5	<5	<5
Freon-113 *	5		**0.9J**	<5	<5
Total VOCs			**15.9**	**0.5**	**2**

[1]	Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater F
ient value listed.	(ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most
VOCs	Volatile organic compounds
ug/L	Micrograms per liter
B	Compound identified in associated blank.
H	Alternate peak selection upon analytical review.
J	Estimated value
M	Manually integrated compound
U	Compound not detected
NYSDEC	New York State Department of Environmental Conservation
*	Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane.
	Value exceeds associated SCG value.
NE	No SCG established
TOGS	Technical and Operational Guidance Series

Bold value indicates a detection.

ARCADIS

Table 10. Concentrations of Volatile Organic Compounds Detected in Deep Wells, Second and Third Quarters of 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[1]	WELL: / SAMPLE ID: / DATE:	GM-13D / GM-13D / 9/19/2006	GM-15D / GM-15D / 9/20/2006	GM-17D / GM-17D / 9/13/2006	GM-18D / GM-18D / 9/15/2006	GM-20D / GM-20D / 7/21/2006	GM-20D / REP-7-21-06 / 7/21/2006
Chloromethane	5		<5	<5	<5	<5	<5	<5
Bromomethane	5		<5	<5	<5	<5	<5	<5
Vinyl Chloride	2		<2	<2	<2	<2	<2	<2
Chloroethane	5		<5	<5	<5	<5	<5	<5
Methylene chloride	5		<5	<5	<5	<5	<5	<5
Acetone	50		<10	<10	<10	<10	<10	<10
Carbon disulfide	50		<5	<5	<5	<5	<5	<5
1,1-Dichloroethene	5		**21**	<5	<5	<5	<5	<5
1,1-Dichloroethane	5		**8**	<5	<5	<5	<5	<5
cis-1,2-Dichloroethene	5		**44**	<5	<5	<5	<5	<5
trans-1,2-Dichloroethene	5		<5	<5	<5	<5	<5	<5
Chloroform	7		<5	<5	<5	<5	<5	<5
1,2-Dichloroethane	5		<5	<5	<5	<5	<5	<5
2-Butanone	50		<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane	5		**7**	<5	<5	<5	<5	<5
Carbon tetrachloride	5		<5	<5	<5	<5	<5	<5
Bromodichloromethane	50		<5	<5	<5	<5	<5	<5
1,2-Dichloropropane	5		<5	<5	<5	<5	<5	<5
cis-1,3-Dichloropropene	5		<5	<5	<5	<5	<5	<5
Trichloroethene	5		**120**	**1J**	<5	**11**	<5	<5
Dibromochloromethane	5		<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane	5		<5	<5	<5	<5	<5	<5
Benzene	0.7		<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
trans-1,3-Dichloropropene	5		<5	<5	<5	<5	<5	<5
Bromoform	50		<5	<5	<5	<5	<5	<5
4-Methyl-2-pentanone	50		<10	<10	<10	<10	<10	<10
2-Hexanone	50		<10	<10	<10	<10	<10	<10
Tetrachloroethene	5		**510EJ**	**0.8J**	<5	**0.6J**	<5	<5
1,1,2,2-Tetrachloroethane	5		<5	<5	<5	<5	<5	<5
Toluene	5		<5	<5	<5	<5	<5	<5
Chlorobenzene	5		<5	<5	<5	<5	<5	<5
Ethylbenzene	5		<5	<5	<5	<5	<5	<5
Styrene	5		<5	<5	<5	<5	<5	<5
Xylene (total)	5		<5	<5	<5	<5	<5	<5
Vinyl Acetate	NE		<5	<5	<5	<5	<5	<5
Freon-113 *	5		**4J**	<5	<5	<5	<5	<5
Total VOCs			**714**	**1.8**	**0**	**11.6**	**0**	**0**

(1) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent value listed.

VOCs Volatile organic compounds

ug/L Micrograms per liter

D Diluted

J Estimated value

NYSDEC New York State Department of Environmental Conservation

* Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane.

Value exceeds associated SCG value.

NE No SCG established

TOGS Technical and Operational Guidance Series

Bold value indicates a detection.

Table 10. Concentrations of Volatile Organic Compounds Detected in Deep Wells, Second and Third Quarters of 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[1]	WELL: / SAMPLE ID: / DATE:	GM-20D / GM-20D / 9/20/2006	GM-21D / GM-21D / 7/5/2006	GM-21D / GM-21D / 9/18/2006	GM-34D / GM-34D / 7/6/2006	GM-34D / GM-34D / 9/29/2006	GM-34D / REP092906 / 9/29/2006
Chloromethane	5		<5	<5	<5	<5	<5	<5
Bromomethane	5		<5	<5	<5	<5	<5	<5
Vinyl Chloride	2		<2	<2	<2	<2	<2	<2
Chloroethane	5		<5	<5	<5	<5	<5	<5
Methylene chloride	5		<5	<5	<5	<5	<5	<5
Acetone	50		<10	<10	<10	<10	<10	<10
Carbon disulfide	50		<5	<5	<5	<5	<5	<5
1,1-Dichloroethene	5		<5	<5	<5	**8**	**11**	**11J**
1,1-Dichloroethane	5		<5	<5	<5	<5	<5	<5
cis-1,2-Dichloroethene	5		<5	<5	<5	**8**	**9J**	**9J**
trans-1,2-Dichloroethene	5		<5	<5	<5	<5	<5	<5
Chloroform	7		<5	<5	<5	<5	**0.7J**	<5
1,2-Dichloroethane	5		<5	<5	<5	<5	<5	<5
2-Butanone	50		<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane	5		<5	<5	<5	<5	<5	<5
Carbon tetrachloride	5		<5	<5	<5	<5	<5	<5
Bromodichloromethane	50		<5	<5	<5	<5	<5	<5
1,2-Dichloropropane	5		<5	<5	<5	<5	<5	<5
cis-1,3-Dichloropropene	5		<5	<5	<5	<5	<5	<5
Trichloroethene	5		<5	**1J**	**1J**	**590D**	**750D**	**770D**
Dibromochloromethane	5		<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane	5		<5	<5	<5	<5	<5	<5
Benzene	0.7		<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
trans-1,3-Dichloropropene	5		<5	<5	<5	<5	<5	<5
Bromoform	50		<5	<5	<5	<5	<5	<5
4-Methyl-2-pentanone	50		<10	<10	<10	<10	<10	<10
2-Hexanone	50		<10	<10	<10	<10	<10	<10
Tetrachloroethene	5		<5	<5	<5	**7**	**9J**	**9J**
1,1,2,2-Tetrachloroethane	5		<5	<5	<5	<5	<5	<5
Toluene	5		<5	<5	<5	<5	<5	<5
Chlorobenzene	5		<5	<5	<5	<5	<5	<5
Ethylbenzene	5		<5	<5	<5	<5	<5	<5
Styrene	5		<5	<5	<5	<5	<5	<5
Xylene (total)	5		<5	<5	<5	<5	<5	<5
Vinyl Acetate	NE		<5	<5	<5	<5	<5	<5
Freon-113 *	5		<5	<5	<5	**21**	**24J**	**23J**
Total VOCs			**0**	**1**	**1**	**634**	**803.7**	**822**

[1]	Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent value listed.
VOCs	Volatile organic compounds
ug/L	Micrograms per liter
D	Diluted
J	Estimated value
NYSDEC	New York State Department of Environmental Conservation
*	Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane.
	Value exceeds associated SCG value.
NE	No SCG established
TOGS	Technical and Operational Guidance Series

Bold value indicates a detection.

Table 10. Concentrations of Volatile Organic Compounds Detected in Deep Wells, Second and Third Quarters of 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[1]	WELL: / SAMPLE ID: / DATE:	GM-38D / GM-38D / 9/21/2006	GM-39D$_A$ / GM-39D / 9/18/2006	GM-39D$_B$ / GM-39D2 / 9/18/2006	GM-73D / GM-73D / 9/14/2006	GM-74D / GM-74D / 9/14/2006
Chloromethane	5		<5	<5	<5	<5	<5
Bromomethane	5		<5	<5	<5	<5	<5
Vinyl Chloride	2		<2	<2	<2	<2	<2
Chloroethane	5		<5	<5	<5	<5	<5
Methylene chloride	5		<5	<5	<5	<5	<5
Acetone	50		<10	<10	<10	<10	<10
Carbon disulfide	50		<5	<5	<5	<5	<5
1,1-Dichloroethene	5		**8**	<5	<5	<5	<5
1,1-Dichloroethane	5		**5J**	<5	<5	<5	<5
cis-1,2-Dichloroethene	5		**2J**	<5	<5	<5	<5
trans-1,2-Dichloroethene	5		<5	<5	<5	<5	<5
Chloroform	7		**1J**	<5	<5	<5	<5
1,2-Dichloroethane	5		<5	<5	<5	<5	<5
2-Butanone	50		<10	<10	<10	<10	<10
1,1,1-Trichloroethane	5		**5J**	<5	<5	<5	<5
Carbon tetrachloride	5		<5	<5	<5	<5	<5
Bromodichloromethane	50		<5	<5	<5	<5	<5
1,2-Dichloropropane	5		<5	<5	<5	<5	<5
cis-1,3-Dichloropropene	5		<5	<5	<5	<5	<5
Trichloroethene	5		**1100D**	**17**	**63**	**14**	**3J**
Dibromochloromethane	5		<5	<5	<5	<5	<5
1,1,2-Trichloroethane	5		<5	<5	<5	<5	<5
Benzene	0.7		<0.7	<0.7	<0.7	<0.7	<0.7
trans-1,3-Dichloropropene	5		<5	<5	<5	<5	<5
Bromoform	50		<5	<5	<5	<5	<5
4-Methyl-2-pentanone	50		<10	<10	<10	<10	<10
2-Hexanone	50		<10	<10	<10	<10	<10
Tetrachloroethene	5		**2J**	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	5		<5	<5	<5	<5	<5
Toluene	5		<5	<5	<5	<5	<5
Chlorobenzene	5		<5	<5	<5	<5	<5
Ethylbenzene	5		<5	<5	<5	<5	<5
Styrene	5		<5	<5	<5	<5	<5
Xylene (total)	5		<5	<5	<5	<5	<5
Vinyl Acetate	NE		<5	<5	<5	<5	<5
Freon-113 *	5		**2J**	<5	<5	<5	<5
Total VOCs			**1125**	**17**	**63**	**14**	**3**

(1) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDI most stringent value listed.

VOCs Volatile organic compounds

ug/L Micrograms per liter

D Diluted

J Estimated value

NYSDEC New York State Department of Environmental Conservation

* Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane.

Value exceeds associated SCG value.

NE No SCG established

TOGS Technical and Operational Guidance Series

Bold value indicates a detection.

Table 10. Concentrations of Volatile Organic Compounds Detected in Deep Wells, Second and Third Quarters of 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[1]	WELL: / SAMPLE ID: / DATE:	GM-79D GM-79D 7/6/2006	GM-79D GM-79D 9/12/2006	10627 N-10627 10/2/2006
Chloromethane	5		<5	<5	<5
Bromomethane	5		<5	<5	<5
Vinyl Chloride	2		<2	<2	<2
Chloroethane	5		<5	<5	<5
Methylene chloride	5		<5	<5	<5
Acetone	50		<10	<10	<10
Carbon disulfide	50		<5	<5	<5
1,1-Dichloroethene	5		<5	<5	<5
1,1-Dichloroethane	5		<5	<5	<5
cis-1,2-Dichloroethene	5		<5	<5	<5
trans-1,2-Dichloroethene	5		<5	<5	<5
Chloroform	7		<5	<5	<5
1,2-Dichloroethane	5		<5	<5	<5
2-Butanone	50		<10	<10	<10
1,1,1-Trichloroethane	5		<5	<5	<5
Carbon tetrachloride	5		<5	<5	<5
Bromodichloromethane	50		<5	<5	<5
1,2-Dichloropropane	5		<5	<5	<5
cis-1,3-Dichloropropene	5		<5	<5	<5
Trichloroethene	5		**44**	**55**	**2J**
Dibromochloromethane	5		<5	<5	<5
1,1,2-Trichloroethane	5		<5	<5	<5
Benzene	0.7		<0.7	<0.7	<0.7
trans-1,3-Dichloropropene	5		<5	<5	<5
Bromoform	50		<5	<5	<5
4-Methyl-2-pentanone	50		<10	<10	<10
2-Hexanone	50		<10	<10	<10
Tetrachloroethene	5		**0.9J**	**1J**	<5
1,1,2,2-Tetrachloroethane	5		<5	<5	<5
Toluene	5		<5	<5	<5
Chlorobenzene	5		<5	<5	<5
Ethylbenzene	5		<5	<5	<5
Styrene	5		<5	<5	<5
Xylene (total)	5		<5	<5	<5
Vinyl Acetate	NE		<5	<5	<5
Freon-113 *	5		<5	<5	<5
Total VOCs			**44.9**	**56**	**2**

(1)	Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater
)EC 1998);	Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent value listed.
VOCs	Volatile organic compounds
ug/L	Micrograms per liter
D	Diluted
J	Estimated value
NYSDEC	New York State Department of Environmental Conservation
*	Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane.
	Value exceeds associated SCG value.
NE	No SCG established
TOGS	Technical and Operational Guidance Series

Bold value indicates a detection.

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Table 11. Concentrations of Volatile Organic Compounds Detected in Deep2 Wells Groundwater Remedial Treatment Systems, Second and Third Quarters of 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[1]	WELL:	GM-15D2	GM-33D2	GM-33D2	GM-34D2	GM-34D2	GM-35D2
		SAMPLE ID:	GM-15D2	GM-33DZ	GM-33D2	GM-34D-2	GM-34D2	MW-35D2
		DATE:	9/13/2006	7/7/2006	10/3/2006	7/6/2006	9/29/2006	7/28/2006
Chloromethane	5		<5	<5	<5	<5	<5	<5
Bromomethane	5		<5	<5	<5	<5	<5	<5
Vinyl Chloride	2		<2	<2	<2	<2	<2	<2
Chloroethane	5		<5	<5	<5	<5	<5	<5
Methylene chloride	5		<5	<5	<5	<5	<5	<5
Acetone	50		<10	<10	<10	<10	<10	<10
Carbon disulfide	50		<5	<5	<5	<5	<5	<5
1,1-Dichloroethene	5		<5	<5	<5	**3J**	**4J**	**1J**
1,1-Dichloroethane	5		<5	<5	<5	<5	<5	<5
cis-1,2-Dichloroethene	5		<5	**2J**	**2J**	**8**	**8**	**3J**
trans-1,2-Dichloroethene	5		<5	<5	<5	<5	<5	<5
Chloroform	7		<5	<5	<5	<5	<5	<5
1,2-Dichloroethane	5		<5	<5	<5	<5	<5	<5
2-Butanone	50		<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane	5		<5	<5	<5	<5	<5	<5
Carbon tetrachloride	5		<5	<5	<5	<5	<5	<5
Bromodichloromethane	50		<5	<5	<5	<5	<5	<5
1,2-Dichloropropane	5		<5	<5	<5	<5	<5	<5
cis-1,3-Dichloropropene	5		<5	<5	<5	<5	<5	<5
Trichloroethene	5		**13**	**180**	**140**	**240D**	**290D**	**260D**
Dibromochloromethane	5		<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane	5		<5	<5	<5	<5	<5	<5
Benzene	0.7		<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
trans-1,3-Dichloropropene	5		<5	<5	<5	<5	<5	<5
Bromoform	50		<5	<5	<5	<5	<5	<5
4-Methyl-2-pentanone	50		<10	<10	<10	<10	<10	<10
2-Hexanone	50		<10	<10	<10	<10	<10	<10
Tetrachloroethene	5		**16**	**27**	**43**	**11**	**12**	**8**
1,1,2,2-Tetrachloroethane	5		<5	<5	<5	<5	<5	<5
Toluene	5		<5	<5	<5	<5	<5	<5
Chlorobenzene	5		<5	<5	<5	<5	<5	<5
Ethylbenzene	5		<5	<5	<5	<5	<5	<5
Styrene	5		<5	<5	<5	<5	<5	<5
Xylene (total)	5		<5	<5	<5	<5	<5	<5
Vinyl Acetate	NE		<5	<5	<5	<5	<5	<5
Freon-113 *	5		**2J**	**140**	**130**	**7**	**8**	**6**
Total VOCs			**31**	**349**	**315**	**269**	**322**	**278**

[1] Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent value listed.

NYSDEC New York State Department of Environmental Conservation
VOCs Volatile organic compounds
ug/L Micrograms per liter
J Estimated value
D Constituent identified at a secondary dilution.
* Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane.
Value exceeds associated SCG value.
NE No SCG established
TOGS Technical and Operational Guidance Series

Bold value indicates a detection.

Table 11. Concentrations of Volatile Organic Compounds Detected in Deep2 Wells Groundwater Remedial Treatment Systems, Second and Third Quarters of 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[1]	WELL: / SAMPLE ID: / DATE:	GM-35D2 GM-35D2 9/21/2006	GM-38D2 GM-38D2 9/21/2006	GM-38D2 REP092106 9/21/2006	GM-73D2 GM-73D2 9/14/2006	GM-74D2 GM-74D2 9/15/2006	GM-75D2 GM-75D2 7/7/2006
Chloromethane	5		<5	<5	<5	<5	<5	<5
Bromomethane	5		<5	<5	<5	<5	<5	<5
Vinyl Chloride	2		<2	<2	<2	<2	<2	<2
Chloroethane	5		<5	<5	<5	<5	<5	<5
Methylene chloride	5		<5	<5	<5	<5	<5	<5
Acetone	50		<10	<10	<10	<10	<10	<10
Carbon disulfide	50		<5	<5	<5	<5	<5	<5
1,1-Dichloroethene	5		<5	**3J**	**3J**	<5	<5	**5J**
1,1-Dichloroethane	5		<5	<5	<5	<5	<5	<5
cis-1,2-Dichloroethene	5		**3J**	**7**	**8**	<5	<5	**1J**
trans-1,2-Dichloroethene	5		<5	**0.3J**	<5	<5	<5	<5
Chloroform	7		<5	**0.8J**	**0.8J**	<5	<5	<5
1,2-Dichloroethane	5		<5	<5	<5	<5	<5	<5
2-Butanone	50		<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane	5		<5	<5	<5	<5	<5	<5
Carbon tetrachloride	5		<5	<5	<5	<5	<5	<5
Bromodichloromethane	50		<5	<5	<5	<5	<5	<5
1,2-Dichloropropane	5		<5	<5	<5	<5	<5	<5
cis-1,3-Dichloropropene	5		<5	<5	<5	<5	<5	<5
Trichloroethene	5		**300D**	**1200D**	**1100D**	**96**	**9**	**310D**
Dibromochloromethane	5		<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane	5		<5	**2J**	**1J**	<5	<5	<5
Benzene	0.7		<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
trans-1,3-Dichloropropene	5		<5	<5	<5	<5	<5	<5
Bromoform	50		<5	<5	<5	<5	<5	<5
4-Methyl-2-pentanone	50		<10	<10	<10	<10	<10	<10
2-Hexanone	50		<10	<10	<10	<10	<10	<10
Tetrachloroethene	5		**9**	<5	<5	<5	**9**	**6**
1,1,2,2-Tetrachloroethane	5		<5	<5	<5	<5	<5	<5
Toluene	5		<5	<5	<5	<5	<5	<5
Chlorobenzene	5		<5	<5	<5	<5	<5	<5
Ethylbenzene	5		<5	<5	<5	<5	<5	<5
Styrene	5		<5	<5	<5	<5	<5	<5
Xylene (total)	5		<5	<5	<5	<5	<5	<5
Vinyl Acetate	NE		<5	<5	<5	<5	<5	<5
Freon-113 *	5		**7**	**4J**	**4J**	<5	<5	**4J**
Total VOCs			**319**	**1217.1**	**1116.8**	**96**	**18**	**326**

(1) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent value listed.

NYSDEC New York State Department of Environmental Conservation

VOCs Volatile organic compounds

ug/L Micrograms per liter

J Estimated value

D Constituent identified at a secondary dilution.

* Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane.

Value exceeds associated SCG value.

NE No SCG established

TOGS Technical and Operational Guidance Series

Bold value indicates a detection.

Table 11. Concentrations of Volatile Organic Compounds Detected in Deep2 Wells Groundwater Remedial Treatment Systems, Second and Third Quarters of 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[1]	WELL: / SAMPLE ID: / DATE:	GM-75D2 GM-75D2 9/22/2006	Well 1 GP-1 8/1/2006	GP-1 GP WELL 1 10/11/2006	Well 3 GP-3 8/1/2006	GP-3 GP WELL 3 10/11/2006
Chloromethane	5		<5	<5	<5	<25	<5
Bromomethane	5		<5	<5	<5	<25	<5
Vinyl Chloride	2		<2	<2	<2	**140**	**160**
Chloroethane	5		<5	<5	<5	<25	**3J**
Methylene chloride	5		<5	<5	<5	<25	<5
Acetone	50		<10	<10	<10	<50	<10
Carbon disulfide	50		<5	<5	<5	<25	<5
1,1-Dichloroethene	5		**5J**	**5J**	**6**	**19J**	**17**
1,1-Dichloroethane	5		<5	<5	<5	<25	<5
cis-1,2-Dichloroethene	5		**1J**	**8**	**10**	**15J**	**13**
trans-1,2-Dichloroethene	5		<5	<5	<5	<25	<5
Chloroform	7		<5	<5	<5	<25	<5
1,2-Dichloroethane	5		<5	<5	<5	<25	<5
2-Butanone	50		<10	<10	<10	<50	<10
1,1,1-Trichloroethane	5		<5	<5	<5	<25	**3J**
Carbon tetrachloride	5		<5	<5	<5	<25	<5
Bromodichloromethane	50		<5	<5	<5	<25	<5
1,2-Dichloropropane	5		<5	<5	<5	<25	<5
cis-1,3-Dichloropropene	5		<5	<5	<5	<25	<5
Trichloroethene	5		**360D**	**550D**	**530D**	**3800D**	**3600D**
Dibromochloromethane	5		<5	<5	<5	<25	<5
1,1,2-Trichloroethane	5		<5	<5	<5	<25	<5
Benzene	0.7		<0.7	<0.7	<0.7	<4	<0.7
trans-1,3-Dichloropropene	5		<5	<5	<5	<25	<5
Bromoform	50		<5	<5	<5	<25	<5
4-Methyl-2-pentanone	50		<10	<10	<10	<50	<10
2-Hexanone	50		<10	<10	<10	<50	<10
Tetrachloroethene	5		**7**	**140**	**150**	**61**	**42**
1,1,2,2-Tetrachloroethane	5		<5	<5	<5	<25	**0.6J**
Toluene	5		<5	<5	<5	<25	<5
Chlorobenzene	5		<5	<5	<5	<25	<5
Ethylbenzene	5		<5	<5	<5	<25	<5
Styrene	5		<5	<5	<5	<25	<5
Xylene (total)	5		<5	<5	<5	<25	<5
Vinyl Acetate	NE		<5	<5	<5	<25	<5
Freon-113 *	5		**3J**	**8**	**9**	**22J**	**15**
Total VOCs			**376**	**711**	**705**	**4057**	**3853.6**

[1] Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent value listed.

NYSDEC New York State Department of Environmental Conservation
VOCs Volatile organic compounds
ug/L Micrograms per liter
J Estimated value
D Constituent identified at a secondary dilution.
* Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane.
Value exceeds associated SCG value.
NE No SCG established
TOGS Technical and Operational Guidance Series
Bold value indicates a detection.

Table 11. Concentrations of Volatile Organic Compounds Detected in Deep2 Wells Groundwater Remedial Treatment Systems, Second and Third Quarters of 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[1]	WELL: / SAMPLE ID: / DATE:	EFFL TOWER 96 EFFLUE 8/1/2006	T-96-EFFL TOWER 96 EFFLUE 10/11/2006	WELL 17 WELL 17 8/1/2006	WELL 17 WELL 17 10/11/2006	Well 17 REP-8-1-06 8/1/2006
Chloromethane	5		<5	<5	<5	<5	<5
Bromomethane	5		<5	<5	<5	<5	<5
Vinyl Chloride	2		<2	<2	<2	<2	<2
Chloroethane	5		<5	<5	<5	<5	<5
Methylene chloride	5		<5	<5	<5	<5	<5
Acetone	50		<10	<10	<10	<10	<10
Carbon disulfide	50		<5	<5	<5	<5	<5
1,1-Dichloroethene	5		<5	<5	**2J**	**3J**	**3J**
1,1-Dichloroethane	5		<5	<5	<5	<5	<5
cis-1,2-Dichloroethene	5		<5	<5	**3J**	**4J**	**3J**
trans-1,2-Dichloroethene	5		<5	<5	<5	<5	<5
Chloroform	7		<5	<5	<5	<5	<5
1,2-Dichloroethane	5		<5	<5	<5	<5	<5
2-Butanone	50		<10	<10	<10	<10	<10
1,1,1-Trichloroethane	5		<5	<5	<5	<5	<5
Carbon tetrachloride	5		<5	<5	<5	<5	<5
Bromodichloromethane	50		<5	<5	<5	<5	<5
1,2-Dichloropropane	5		<5	<5	<5	<5	<5
cis-1,3-Dichloropropene	5		<5	<5	<5	<5	<5
Trichloroethene	5		**1J**	<5	**470D**	**460D**	**530D**
Dibromochloromethane	5		<5	<5	<5	<5	<5
1,1,2-Trichloroethane	5		<5	<5	<5	<5	<5
Benzene	0.7		<0.7	<0.7	<0.7	<0.7	<0.7
trans-1,3-Dichloropropene	5		<5	<5	<5	<5	<5
Bromoform	50		<5	<5	<5	<5	<5
4-Methyl-2-pentanone	50		<10	<10	<10	<10	<10
2-Hexanone	50		<10	<10	<10	<10	<10
Tetrachloroethene	5		<5	<5	**21**	**26**	**23**
1,1,2,2-Tetrachloroethane	5		<5	<5	<5	<5	<5
Toluene	5		<5	<5	<5	<5	<5
Chlorobenzene	5		<5	<5	<5	<5	<5
Ethylbenzene	5		<5	<5	<5	<5	<5
Styrene	5		<5	<5	<5	<5	<5
Xylene (total)	5		<5	<5	<5	<5	<5
Vinyl Acetate	NE		<5	<5	<5	<5	<5
Freon-113 *	5		<5	<5	**10**	**11**	**10**
Total VOCs			1	0	**506**	**504**	**569**

(1) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent value listed.

NYSDEC New York State Department of Environmental Conservation
VOCs Volatile organic compounds
ug/L Micrograms per liter
J Estimated value
D Constituent identified at a secondary dilution.
B Compound identified in associated blank.
U Compound not detected
* Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane.
Value exceeds associated SCG value.
NE No SCG established
TOGS Technical and Operational Guidance Series
Bold value indicates a detection.

Table 11. Concentrations of Volatile Organic Compounds Detected in Deep2 Wells Groundwater Remedial Treatment Systems, Second and Third Quarters of 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[1]	WELL: / SAMPLE ID: / DATE:	WELL 18 WELL 18 8/1/2006	WELL 18 WELL 18 10/11/2006	WELL 19 WELL 19 8/1/2006	WELL 19 WELL 19 10/11/2006	WELL 19 REP 111006 10/11/2006
Chloromethane	5		<5	<5	<5	<5	<5
Bromomethane	5		<5	<5	<5	<5	<5
Vinyl Chloride	2		<2	<2	<2	<2	<2
Chloroethane	5		<5	<5	<5	<5	<5
Methylene chloride	5		<5	<5	<5	<5	<5
Acetone	50		<10	<10	<10	<10	<10
Carbon disulfide	50		<5	<5	<5	<5	<5
1,1-Dichloroethene	5		**4J**	**5**	**1J**	**2J**	**1J**
1,1-Dichloroethane	5		<5	<5	<5	<5	<5
cis-1,2-Dichloroethene	5		**1J**	**2J**	**20**	**25**	**25**
trans-1,2-Dichloroethene	5		<5	<5	<5	<5	<5
Chloroform	7		<5	<5	**0.7J**	**0.9J**	**0.9J**
1,2-Dichloroethane	5		<5	<5	<5	<5	<5
2-Butanone	50		<10	<10	<10	<10	<10
1,1,1-Trichloroethane	5		<5	<5	<5	<5	<5
Carbon tetrachloride	5		<5	<5	<5	<5	<5
Bromodichloromethane	50		<5	<5	<5	<5	<5
1,2-Dichloropropane	5		<5	<5	<5	<5	<5
cis-1,3-Dichloropropene	5		<5	<5	<5	<5	<5
Trichloroethene	5		**130**	**160**	**140**	**190**	**190**
Dibromochloromethane	5		<5	<5	<5	<5	<5
1,1,2-Trichloroethane	5		<5	<5	<5	<5	<5
Benzene	0.7		<0.7	<0.7	<0.7	<0.7	<0.7
trans-1,3-Dichloropropene	5		<5	<5	<5	<5	<5
Bromoform	50		<5	<5	<5	<5	<5
4-Methyl-2-pentanone	50		<10	<10	<10	<10	<10
2-Hexanone	50		<10	<10	<10	<10	<10
Tetrachloroethene	5		**9**	**10**	**8**	**10**	**11**
1,1,2,2-Tetrachloroethane	5		<5	<5	<5	<5	<5
Toluene	5		<5	<5	<5	<5	<5
Chlorobenzene	5		<5	<5	<5	<5	<5
Ethylbenzene	5		<5	<5	<5	<5	<5
Styrene	5		<5	<5	<5	<5	<5
Xylene (total)	5		<5	<5	<5	<5	<5
Vinyl Acetate	NE		<5	<5	<5	<5	<5
Freon-113 *	5		**1J**	**2J**	**0.8J**	<5	<5
Total VOCs			**145**	**179**	**170.5**	**227.9**	**227.9**

(1) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent value listed.

NYSDEC New York State Department of Environmental Conservation

VOCs Volatile organic compounds

ug/L Micrograms per liter

J Estimated value

D Constituent identified at a secondary dilution.

B Compound identified in associated blank.

U Compound not detected

* Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane.

Value exceeds associated SCG value.

NE No SCG established

TOGS Technical and Operational Guidance Series

Bold value indicates a detection.

Table 11. Concentrations of Volatile Organic Compounds Detected in Deep2 Wells Groundwater Remedial Treatment Systems, Second and Third Quarters of 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[1]	WELL: / SAMPLE ID: / DATE:	EFFL TOWER 102 EFFLU 8/1/2006	TOWER_EFF TOWER 102 EFFLU 10/11/2006
Chloromethane	5		<5	<5
Bromomethane	5		<5	<5
Vinyl Chloride	2		<2	<2
Chloroethane	5		<5	<5
Methylene chloride	5		<5	<5
Acetone	50		<10	<10
Carbon disulfide	50		<5	<5
1,1-Dichloroethene	5		<5	<5
1,1-Dichloroethane	5		<5	<5
cis-1,2-Dichloroethene	5		<5	<5
trans-1,2-Dichloroethene	5		<5	<5
Chloroform	7		<5	<5
1,2-Dichloroethane	5		<5	<5
2-Butanone	50		<10	<10
1,1,1-Trichloroethane	5		<5	<5
Carbon tetrachloride	5		<5	<5
Bromodichloromethane	50		<5	<5
1,2-Dichloropropane	5		<5	<5
cis-1,3-Dichloropropene	5		<5	<5
Trichloroethene	5		<5	<5
Dibromochloromethane	5		<5	<5
1,1,2-Trichloroethane	5		<5	<5
Benzene	0.7		<0.7	<0.7
trans-1,3-Dichloropropene	5		<5	<5
Bromoform	50		<5	<5
4-Methyl-2-pentanone	50		<10	<10
2-Hexanone	50		<10	<10
Tetrachloroethene	5		<5	<5
1,1,2,2-Tetrachloroethane	5		<5	<5
Toluene	5		<5	<5
Chlorobenzene	5		<5	<5
Ethylbenzene	5		<5	<5
Styrene	5		<5	<5
Xylene (total)	5		<5	<5
Vinyl Acetate	NE		<5	<5
Freon-113 *	5		<5	<5
Total VOCs			0	0

[1]	Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Stuc (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent va
NYSDEC	New York State Department of Environmental Conservation
VOCs	Volatile organic compounds
ug/L	Micrograms per liter
J	Estimated value
D	Constituent identified at a secondary dilution.
B	Compound identified in associated blank.
U	Compound not detected
*	Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane.
	Value exceeds associated SCG value.
NE	No SCG established
TOGS	Technical and Operational Guidance Series

Bold value indicates a detection.

Table 12. Concentrations of Site-Related Volatile Organic Compounds Detected in Outpost Wells and Associated Blank Samples, Second and Third Quarters of 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York. [1]

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[2]	WELL: / SAMPLE ID: / DATE:	OW1-1 BPOW 1-1 7/10/2006	OW1-2 BPOW 1-2 7/10/2006	OW1-3 BPOW 1-3 7/10/2006	OW2-1 [3] BPOW 2-1 7/12/2006	OW2-2 BPOW 2-2 7/12/2006	OW3-1 BPOW 3-1 7/13/2006	OW3-2 BPOW 3-2 7/13/2006	OW4-1 BPOW 4-1 7/12/2006
Chlorobenzene	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	5		**2.3**	<0.5	**3.3**	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	5		**2**	<0.5	**1.8**	**2**	**1**	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	7		<0.5	<0.5	<0.5	**0.71**	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	5		<0.5	<0.5	<0.5	**3.2**	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	5		**3.8**	<0.5	**5.3**	**0.94**	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	5		**2.3**	<0.5	**1.4**	**2.1**	**1.4**	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	5		<0.5	<0.5	<0.5	**1.5**	<0.5	<0.5	<0.5	<0.5
Freon-113 *	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Site-Related VOCs:			**10.4**	0	**11.8**	**10.45**	**2.4**	0	0	0

Footnotes:

(1) Site-related VOCs were established in the Public Water Supply Contingency Plan (ARCADIS Geraghty & Miller, Inc. 2003b).

(2) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent value listed.

(3) Benzene and Methyl tert-butyl ether (MTBE), which are not site-related VOCs, were detected in Outpost Well OW 2-1 on 3/27/06 at 120 ug/L and 11 ug/L, respectively.

General Notes:

- Samples analyzed and reported as a NYSDEC Category A deliverable per the NYS DER-10 Guidance Document (NYSDEC 2002).
- Samples analyzed by EPA Method 502.2, as specified in the NYSDEC OU2 Record of Decision.
- Results were validated by ARCADIS by following the contract laboratory program national functional guidelines for organic data review (USEPA 1999).

Definitions:

OU2	Operable Unit 2
VOCs	Volatile organic compounds
ug/L	Micrograms per liter
NYSDEC	New York State Department of Environmental Conservation
*	Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane.
TOGs	Technical and Operational Guidance Series

Bold value indicates a detection.

Table 12. Concentrations of Site-Related Volatile Organic Compounds Detected in Outpost Wells and Associated Blank Samples, Second and Third Quarters of 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York. (1)

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values(2)	WELL: / SAMPLE ID: / DATE:	OW4-1 REP-7-12-06 7/12/2006	OW-4-2 BPOW - 4-2 7/11/2006	FIELD BLANK FB 7-10-06 7/10/2006	TRIP BLANK TB 7-11-06 7/11/2006	TRIP BLANK TB 7-12-06 7/12/2006	TRIP BLANK TB 7-13-06 7/13/2006	OW1-1 BPOW-1-1 10/6/2006	OW1-2 BPOW-1-2 10/6/2006
Chlorobenzene	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.6**	<0.5
1,1-Dichloroethane	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.2**	<0.5
trans-1,2-Dichloroethene	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	7		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**2.6**	<0.5
Carbon tetrachloride	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.6**	<0.5
1,1,2-Trichloroethane	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Freon-113 *	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
1,1,2,2-Tetrachloroethane	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Site-Related VOCs:			0	0	0	0	0	0	**7**	0

Footnotes:

(1) Site-related VOCs were established in the Public Water Supply Contingency Plan (ARCADIS Geraghty & Miller, Inc. 2003b).

(2) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent value listed.

(3) Benzene and Methyl tert-butyl ether (MTBE), which are not site-related VOCs, were detected in Outpost Well OW 2-1 on 3/27/06 at 120 ug/L and 11 ug/L, respectively.

General Notes:

- Samples analyzed and reported as a NYSDEC Category A deliverable per the NYS DER-10 Guidance Document (NYSDEC 2002).
- Samples analyzed by EPA Method 502.2, as specified in the NYSDEC OU2 Record of Decision.
- Results were validated by ARCADIS by following the contract laboratory program national functional guidelines for organic data review (USEPA 1999).

Definitions:

OU2	Operable Unit 2
VOCs	Volatile organic compounds
ug/L	Micrograms per liter
NYSDEC	New York State Department of Environmental Conservation
*	Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane.
TOGs	Technical and Operational Guidance Series

Bold value indicates a detection.

Table 12. Concentrations of Site-Related Volatile Organic Compounds Detected in Outpost Wells and Associated Blank Samples, Second and Third Quarters of 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York. [1]

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[2]	WELL: / SAMPLE ID: / DATE:	OW1-2 REP 10-6-06 10/6/2006	OW1-3 BPOW-1-3 10/6/2006	OW2-1 [3] BPOW-2-1 10/5/2006	OW2-2 BPOW-2-2 10/5/2006	OW3-1 BPOW-3-1 10/9/2006	OW3-2 BPOW-3-2 10/9/2006	OW4-1 BPOW-4-1 10/10/2006	OW4-2 BPOW-4-2 10/10/2006
Chlorobenzene	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	5		<0.5	**3.2**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	5		<0.5	**1.6**	**1.3**	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	7		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	5		<0.5	<0.5	**2.3**	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	5		<0.5	**4.7**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	5		<0.5	**1.1**	**1.4**	**0.57**	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	5		<0.5	<0.5	**0.93**	<0.5	<0.5	<0.5	<0.5	<0.5
Freon-113 *	5		--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Site-Related VOCs:			0	**10.6**	**5.93**	**0.57**	0	0	0	0

Footnotes:

(1) Site-related VOCs were established in the Public Water Supply Contingency Plan (ARCADIS Geraghty & Miller, Inc. 2003b).

(2) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent value listed.

(3) Benzene and Methyl tert-butyl ether (MTBE), which are not site-related VOCs, were detected in Outpost Well OW 2-1 on 3/27/06 at 120 ug/L and 11 ug/L, respectively.

General Notes:

- Samples analyzed and reported as a NYSDEC Category A deliverable per the NYS DER-10 Guidance Document (NYSDEC 2002).
- Samples analyzed by EPA Method 502.2, as specified in the NYSDEC OU2 Record of Decision.
- Results were validated by ARCADIS by following the contract laboratory program national functional guidelines for organic data review (USEPA 1999).

Definitions:

OU2	Operable Unit 2
VOCs	Volatile organic compounds
ug/L	Micrograms per liter
NYSDEC	New York State Department of Environmental Conservation
*	Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane.
TOGs	Technical and Operational Guidance Series

Bold value indicates a detection.

Table 12. Concentrations of Site-Related Volatile Organic Compounds Detected in Outpost Wells and Associated Blank Samples, Second and Third Quarters of 2006, Operable Northrop Grumman Corporation, Bethpage, New York. [1]

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[2]	WELL: SAMPLE ID: DATE:	TRIP BLANK TB100506 10/5/2006	TRIP BLANK TB100906 10/9/2006	TRIP BLANK TB101006 10/10/2006
Chlorobenzene	5		<0.5	<0.5	<0.5
1,1-Dichloroethene	5		<0.5	<0.5	<0.5
1,1-Dichloroethane	5		<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	5		<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	5		<0.5	<0.5	<0.5
Chloroform	7		<0.5	<0.5	<0.5
1,2-Dichloroethane	5		<0.5	<0.5	<0.5
1,1,1-Trichloroethane	5		<0.5	<0.5	<0.5
Carbon tetrachloride	5		<0.5	<0.5	<0.5
Trichloroethene	5		<0.5	<0.5	<0.5
1,1,2-Trichloroethane	5		<0.5	<0.5	<0.5
Tetrachloroethene	5		<0.5	<0.5	<0.5
Freon-113 *	5		--	--	--
1,1,2,2-Tetrachloroethane	5		<0.5	<0.5	<0.5
Total Site-Related VOCs:			0	0	0

Footnotes:

(1) Site-related VOCs were established in the Public Water Supply Contingency Plan (ARCADIS Geraghty & Miller, Inc. 2003b).

(2) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGs (NYSDEC 1998); most stringent value listed.

(3) Benzene and Methyl tert-butyl ether (MTBE), which are not site-related VOCs, were detected in Outpost Well OW 2-1 on 3/27/06 at 120 ug/L and 11 ug/L, respectively

General Notes:

- Samples analyzed and reported as a NYSDEC Category A deliverable per the NYS DER-10 Guidance Document (NYSDEC 2002).
- Samples analyzed by EPA Method 502.2, as specified in the NYSDEC OU2 Record of Decision.
- Results were validated by ARCADIS by following the contract laboratory program national functional guidelines for organic data review (USEPA 1999).

Definitions:

OU2	Operable Unit 2
VOCs	Volatile organic compounds
ug/L	Micrograms per liter
NYSDEC	New York State Department of Environmental Conservation
*	Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane.
TOGs	Technical and Operational Guidance Series

Bold value indicates a detection.

ARCADIS

Table 13. Concentrations of Total and Dissolved Cadmium and Chromium Detected in Groundwater and Blank Samples, Third Quarter 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC SCGs[1]	WELL:	GM-15S	GM-78S	GM-78I	MW-01GF	MW-02GF	10631	MW-04	MW-05	MW-06	FIELD BLANK	FIELD BLANK	FIELD BLANK
		SAMPLE ID:	GM-15S	GM-78S	GM-78I	MW-1GF	MW-2GF	N-10621	PLTI MW-04	PLTI MW-05	PLTI MW-06	FB092606	FB092806	FB-10-02-06
		DATE:	9/28/2006	9/26/2006	9/26/2006	9/28/2006	9/28/2006	10/2/2006	9/28/2006	9/28/2006	9/28/2006	9/26/2006	9/28/2006	10/2/2006
Cadmium	5		--	<0.76	<0.76	<0.76	<0.76	**6.2B**	--	--	--	<0.76	<0.76	<0.76
Cadmium (Dissolved)	5		--	<0.76	<0.76	<0.76	<0.76	**4.8B**	--	--	--	--	--	--
Chromium	50		**530**	**2.1B**	<2.0	<2.0	**21.6**	**23.3**	<2.0	**801**	**230**	<2.0	<2.0	<2.0
Chromium (Dissolved)	50		--	<2.0	<2.0	<2.0	**20**	**13.6**	--	--	--	--	--	--

[1]	Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000) that are based on the NYSDEC TOGS (NYSDEC 1998); most stringent value listed.
NYSDEC	New York State Department of Environmental Conservation
ug/L	Micrograms per liter
B	Detected between the IDL and CRDL
IDL	Instrument detection limit
CRDL	Contract-required detection limit
	Value exceeds associated SCG value.
TOGS	Technical and Operational Guidance Series
Bold	Constituent detected above IDL.
--	Not analyzed

Table 14. Concentrations of Volatile Organic Compounds Detected in Blank Samples, Second and Third Quarters of 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	SAMPLE TYPE:	FIELD BLANK	FIELD BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK
	SAMPLE ID:	FB 7-5-06	FB-7-6-06	TB-7-6-06	TB-7-7-06	TB-7-21-06	TB 7-28-06
	DATE:	7/5/2006	7/6/2006	7/6/2006	7/7/2006	7/21/2006	7/28/2006
Chloromethane		<5	<5	<5	<5	<5	<5
Bromomethane		<5	<5	<5	<5	<5	<5
Vinyl Chloride		<2	<2	<2	<2	<2	<2
Chloroethane		<5	<5	<5	<5	<5	<5
Methylene chloride		**5JB**	**5J**	**7**	**5JB**	**7B**	**6**
Acetone		<10	<10	<10	<10	<10	<10
Carbon disulfide		<5	<5	<5	<5	<5	<5
1,1-Dichloroethene		<5	<5	<5	<5	<5	<5
1,1-Dichloroethane		<5	<5	<5	<5	<5	<5
cis-1,2-Dichloroethene		<5	<5	<5	<5	<5	<5
trans-1,2-Dichloroethene		<5	<5	<5	<5	<5	<5
Chloroform		<5	<5	<5	<5	<5	<5
1,2-Dichloroethane		<5	<5	<5	<5	<5	<5
2-Butanone		<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane		<5	<5	<5	<5	<5	<5
Carbon tetrachloride		<5	<5	<5	<5	<5	<5
Bromodichloromethane		<5	<5	<5	<5	<5	<5
1,2-Dichloropropane		<5	<5	<5	<5	<5	<5
cis-1,3-Dichloropropene		<5	<5	<5	<5	<5	<5
Trichloroethene		<5	<5	<5	<5	<5	<5
Dibromochloromethane		<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane		<5	<5	<5	<5	<5	<5
Benzene		<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
trans-1,3-Dichloropropene		<5	<5	<5	<5	<5	<5
Bromoform		<5	<5	<5	<5	<5	<5
4-Methyl-2-pentanone		<10	<10	<10	<10	<10	<10
2-Hexanone		<10	<10	<10	<10	<10	<10
Tetrachloroethene		<5	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane		<5	<5	<5	<5	<5	<5
Toluene		<5	<5	<5	<5	<5	<5
Chlorobenzene		<5	<5	<5	<5	<5	<5
Ethylbenzene		<5	<5	<5	<5	<5	<5
Styrene		<5	<5	<5	<5	<5	<5
Xylene (total)		<5	<5	<5	<5	<5	<5
Vinyl Acetate		<5	<5	<5	<5	<5	<5
Freon-113 *		<5	<5	<5	<5	<5	<5
Total VOCs		**5**	**5**	**7**	**5**	**7**	**6**

VOCs Volatile organic compounds
ug/L Micrograms per liter
J Estimated value
B Detected in an associated method blank
* Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane
Bold value indicates a detection.

Table 14. Concentrations of Volatile Organic Compounds Detected in Blank Samples, Second and Third Quarters of 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	SAMPLE TYPE: / SAMPLE ID: / DATE:	TRIP BLANK TB 8-1-06 8/1/2006	FIELD BLANK FB092606 9/26/2006	FIELD BLANK FB092706 9/27/2006	FIELD BLANK FB092806 9/28/2006	FIELD BLANK FB092906 9/29/2006	FIELD BLANK FB100206 10/2/2006
Chloromethane		<5	<5	<5	<5	<5	<5
Bromomethane		<5	<5	<5	<5	<5	<5
Vinyl Chloride		<2	<2	<2	<2	<2	<2
Chloroethane		<5	<5	<5	<5	<5	<5
Methylene chloride		**6B**	<5	<5	<5	**1J**	<5
Acetone		<10	<10	**4J**	**6J**	<10	<10
Carbon disulfide		<5	<5	<5	<5	<5	<5
1,1-Dichloroethene		<5	<5	<5	<5	<5	<5
1,1-Dichloroethane		<5	<5	<5	<5	<5	<5
cis-1,2-Dichloroethene		<5	<5	<5	<5	<5	<5
trans-1,2-Dichloroethene		<5	<5	<5	<5	<5	<5
Chloroform		<5	<5	<5	<5	<5	<5
1,2-Dichloroethane		<5	<5	<5	<5	<5	<5
2-Butanone		<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane		<5	<5	<5	<5	<5	<5
Carbon tetrachloride		<5	<5	<5	<5	<5	<5
Bromodichloromethane		<5	<5	<5	<5	<5	<5
1,2-Dichloropropane		<5	<5	<5	<5	<5	<5
cis-1,3-Dichloropropene		<5	<5	<5	<5	<5	<5
Trichloroethene		<5	<5	<5	<5	<5	<5
Dibromochloromethane		<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane		<5	<5	<5	<5	<5	<5
Benzene		<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
trans-1,3-Dichloropropene		<5	<5	<5	<5	<5	<5
Bromoform		<5	<5	<5	<5	<5	<5
4-Methyl-2-pentanone		<10	<10	<10	<10	<10	<10
2-Hexanone		<10	<10	<10	<10	<10	<10
Tetrachloroethene		<5	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane		<5	<5	<5	<5	<5	<5
Toluene		<5	<5	<5	<5	<5	**0.5J**
Chlorobenzene		<5	<5	<5	<5	<5	<5
Ethylbenzene		<5	<5	<5	<5	<5	<5
Styrene		<5	<5	<5	<5	<5	<5
Xylene (total)		<5	<5	<5	<5	<5	<5
Vinyl Acetate		<5	<5	<5	<5	<5	<5
Freon-113 *		<5	<5	<5	<5	<5	<5
Total VOCs		**6**	0	**4**	**6**	**1**	**0.5**

VOCs Volatile organic compounds
ug/L Micrograms per liter
J Estimated value
B Detected in an associated method blank
* Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane
Bold value indicates a detection.

Table 14. Concentrations of Volatile Organic Compounds Detected in Blank Samples, Second and Third Quarters of 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	SAMPLE TYPE:	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK
	SAMPLE ID:	TB091206	TB091306	TB091406	TB091506	TB091806	TB091906
	DATE:	9/12/2006	9/13/2006	9/14/2006	9/15/2006	9/18/2006	9/19/2006
Chloromethane		<5	**2J**	<5	<5	<5	<5
Bromomethane		<5	<5	<5	<5	<5	<5
Vinyl Chloride		<2	<2	<2	<2	<2	<2
Chloroethane		<5	<5	<5	<5	<5	<5
Methylene chloride		<5	**5JB**	<5	<5	<5	<5
Acetone		<10	**8J**	<10	<10	<10	<10
Carbon disulfide		<5	<5	<5	<5	<5	<5
1,1-Dichloroethene		<5	<5	<5	<5	<5	<5
1,1-Dichloroethane		<5	<5	<5	<5	<5	<5
cis-1,2-Dichloroethene		<5	<5	<5	<5	<5	<5
trans-1,2-Dichloroethene		<5	<5	<5	<5	<5	<5
Chloroform		<5	<5	<5	<5	<5	<5
1,2-Dichloroethane		<5	<5	<5	<5	<5	<5
2-Butanone		<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane		<5	<5	<5	<5	<5	<5
Carbon tetrachloride		<5	<5	<5	<5	<5	<5
Bromodichloromethane		<5	<5	<5	<5	<5	<5
1,2-Dichloropropane		<5	<5	<5	<5	<5	<5
cis-1,3-Dichloropropene		<5	<5	<5	<5	<5	<5
Trichloroethene		<5	<5	<5	<5	<5	<5
Dibromochloromethane		<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane		<5	<5	<5	<5	<5	<5
Benzene		<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
trans-1,3-Dichloropropene		<5	<5	<5	<5	<5	<5
Bromoform		<5	<5	<5	<5	<5	<5
4-Methyl-2-pentanone		<10	<10	<10	<10	<10	<10
2-Hexanone		<10	<10	<10	<10	<10	<10
Tetrachloroethene		<5	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane		<5	<5	<5	<5	<5	<5
Toluene		<5	<5	<5	<5	<5	<5
Chlorobenzene		<5	<5	<5	<5	<5	<5
Ethylbenzene		<5	<5	<5	<5	<5	<5
Styrene		<5	<5	<5	<5	<5	<5
Xylene (total)		<5	<5	<5	<5	<5	<5
Vinyl Acetate		<5	<5	<5	<5	<5	<5
Freon-113 *		<5	<5	<5	<5	<5	<5
Total VOCs		0	**15**	0	0	0	0

VOCs	Volatile organic compounds
ug/L	Micrograms per liter
H	Alternate peak selection upon analytical review.
J	Estimated value
B	Detected in an associated method blank
M	Manually integrate compound
*	Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane
--	Not analyzed

Bold value indicates a detection.

Table 14. Concentrations of Volatile Organic Compounds Detected in Blank Samples, Second and Third Quarters of 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	SAMPLE TYPE: / SAMPLE ID: / DATE:	TRIP BLANK TB092006 9/20/2006	TRIP BLANK TB092106 9/21/2006	TRIP BLANK TB092206 9/22/2006	TRIP BLANK TB092606 9/26/2006	TRIP BLANK TB092706 9/27/2006	TRIP BLANK TB092806 9/28/2006
Chloromethane		<5	<5	<5	<5	<5	<5
Bromomethane		<5	<5	<5	<5	<5	<5
Vinyl Chloride		<2	<2	<2	<2	<2	<2
Chloroethane		<5	<5	<5	<5	<5	<5
Methylene chloride		<5	<5	<5	<5	<5	<5
Acetone		<10	<10	<10	<10	<10	<10
Carbon disulfide		<5	<5	<5	<5	<5	<5
1,1-Dichloroethene		<5	<5	<5	<5	<5	<5
1,1-Dichloroethane		<5	<5	<5	<5	<5	<5
cis-1,2-Dichloroethene		<5	<5	<5	<5	<5	<5
trans-1,2-Dichloroethene		<5	<5	<5	<5	<5	<5
Chloroform		<5	<5	<5	<5	<5	<5
1,2-Dichloroethane		<5	<5	<5	<5	<5	<5
2-Butanone		<10	<10	<10	<10	<10	<10
1,1,1-Trichloroethane		<5	<5	<5	<5	<5	<5
Carbon tetrachloride		<5	<5	<5	<5	<5	<5
Bromodichloromethane		<5	<5	<5	<5	<5	<5
1,2-Dichloropropane		<5	<5	<5	<5	<5	<5
cis-1,3-Dichloropropene		<5	<5	<5	<5	<5	<5
Trichloroethene		<5	<5	<5	<5	<5	<5
Dibromochloromethane		<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane		<5	<5	<5	<5	<5	<5
Benzene		<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
trans-1,3-Dichloropropene		<5	<5	<5	<5	<5	<5
Bromoform		<5	<5	<5	<5	<5	<5
4-Methyl-2-pentanone		<10	<10	<10	<10	<10	<10
2-Hexanone		<10	<10	<10	<10	<10	<10
Tetrachloroethene		<5	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane		<5	<5	<5	<5	<5	<5
Toluene		<5	<5	<5	<5	<5	<5
Chlorobenzene		<5	<5	<5	<5	<5	<5
Ethylbenzene		<5	<5	<5	<5	<5	<5
Styrene		<5	<5	<5	<5	<5	<5
Xylene (total)		<5	<5	<5	<5	<5	<5
Vinyl Acetate		<5	<5	<5	<5	<5	<5
Freon-113 *		<5	<5	<5	<5	<5	<5
Total VOCs		0	0	0	0	0	0

VOCs	Volatile organic compounds
ug/L	Micrograms per liter
-	Alternate peak selection upon analytical review.
J	Estimated value
B	Detected in an associated method blank
M	Manually integrate compound
*	Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane
--	Not analyzed

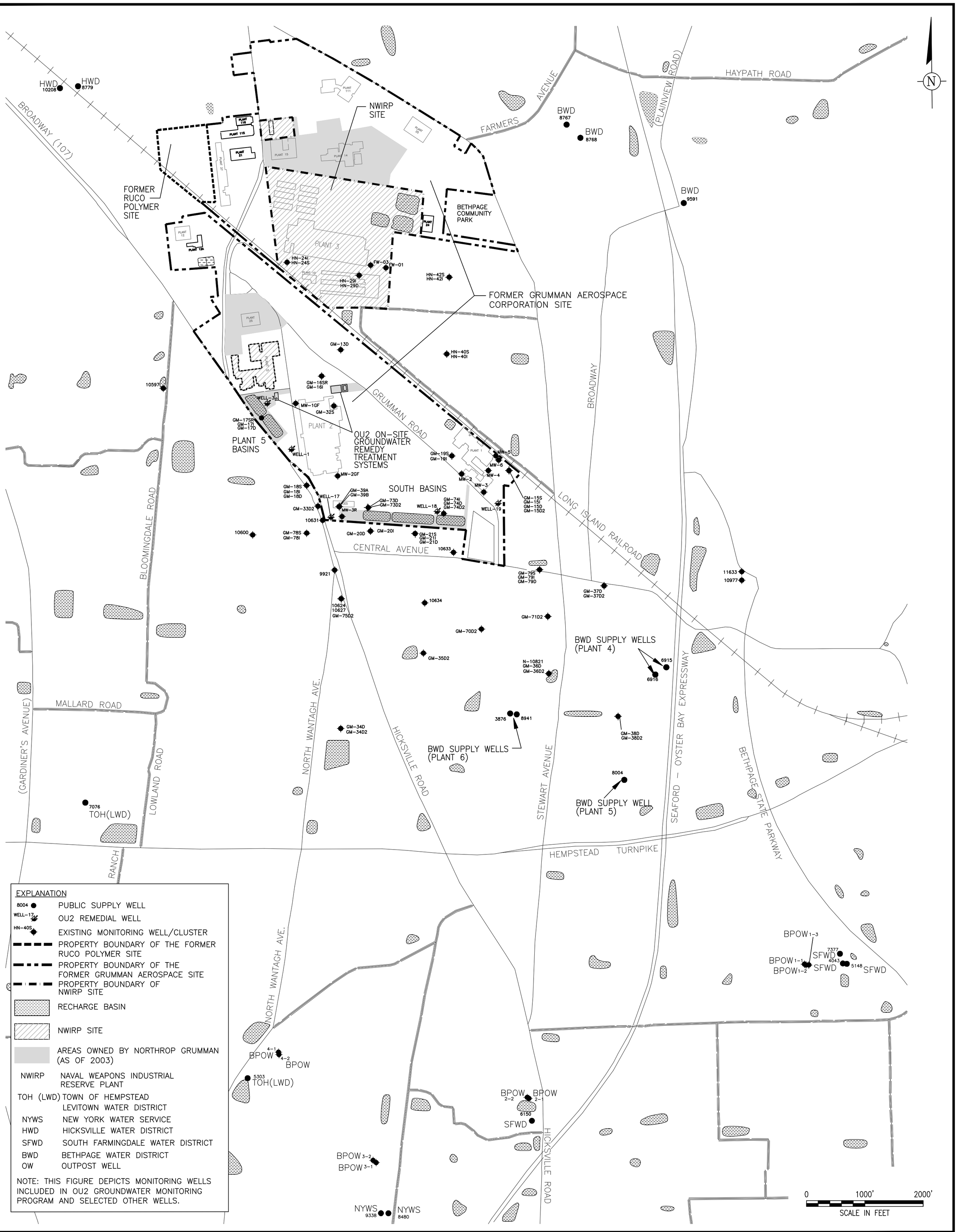
Bold value indicates a detection.

Table 14. Concentrations of Volatile Organic Compounds Detected in Blank Samples, Second and Third Quarters of 2006, Operable Unit 2, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	SAMPLE TYPE: / SAMPLE ID: / DATE:	TRIP BLANK TB092906 9/29/2006	TRIP BLANK TB100206 10/2/2006	TRIP BLANK TB100306 10/3/2006	TRIP BLANK TB111006 10/11/2006
Chloromethane		<5	<5	<5	<5
Bromomethane		<5	<5	<5	<5
Vinyl Chloride		<2	<2	<2	<2
Chloroethane		<5	<5	<5	<5
Methylene chloride		<5	<5	<5	<5
Acetone		<10	<10	<10	<10
Carbon disulfide		<5	<5	<5	<5
1,1-Dichloroethene		<5	<5	<5	<5
1,1-Dichloroethane		<5	<5	<5	<5
cis-1,2-Dichloroethene		<5	<5	<5	<5
trans-1,2-Dichloroethene		<5	<5	<5	<5
Chloroform		<5	<5	<5	<5
1,2-Dichloroethane		<5	<5	<5	<5
2-Butanone		<10	<10	<10	<10
1,1,1-Trichloroethane		<5	<5	<5	<5
Carbon tetrachloride		<5	<5	<5	<5
Bromodichloromethane		<5	<5	<5	<5
1,2-Dichloropropane		<5	<5	<5	<5
cis-1,3-Dichloropropene		<5	<5	<5	<5
Trichloroethene		<5	<5	<5	<5
Dibromochloromethane		<5	<5	<5	<5
1,1,2-Trichloroethane		<5	<5	<5	<5
Benzene		<0.7	<0.7	<0.7	<0.7
trans-1,3-Dichloropropene		<5	<5	<5	<5
Bromoform		<5	<5	<5	<5
4-Methyl-2-pentanone		<10	<10	<10	<10
2-Hexanone		<10	<10	<10	<10
Tetrachloroethene		<5	<5	<5	<5
1,1,2,2-Tetrachloroethane		<5	<5	<5	<5
Toluene		<5	<5	<5	<5
Chlorobenzene		<5	<5	<5	<5
Ethylbenzene		<5	<5	<5	<5
Styrene		<5	<5	<5	<5
Xylene (total)		<5	<5	<5	<5
Vinyl Acetate		<5	<5	<5	<5
Freon-113 *		<5	<5	<5	<5
Total VOCs		0	0	0	0

VOCs	Volatile organic compounds
ug/L	Micrograms per liter
-	Alternate peak selection upon analytical review.
J	Estimated value
B	Detected in an associated method blank
M	Manually integrate compound
*	Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane
–	Not analyzed

Bold value indicates a detection.



EXPLANATION

- 8004 ● PUBLIC SUPPLY WELL
- WELL-17 OU2 REMEDIAL WELL
- HN-40S EXISTING MONITORING WELL/CLUSTER
- PROPERTY BOUNDARY OF THE FORMER RUCO POLYMER SITE
- PROPERTY BOUNDARY OF THE FORMER GRUMMAN AEROSPACE SITE
- PROPERTY BOUNDARY OF NWIRP SITE
- RECHARGE BASIN
- NWIRP SITE
- AREAS OWNED BY NORTHROP GRUMMAN (AS OF 2003)

NWIRP	NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
TOH (LWD)	TOWN OF HEMPSTEAD LEVITOWN WATER DISTRICT
NYWS	NEW YORK WATER SERVICE
HWD	HICKSVILLE WATER DISTRICT
SFWD	SOUTH FARMINGDALE WATER DISTRICT
BWD	BETHPAGE WATER DISTRICT
OW	OUTPOST WELL

NOTE: THIS FIGURE DEPICTS MONITORING WELLS INCLUDED IN OU2 GROUNDWATER MONITORING PROGRAM AND SELECTED OTHER WELLS.

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PROJECT TITLE

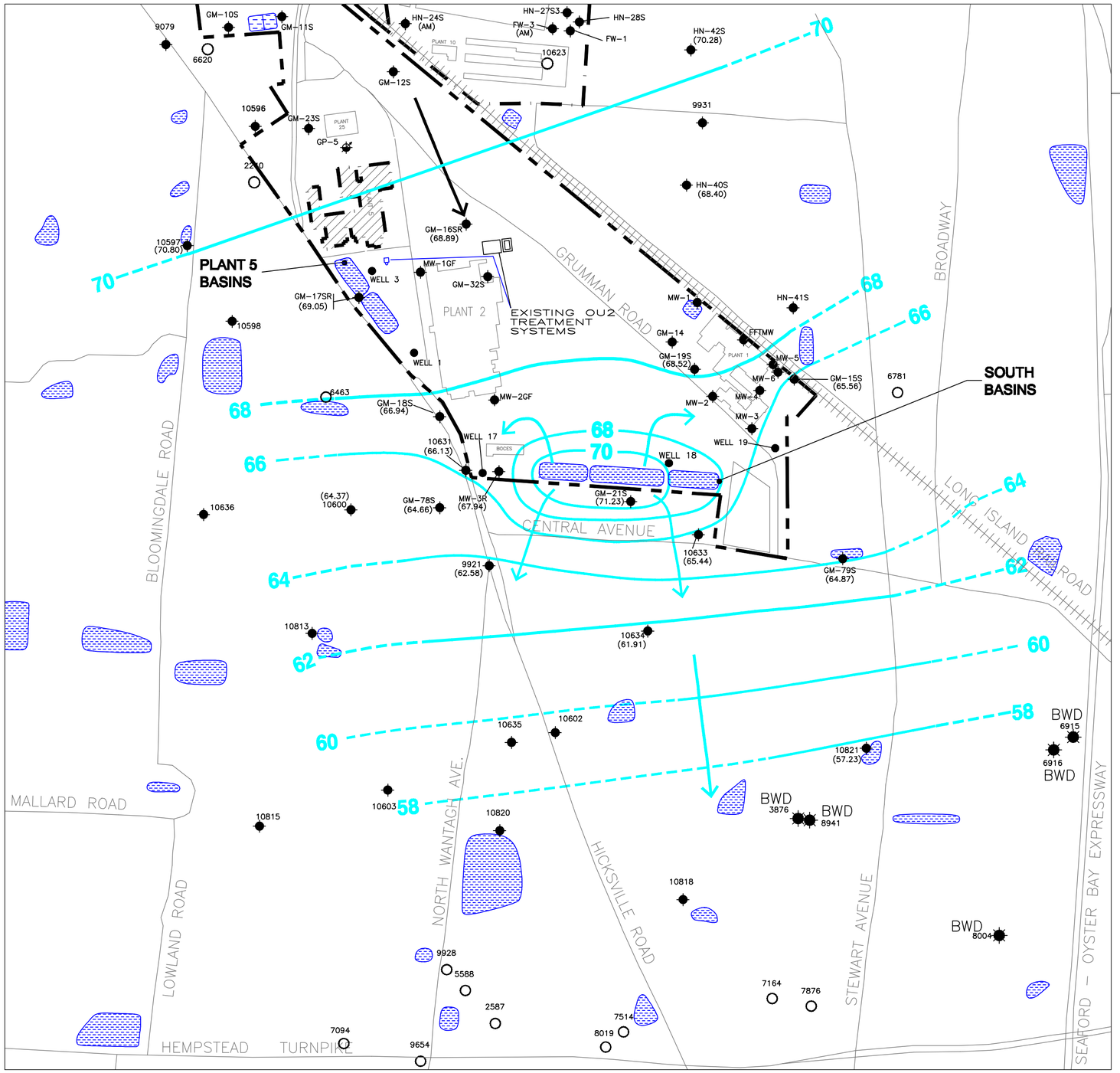
OPERABLE UNIT 2
NORTHROP GRUMMAN SYSTEMS CORPORATION
BETHPAGE, NEW YORK

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

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



EXPLANATION:

- PROPERTY BOUNDARY OF FORMER GRUMMAN AEROSPACE CORPORATION SITE
- PROPERTY BOUNDARY OF THE U.S. NAVY SITE
- RECHARGE BASIN
- GM-15S (65.56) — LOCATION AND DESIGNATION OF SHALLOW MONITORING WELL AND WATER-LEVEL ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL
- 3876 — LOCATION AND DESIGNATION OF BETHPAGE WATER DISTRICT PUBLIC SUPPLY WELL (SHOWN FOR REFERENCE ONLY)
- 7164 — LOCATION AND DESIGNATION OF ADDITIONAL WELL
- GP-5 — LOCATION AND DESIGNATION OF GRUMMAN INDUSTRIAL SUPPLY WELL (SHOWN FOR REFERENCE ONLY)
- WELL 17 — LOCATION AND DESIGNATION OF ON-SITE OU2 REMEDIAL WELL (SHOWN FOR REFERENCE ONLY)
- HORIZONTAL COMPONENT OF GROUNDWATER FLOW
- 66 — LINE OF EQUAL WATER TABLE ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL (DASHED WHERE APPROXIMATE)
- OU2 — OPERABLE UNIT 2
- BWD — BETHPAGE WATER DISTRICT
- USGS — UNITED STATES GEOLOGICAL SURVEY
- AM — ANOMALOUS MEASUREMENT

NOTES:

1. THIS FIGURE INCLUDES LOCATIONS OF MONITORING WELLS AND PUBLIC SUPPLY WELLS AS OF SEPTEMBER 25, 2001.
2. OU2 WELLS 1,3,17,18, AND 19 ARE SCREENED IN THE D2 ZONE.
3. BWD WELL 3876 IS SCREENED IN THE DEEP ZONE.
4. BWD WELLS 6915, 6916, 8004, AND 8941 ARE SCREENED IN THE D2 ZONE.
5. BASIN LOCATIONS OBTAINED FROM USGS TOPOGRAPHIC MAPS (HICKSVILLE, AMITYVILLE, HUNTINGTON, AND FREEPORT QUADRANGLES), AND INFORMATION PROVIDED BY NORTHROP GRUMMAN.
6. SOUTH RECHARGE BASIN AND WEST BASIN DISCHARGE VOLUME OF GROUNDWATER FROM THE ON-SITE PORTION OF THE OU2 GROUNDWATER REMEDY THIS PERIOD IS PROVIDED IN TABLE 1.

0 800' 1600'
SCALE IN FEET

NO.	ISSUED DATE	REVISION DESCRIPTION	BY/CKD
1	03/14/07	UPDATED	MR
0	11/13/06	2nd & 3rd QT 2006 GW REPORT	MR

SEAL

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PROJECT TITLE
OPERABLE UNIT 2
NORTHROP GRUMMAN SYSTEMS CORPORATION
BETHPAGE, NEW YORK

PROJECT MANAGER	DEPARTMENT MANAGER	LEAD DESIGN PROF.	CHECKED BY
C. SAN GIOVANNI	M. WOLFERT		M. REINDL

SHEET TITLE
WATER-TABLE CONFIGURATION AND HORIZONTAL GROUNDWATER FLOW DIRECTIONS IN THE SHALLOW ZONE OCTOBER 12, 2006

TASK/PHASE NUMBER	DRAWN BY
00004	A. SANCHEZ
PROJECT NUMBER	DRAWING NUMBER
NY001464.0407	2

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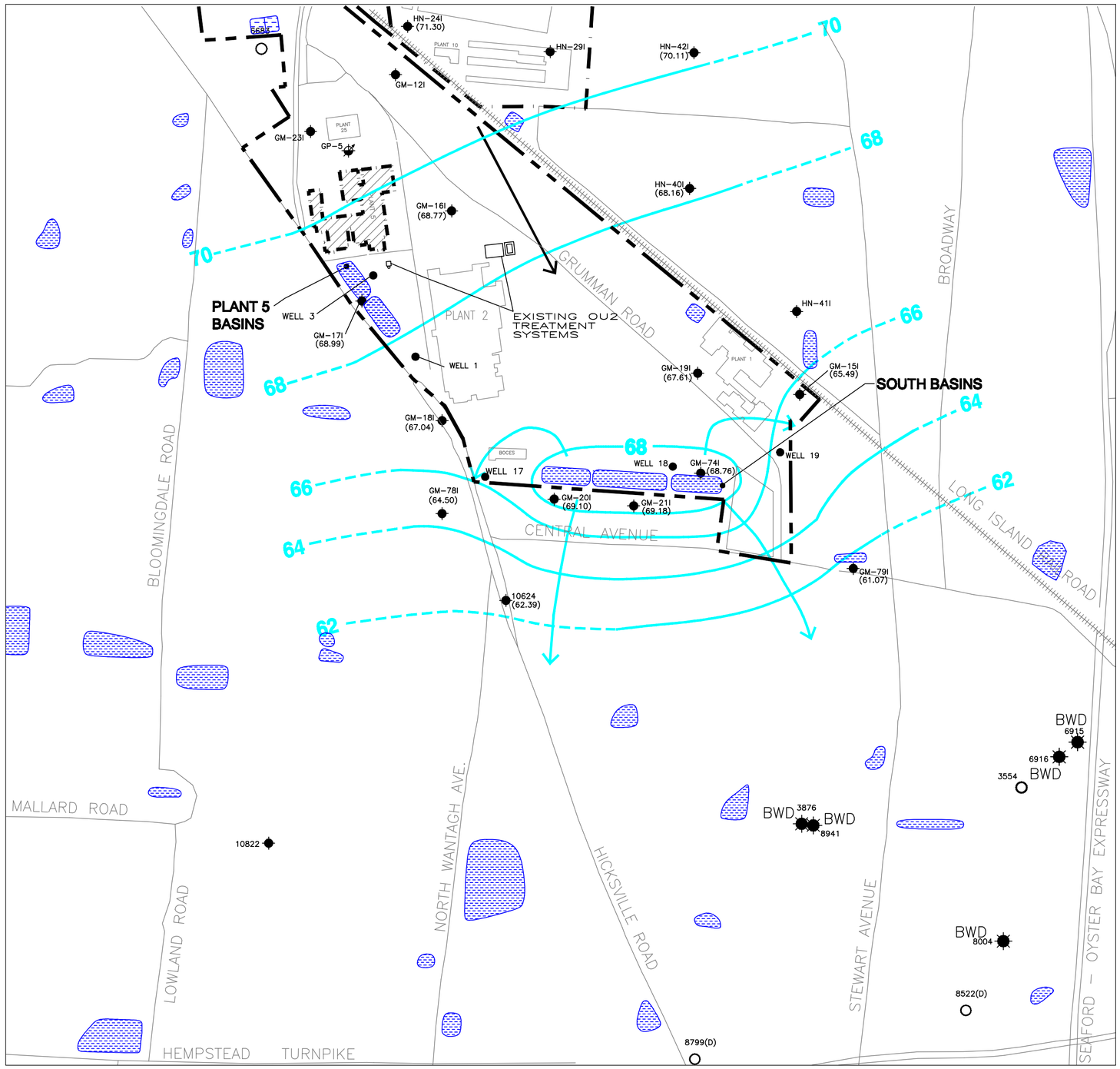

EXPLANATION

- PROPERTY BOUNDARY OF FORMER GRUMMAN AEROSPACE CORPORATION SITE
- PROPERTY BOUNDARY OF THE U.S. NAVY SITE
- RECHARGE BASIN
- GM-15I (65.49) — LOCATION AND DESIGNATION OF INTERMEDIATE MONITORING WELL AND WATER-LEVEL ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL
- 3876 — LOCATION AND DESIGNATION OF BETHPAGE WATER DISTRICT PUBLIC SUPPLY WELL (SHOWN FOR REFERENCE ONLY)
- 3554 — LOCATION AND DESIGNATION OF ADDITIONAL WELL
- GP-5 — LOCATION AND DESIGNATION OF GRUMMAN INDUSTRIAL SUPPLY WELL (SHOWN FOR REFERENCE ONLY)
- WELL 17 — LOCATION AND DESIGNATION OF ON-SITE OU2 REMEDIAL WELL (SHOWN FOR REFERENCE ONLY)
- HORIZONTAL COMPONENT OF GROUNDWATER FLOW
- -68- LINE OF EQUAL POTENTIOMETRIC SURFACE ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL (DASHED WHERE APPROXIMATE)
- OU2 OPERABLE UNIT 2
- BWD BETHPAGE WATER DISTRICT
- USGS UNITED STATES GEOLOGICAL SURVEY

NOTES:

1. THIS FIGURE INCLUDES LOCATIONS OF MONITORING WELLS AND PUBLIC SUPPLY WELLS AS OF SEPTEMBER 25, 2001.
2. OU2 WELLS 1,3,17,18, AND 19 ARE SCREENED IN THE D2 ZONE.
3. BWD WELL 3876 IS SCREENED IN THE DEEP ZONE.
4. BWD WELLS 6915, 6916, 8004, AND 8941 ARE SCREENED IN THE D2 ZONE.
5. BASIN LOCATIONS OBTAINED FROM USGS TOPOGRAPHIC MAPS (HICKSVILLE, AMITYVILLE, HUNTINGTON, AND FREEPORT QUADRANGLES), AND INFORMATION PROVIDED BY NORTHROP GRUMMAN.

0 800' 1600'
SCALE IN FEET

NO.	ISSUED DATE	REVISION DESCRIPTION	BY/CKD
1	03/14/07	UPDATED	MR
0	11/13/06	2nd & 3rd QT 2006 GW REPORT	MR

SEAL

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PROJECT TITLE
OPERABLE UNIT 2
NORTHROP GRUMMAN SYSTEMS CORPORATION
BETHPAGE, NEW YORK

PROJECT MANAGER	DEPARTMENT MANAGER	LEAD DESIGN PROF.	CHECKED BY
C. SAN GIOVANNI	M. WOLFERT		M. REINDL

SHEET TITLE
POTENTIOMETRIC SURFACE ELEVATION AND HORIZONTAL GROUNDWATER FLOW DIRECTIONS IN THE INTERMEDIATE ZONE OCTOBER 12, 2006

TASK/PHASE NUMBER	DRAWN BY
00004	A. SANCHEZ

PROJECT NUMBER	DRAWING NUMBER
NY001464.0407	3

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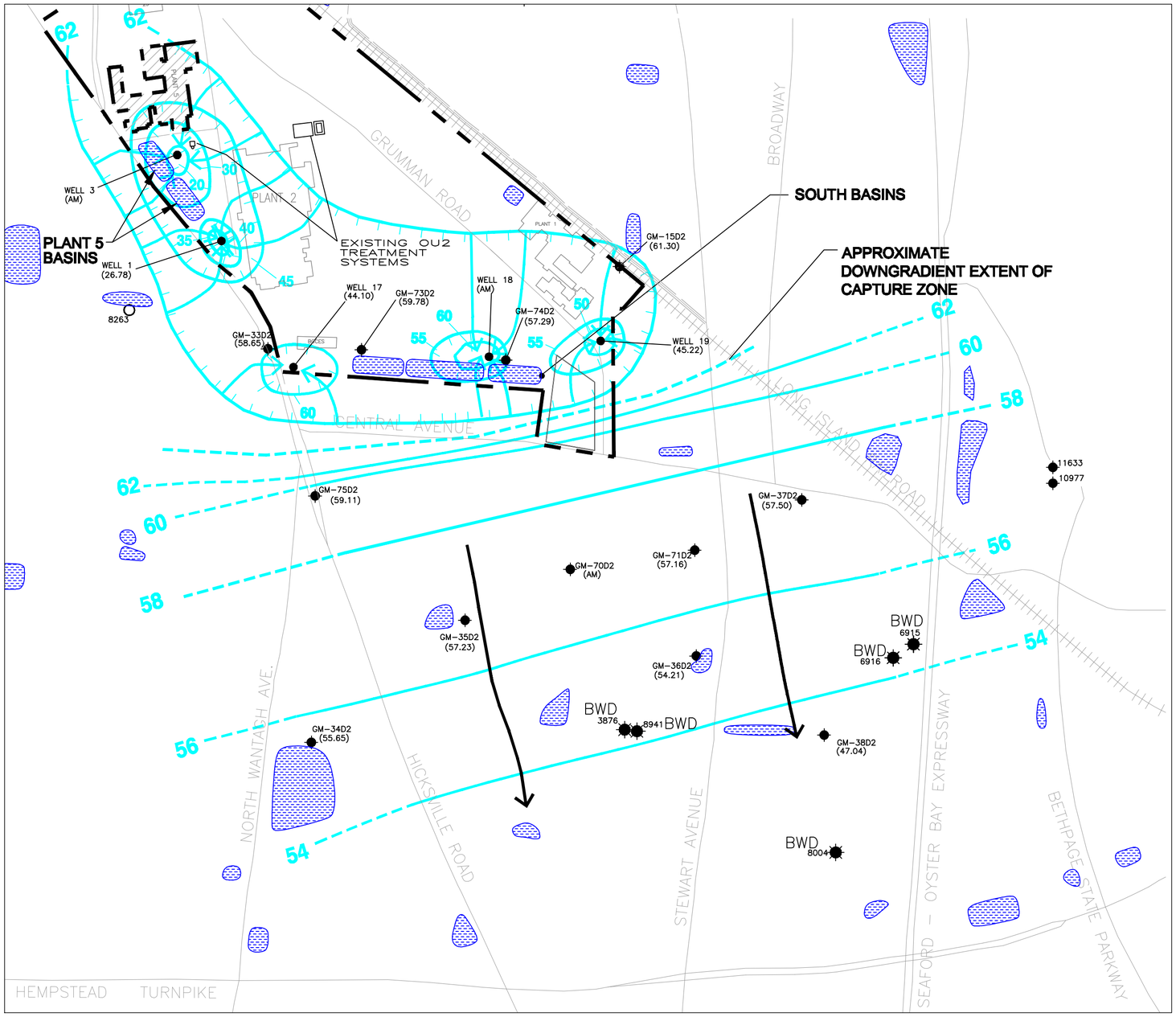

N

EXPLANATION

- PROPERTY BOUNDARY OF FORMER GRUMMAN AEROSPACE CORPORATION SITE
- RECHARGE BASIN
- GM-15D2 (61.30) — LOCATION AND DESIGNATION OF D2 (VERY DEEP) MONITORING WELL AND WATER-LEVEL ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL.
- 3876 — LOCATION AND DESIGNATION OF BETHPAGE WATER DISTRICT PUBLIC SUPPLY WELL
- 8263 — LOCATION AND DESIGNATION OF ADDITIONAL WELL
- WELL 19 (45.22) — LOCATION AND DESIGNATION OF ON-SITE OU2 REMEDIAL WELL AND WATER-LEVEL ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL
- HORIZONTAL COMPONENT OF GROUNDWATER FLOW
- 60 — LINE OF EQUAL POTENTIOMETRIC SURFACE ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL (DASHED WHERE APPROXIMATE)
- LINE OF EQUAL POTENTIOMETRIC SURFACE ELEVATION DENOTING A DECREASE IN FEET RELATIVE TO MEAN SEA LEVEL

OU2	OPERABLE UNIT 2
GPM	GALLONS PER MINUTE
BWD	BETHPAGE WATER DISTRICT
USGS	UNITED STATES GEOLOGICAL SURVEY
AM	ANOMALOUS MEASUREMENT

NOTES:

1. THIS FIGURE INCLUDES LOCATIONS OF MONITORING WELLS AND PUBLIC SUPPLY WELLS AS OF SEPTEMBER 25, 2001.
2. OU2 REMEDIAL WELLS 1, 3, 17, 18, AND 19 ARE SCREENED IN THE D2 ZONE AND WERE PUMPING AT 990 GPM, 455 GPM, 958 GPM, 540 GPM AND 669 GPM, RESPECTIVELY, AT THE TIME OF WATER-LEVEL MEASUREMENT.
3. BWD WELL 3876 IS SCREENED IN THE DEEP ZONE.
4. BWD WELLS 6915, 6916, 8004, AND 8941 ARE SCREENED IN THE D2 ZONE.
5. BASIN LOCATIONS OBTAINED FROM USGS TOPOGRAPHIC MAPS (HICKSVILLE, AMITYVILLE, HUNTINGTON, AND FREEPORT QUADRANGLES), AND INFORMATION PROVIDED BY NORTHROP GRUMMAN.

0 800' 1600'
SCALE IN FEET

NO.	ISSUED DATE	REVISION DESCRIPTION	BY/CKD
1	03/14/07	UPDATED	MR
0	11/13/06	2nd & 3rd QT 2006 GW REPORT	MR

SEAL

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PROJECT TITLE
OPERABLE UNIT 2
NORTHROP GRUMMAN SYSTEMS CORPORATION
BETHPAGE, NEW YORK

PROJECT MANAGER: C. SAN GIOVANNI	DEPARTMENT MANAGER: M. WOLFERT
LEAD DESIGN PROF.	CHECKED BY: M. REINDL
SHEET TITLE: POTENTIOMETRIC SURFACE ELEVATION AND HORIZONTAL GROUNDWATER FLOW DIRECTIONS IN THE D2 ZONE OCTOBER 12, 2006	TASK/PHASE NUMBER: 00004
	DRAWN BY: A. SANCHEZ
	PROJECT NUMBER: NY001464.0407
	DRAWING NUMBER: 4

Date\Time : Fri, 23 Mar 2007 - 1:56pm
Path\Name : G:\APROJECT\Northrop Grumman\Cadd\OU2\2007\2-3 Qtr_2006\04_Deep2_2-3 Qtr_GWF.dwg
Acad Version : R17.0s (LMS Tech)
User Name : alsanchez

Appendix A

Water-Level Measurement Logs

ARCADIS

Water Level Record

Project NY001348.0406.00002

Date 10/12/06

Well(s)	Depth to Water (ft bmp)	Time	Remarks
HN-42S	50.04	10:30	
HN-42I	49.50	10:34	
HN-40S	47.95	10:36	
HN-40I	47.75	10:38	
GM-37D	38.95	10:43	
GM-37D2	39.67	10:45	
GM-38D	38.45	10:49	
GM-38D2	44.52	10:51	
N-10821	34.35	10:58	
GM-36D	34.92	11:00	
GM-36D2	37.39	11:01	
GM-70S ~~N-10822~~	40.66	11:05	
GM-70D2	41.24	11:09	
N-	39.29	11:14	Brenhar, off of Hicksville-Mississaqua Rd
ONCT-1	60.00	11:21	50 Ft of H_2O 957.6 GPM 110-50 ✓
MW-3R	53.51	11:26	
GM-74I	38.66	11:32	
GM-74D	44.15	11:35	
GM-74D2	50.07	11:38	
ONCT-2	56.0	11:40	540 GPM 54 PSI 110-54 ✓
GM-73D2	44.84	11:43	
GM-73D	42.94	11:44	
GM-39D	37.89	11:49	
GM-39D2	40.65	11:50	
GM-18I	41.99	11:53	
GM-18D	44.43	11:55	
GP-1	~~90.00~~ 90.00	12:00	30 PSI 990 GPM 120-30
GM-16SR	46.97	1210	
GM-16I	47.04	1212	
GM-13D	45.15	1218	
GM-19I	42.25	1225	
GM-19S	41.34	1226	
ONCT-3	63.48	1231	669 GPM
GM-15D2	48.48	1234	
GM-15D	46.13	1235	
GM-15SR	43.88	1236	
GM-15I	43.76	1237	
FW-03	54.90	1255	
HN-24I	54.50	1259	
HN-24S	51.10	1301	

ARCADIS

Water Level Record

Project NY001348.0406.00002

Date 10/12/06

Well(s)	Depth to Water (ft bmp)	Time	Remarks
N-9921	31.65	1348	
N-10631	37.34	1400	
GM-33D2	48.20	1404	
GM-18S	40.66	1407	
GM-17S	46.74	1411	
GM-17I	46.84	1412	
GM-17D	48.85	1413	
GP-3	58.00	1416	455 GPM 92 PSI 150-92=58
N-0597	39.05	1424	
N-10600	38.04	1432	
GM-78S	40.28	1435	
GM-78I	40.56	1437	
GM-75D2	34.52	1442	
N-10627	31.58	1443	
N-10624	31.22	1444	
GM-35D2	39.05	~~1450~~ 1458	
BPOW-(1-1)	29.05	1503	
BPOW-(1-2)	29.65	1504	
BPOW (1-3)	29.61	1505	
BPOW (2-2)	20.08	1513	
BPOW (2-1)	19.86	1514	
BPOW (3-2)	27.36	1528	
BPOW (3-1)	28.05	1531	
BPOW (4-2)	25.31	1542	
BPOW (4-1)	25.42	1544	
GM-20D	37.20	1555	
GM-20I	34.78	1556	
GM-21S	34.58	1600	
GM-21D	41.96	1601	
GM-21I	36.54	1602	
N-10633	38.36	1605	
GM-79D	41.14	1611	
GM-79I	39.81	1612	
GM-79S	36.01	1618	
GM-34D	13.62		TAKEN 10/13/06
GM-34D2	15.54		"

Appendix B

Groundwater Sampling Logs

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: NORTHROP-GRUMMAN Project No. NY001348.0406.00002 Page 1 of ____

Site Location: BETHPAGE NY Date 7-21-02

Site/Well No. GM-20I Replicate No. ____ Code No. ____

Weather ____ Sampling Time: Begin ____ End ____

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	105
Depth to ~~Water~~ Product (ft bmp)	94
Water-Level Elevation (ft)	
Water Column in Well (ft)	11
Casing Diameter/Type	4 (0.65)
Gallons in Well	
Gallons Pumped/Bailed Prior to Sampling	7.15
Sample Pump Intake Setting (ft bmp)	22
Purge Time	begin ____ end ____
Pumping Rate (gpm)	
Evacuation Method	

Field Parameters

	1	2	3	4
Color				Colorless
Odor				
Appearance				
pH (s.u.)	10.56	11.29	11.25	11.14
Conductivity (mS/cm)				
(µmhos/cm)	1612	1583	1536	1548
Turbidity (NTU)				
Temperature (°C)	19.8	14.6	15.5	14.1
Dissolved Oxygen (mg/L)				
Salinity (%)				
Sampling Method				

Remarks ____

Constituents Sampled	Container Description	Number	Preservative

Sampling Personnel ____

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: NORTHROP-GRUMMAN Project No.: 30013480406.00007 Page: 1 of ____

Site Location: BETHPAGE NY Date: 7-21-06

Site/Well No.: GM-20D Replicate No.: REP-7-21-06 Code No.: ____

Weather: OVERCAST 86° Sampling Time: Begin ____ End ____

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	226
Depth to ~~Water~~ PRODUCT (ft bmp)	215
Water-Level Elevation (ft)	
Water Column in Well (ft)	11
Casing Diameter/Type	4 (0.65)
Gallons in Well	7.15 / 3
Gallons Pumped/Bailed Prior to Sampling	22
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin ____ end ____
Pumping Rate (gpm)	
Evacuation Method	

Field Parameters

	I	1J	2J	3J
Color				COLORLESS
Odor				NONE
Appearance				CLEAR
pH (s.u.)	8.40	6.34	6.06	6.07
Conductivity (~~mS/cm~~) (µmhos/cm)	100.4	97.9	94.9	96.0
Turbidity (NTU)				18.9
Temperature (°C)	18.7	17.5	16.6	17.4
Dissolved Oxygen (mg/L)				
Salinity (%)				
Sampling Method				

Remarks: 56A PASS 1111 Hz

Constituents Sampled	Container Description	Number	Preservative

Sampling Personnel: ____

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: NORTHROP GRUMMAN Project No. NY001348.0406.00002 Page 1 of ____

Site Location: BETHPAGE NY Date: 7-5-06

Site/Well No.: GM-21I Replicate No. ____ Code No. ____

Weather: ____ Sampling Time: Begin 3:55 End 5:15

Evacuation Data

Measuring Point	
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	140
Depth to ~~Water~~ PACKER (ft bmp)	129
Water-Level Elevation (ft)	
Water Column in Well (ft)	11
Casing Diameter/Type	4 (0.65)
Gallons in Well	7.15 x 3
Gallons Pumped/Bailed Prior to Sampling	21.45 (22)
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 405 end ____
Pumping Rate (gpm)	
Evacuation Method	

Field Parameters

Field Parameters	I	1J	2J	3J
Color				COLORLESS
Odor				NONE
Appearance				CLEAR
pH (s.u.)	8.69	9.42	9.24	9.22
Conductivity ~~(mS/cm)~~ (µmhos/cm)	88.7	85.8	86.9	85.2
Turbidity (NTU)				25
Temperature (°C)	18.9	16.9	16.8	16.6
Dissolved Oxygen (mg/L)				
Salinity (%)	4			
Sampling Method				

Remarks: PACKER PRESSURE 90 PSI
5 GAL PAILS 11 1/2

Constituents Sampled	Container Description	Number	Preservative
SEE COC			

Sampling Personnel: GARY WILLIAMS

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/l	Milligrams per liter	NR	Not recorded	VOC	Volatile Organic Compounds

ARCADIS GERAGHTY & MILLER
Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 00002 Well ID: GM-21D
Date: 8-5-06 Sampled By: GW
Sampling Time: _____ Recorded By: GW
Weather: Humid 80-85° Coded Replicate No.: _____

WELL IMFORMATION

Casing Material: _____ Purge Method: LowFlow
Casing Diameter: _____ Purge Rate: ~450ml/min
Total Depth: _____ Total Volume Purged: _____
Depth to Water: _____ Pump Intake Depth _____
Water Column: _____ Pump on: _____ Off: _____
Gallons/Foot: _____ Parameters Sampled: _____
Gallons in Well: _____

FIELD PARAMETER MEASUREMENTS

Time	Rate (ml/min)	Gallons Purged	Turbidity (NTUs)	REDOX (mV)	pH (SI Units)	Conductivity (µmhos/cm)	Temp (°C)	Depth to Water	Diss. Oxygen	Comments
2:40	450			199	4.23	79.4	20.4	41.90	3.47	
2:45				196	4.49	72.5	20.4		3.42	
2:50				194	4.25	68.6	20.3	41.99	3.66	
2:55				194	4.21	65.4	20.3		4.43	
3:00				193	4.17	64.4	20.7		4.27	
3:05				194	4.17	64.5	20.4	41.85	4.80	
3:10				197	[illegible]	64.2	20.1		4.76	
3:15				197	4.20	64.5	20.0		4.77	
3:20				203	4.20	64.4	19.6		4.86	
3:25				203	4.20	64.9	19.4	41.95	4.89	
3:30				203	4.20	64.8	19.4		4.98	
3:35				202	4.20	65.0	19.4		4.91	
3:40			16	208	4.21	64.9	19.4		4.90	

Well Secure: _____ Purge Water Disposal: _____
Color: _____ Turbidity(qualitative): _____

ARCADIS GERAGHTY & MILLER
Low-Flow Groundwater Sampling Log

Project Number: M00348.0406 Task: 00002 Well ID: GM-33D2
Date: 7/7/06 Sampled By: D. Zuck
Sampling Time: 1505 Recorded By: D. Zuck
Weather: Sunny ≈ 80° Coded Replicate No.: N/A

WELL IMFORMATION

Casing Material: PVC Purge Method: Dedicated Bladder pump / Low flow
Casing Diameter: 4" Purge Rate: ≈ 500 mL/min
Total Depth: 520 Total Volume Purged: —
Depth to Water: 45.42 Pump Intake Depth 510
Water Column: — Pump on: 1355 Off: 1505
Gallons/Foot: — Parameters Sampled: see COC
Gallons in Well: —

FIELD PARAMETER MEASUREMENTS

Time	Rate (mL/min)	Gallons Purged	Turbidity (NTUs)	REDOX (mV)	pH (SI Units)	Conductivity (mS/cm)	Temp (°C)	Depth to Water	Diss. Oxygen	Comments
1355	≈500			162	5.77	105.4	23.2	45.42	5.85	
1400				157	5.95	93.7	22.6		5.98	
1405				145	5.98	85.1	21.6		5.98	PH(626
1410				139	6.41	82.3	21.3	46.91	6.18	
1415				137	6.48	79.7	21.0		6.14	
1420				136	6.49	76.8	20.9		6.12	
1425				136	6.50	75.0	20.7	46.92	6.33	
1430				135	6.50	73.7	20.6		6.22	
1435				134	6.50	72.8	20.9		6.36	
1440				140	6.25	71.9	21.0	46.49	6.42	
1445				153	5.94	72.1	20.9		6.76	
1450				161	5.56	72.1	20.6		6.23	
1455			—	165	5.47	72.2	20.5		6.79	
1500			6.2	165	5.45	72.2	20.5	46.43	6.84	

Well Secure: yes Purge Water Disposal: yes
Color: clear Turbidity(qualitative): clear

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001344.0406 Task: 00002 Well ID: GM-34D
Date: ~~7/5/06~~ 7/6/06 Sampled By: G. Williams / D. Zuck
Sampling Time: 1310 Recorded By: D. Zuck
Weather: Overcast 70° Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): ✓ Serial #: ✓

Purging Information
Casing Material: SS Steel Purge Method: Bladder Pump / Low Flow
Casing Diameter: 2" Screen Interval (ft bmp): Top 309 Bottom 319
Sounded Depth (ft bmp): 319 Pump Intake Depth (ft bmp): 314
Depth to Water (ft bmp): 12.29 Purge time Start: 1300 Finish: 1410

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
1300		250		20.6	6.67	765	54	2.02		12.28	
1305				19.5	7.49	116.2	35	1.81			
1310				18.9	7.81	121.5	23	0.70		13.24	
1315				18.4	8.04	122.9	19	0.59			
1320				18.2	8.80	120.6	11	0.60		~~13.18~~	
1325				18.0	9.16	116.4	-58	0.52		13.18	
1330				18.0	8.87	125.8	-54	0.60			
1335				18.0	8.51	127.1	-49	0.64			
1340				18.0	7.96	129.9	-42	0.72		13.21	
1345				18.0	7.74	130.1	-46	0.71			
1350				18.1	6.73	130.6	-59	0.69			
1355				18.3	6.67	130.3	-58	0.74			
1400				18.6	6.49	129.9	-56	0.99		13.2	
1405				18.7	6.47	129.5	-56	0.92			
1410				18.9	6.39	129.7	-55	0.87	31		

Sample Condition Color: Clear Odor: Slight Appearance: Clear
Sample Collection
Parameter: See COC Container: No. Preservative:

PID Reading Not Available

Comments

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY0013480406 Task: 0002 Well ID: GM-34D2
Date: 7/6/06 Sampled By: C. Williams / D. Zuck
Sampling Time: 1245 Recorded By: D. Zuck
Weather: P/C → overcast ~70° Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): ✓ Serial #: ✓

Purging Information
Casing Material: Steel Purge Method: Non dedicated Bladder / Low flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 510 Bottom 520
Sounded Depth (ft bmp): 520 Pump Intake Depth (ft bmp): 515
Depth to Water (ft bmp): 14.63 Purge time Start: 1125 Finish: 1235

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
1125		~500		17.8	7.02	73.0	177	2.45		14.63	
1130				17.4	7.14	79.4	165	1.75			
1135				17.2	7.31	74.5	154	1.70		14.19	
1140				17.2	7.69	71.9	145	1.62			
1145				17.2	7.77	70.2	135	1.36			
1150				17.1	7.82	67.9	130	1.43		14.15	
1155				17.3	7.93	66.9	126	1.39			
1200				17.5	7.01	69.0	124	1.62			
1205				17.9	6.39	78.3	102	1.93			
1210				17.8	6.04	82.0	82	3.15		14.14	
1215				17.8	6.10	80.1	77	3.55			
1220				18.1	6.03	77.0	75	4.15			
1225				18.0	5.99	74.7	75	4.66		14.11	
1230				17.9	6.01	73.8	77	4.96			
1235				17.8	5.98	72.3	79	5.02			
1240				17.7	5.98	72.0	80	5.06	50	14.14	

Sample Condition Color: None Odor: None Appearance: Clear

Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading: Rain

Comments:

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: NGC 2nd Quarter 2006 | Project No.: NY001348.0406 | Page 1 of 1

Site Location: Bethpage, NY | Date: 7/26/06

Site/Well No.: MW-35D2 | Replicate No.: N/A | Code No.: N/A

Weather: Sunny 285° | Sampling Time: Begin 1141 End 1143

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	/
Land Surface Elevation (ft)	/
Sounded Well Depth (ft bmp)	530
Depth to Water (ft bmp)	507
Water-Level Elevation (ft)	/
Water Column in Well (ft)	23
Casing Diameter/Type	4" (.65) PVC
Gallons in Well	14.95 x 3
Gallons Pumped/Bailed Prior to Sampling	45
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1100 end 1140
Pumping Rate (gpm)	
Evacuation Method	Dedicated Bladder Pump

Field Parameters

	I	1V	2V	3V
Color	Clear	Clear	"	"
Odor	None	None	"	"
Appearance	Clear	Clear	"	"
pH (s.u.)	5.86	6.36	6.24	6.19
Conductivity (mS/cm)	/	/	/	/
µS (µmhos/cm)	129.7	124.5	126.3	124.2
Turbidity (NTU)	/	/	/	13.2
Temperature (°C)	18.5	16.1	16.2	16.4
Dissolved Oxygen (mg/L)	/	/	/	/
~~Salinity (%)~~ Sed/Contains	X	3	3	3

Sampling Method: 3well Volume

Remarks: DTW=40.20

507-40.20 x .43 + 50 = 250ft

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: D. Zuck

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: NORTHROP-GRUMMAN Project No. NY001348.0006.00002 Page 1 of ____

Site Location: BETHPAGE NY Date: 7-21-06

Site/Well No.: GM-35D-2 Replicate No. ____ Code No. ____

Weather: OVERCAST 85° Sampling Time: Begin 11:30 End ____

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	530
Depth to Water (ft bmp)	507
Water-Level Elevation (ft)	
Water Column in Well (ft)	23
Casing Diameter/Type	4" (0.65)
Gallons in Well	14.95 x 3
Gallons Pumped/Bailed Prior to Sampling	45
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 11:45 end ____
Pumping Rate (gpm)	
Evacuation Method	DEDICATED BLADDER

Field Parameters

Field Parameters	I	1 J	2 J	3 J
Color				
Odor				
Appearance				
pH (s.u.)	6.75			
Conductivity (~~mS/cm~~)				
(µmhos/cm)	1222			
Turbidity (NTU)				
Temperature (°C)	15.6			
Dissolved Oxygen (mg/L)				
Salinity (%)				
Sampling Method				

Remarks: DTW - 39.39

5 GAL PAILS

Constituents Sampled	Container Description	Number	Preservative
SEE COC			
BLADDER DEVELOPED LEAK			

Sampling Personnel: GW

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: NORTHROP-GRUMMAN Project No. 30013348.0406.00002 Page 1 of ____

Site Location: BETHPAGE NY Date: 7-21-06

Site/Well No.: GM-35D-2 Replicate No. ____ Code No. ____

Weather: OVERCAST 85° Sampling Time: Begin 11:30 End ____

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	530
Depth to Water (ft bmp)	507
Water-Level Elevation (ft)	
Water Column in Well (ft)	23
Casing Diameter/Type	4" (0.65)
Gallons in Well	1495 x3
Gallons Pumped/Bailed Prior to Sampling	45
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 11:45 end ____
Pumping Rate (gpm)	
Evacuation Method	DEDICATED BLADDER

Field Parameters

Field Parameters	I	1 J	2 J	3 J
Color				
Odor				
Appearance				
pH (s.u.)	6.75			
Conductivity (~~mS/cm~~) (µmhos/cm)	122.2			
Turbidity (NTU)				
Temperature (°C)	15.6			
Dissolved Oxygen (mg/L)				
Salinity (%)				

Sampling Method: ____

Remarks: DTW - 39.39

5 GAL PAILS

Constituents Sampled	Container Description	Number	Preservative
SEE COC			
BLADDER DEVELOPED LEAK			

Sampling Personnel: GW

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: MA001349.0406 Task: 00002 Well ID: GM-75D2
Date: 7/7/06 Sampled By: D. Zuck
Sampling Time: 1243 Recorded By: D. Zuck
Weather: Sunny ≈ 80° Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): ✓ Serial #: ✓

Purging Information
Casing Material: PVC Purge Method: Dedicated Bladder pump / Low flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 505 Bottom 525
Sounded Depth (ft bmp): 525 Pump Intake Depth (ft bmp): 515
Depth to Water (ft bmp): 33.99 Purge time Start: 1140 Finish: 1240

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
1140		≈800		20.5	5.20	226	196	5.79		33.99	
1145				19.1	5.10	[illegible]	187	5.01			SC. (116.7)
1150				19.9	5.11	109.6	184	4.68			
1155				18.4	5.13	103.2	181	3.82		33.92	
1200				18.5	5.13	100.6	179	3.74			
1205				18.9	5.13	97.9	179	3.76			
1210				18.9	5.13	96.5	179	3.60		33.90	
1215				18.9	5.13	97.0	179	3.44			
1220				18.9	5.14	96.7	178	3.64			
1225				19.0	5.13	96.1	179	3.64		33.90	
1230				18.9	5.13	95.6	180	3.76			
1235				19.2	5.14	95.6	182	3.50			
1240				19.2	5.14	95.7	180	3.50	7.7		

Sample Condition Color: None Odor: None Appearance: clear
Sample Collection
Parameter: See COC Container: No. Preservative:

PID Reading

Comments

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: M0001348.0406 Task: 00002 Well ID: GM-79I
Date: 7/6/06 Sampled By: G. Williams / D. Zuck
Sampling Time: 1725 Recorded By: D. Zuck
Weather: P/C 75° Coded Replicate No.: NA

Instrument Identification
Water Quality Meter(s): ✓ Serial #: ✓

Purging Information
Casing Material: PVC Purge Method: Peristaltic Bladder Pump / Low flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 170 Bottom 180
Sounded Depth (ft bmp): 180 Pump Intake Depth (ft bmp): 175
Depth to Water (ft bmp): 39.12 Purge time Start: 1640 Finish: 1725

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
1640		≈500		17.6	4.99	78.9	132	8.24		39.12	
1645				15.3	5.09	79.4	133	6.18			
1650				14.9	5.08	77.8	135	6.56			
1655				14.7	5.10	77.7	134	6.57		39.11	
1700				14.6	5.10	77.7	134	6.62			
1705				14.5	5.10	77.3	135	6.65			
1710				14.7	5.09	77.1	137	6.71		39.18	
1715				14.9	5.09	77.0	137	6.75			
1720				14.7	5.09	77.0	139	6.80			
1725		↓		14.7	5.09	76.9	139	6.93		39.16	

Sample Condition Color: None Odor: None Appearance: Clear
Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading: Not Available

Comments:

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 00002 Well ID: GM-79D
Date: 7/6/09 Sampled By: G. Williams / D. Zuck
Sampling Time: Recorded By: D. Zuck
Weather: Overcast 70° Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): Serial #:

Purging Information
Casing Material: PVC Purge Method: Dedicated Bladder pump / Low Flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 280 Bottom 290
Sounded Depth (ft bmp): 290 Pump Intake Depth (ft bmp): 285
Depth to Water (ft bmp): 40.42 Purge time Start: 1530 Finish:

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
1530		≈400		21.2	6.34	112.1	-9	5.53		(40.42)	DO: 7.87
1535				18.1	5.62	95.3	32	~~5.44~~		(40.44)	
1540				16.6	5.20	85.7	69	5.61			
1545				16.5	5.06	82.6	86	5.55			
1550				16.5	5.04	82.4	91	5.36		(40.22)	
1555				16.5	5.00	81.4	99	5.65			
1600				16.4	4.99	80.7	106	5.64			
1605				16.5	4.97	80.6	112	5.64		(40.42)	
1610				16.6	4.97	80.4	116	5.69			
1615				16.5	4.96	79.8	119	5.68			
1620				16.6	4.94	79.6	123	5.64			
1625				16.7	4.94	79.4	127	5.67		(40.42)	
1630				16.5	4.94	79.4	130	5.63	12		

Sample Condition Color: None Odor: None Appearance: Clear

Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading: Not Available

Comments:

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: Northrop Grumman | Project No. NY001348.0006.0000 | Page 1 of 1

Site Location: Bethpage, NY | Date: 7/10/96

Site/Well No.: BPOW 1-1 | Replicate No.: N/A | Code No.: —

Weather: cloudy, 85° | Sampling Time: Begin — End —

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	241
Depth to ~~Water~~ Product (ft bmp)	169
Water-Level Elevation (ft)	—
Water Column in Well (ft)	72
Casing Diameter/Type	4" (0.65)
Gallons in Well	46.8 ×3
Gallons Pumped/Bailed Prior to Sampling	140
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin — end —
Pumping Rate (gpm)	—
Evacuation Method	Dedicated submersible pump/packer

Field Parameters

	I	1V	2V	3V
Color	colorless	colorless	colorless	colorless
Odor	odorless	odorless	odorless	odorless
Appearance	clear	clear	clear	clear
pH (s.u.)	5.35	5.34	5.09	5.09
Conductivity (mS/cm)	—	—	—	—
(µmhos/cm)	142.6	139.9	137.2	140.4
Turbidity (NTU)	—	—	—	7.1
Temperature (°C)	17.8	14.6	14.7	14.1
Dissolved Oxygen (mg/L)	—	—	—	—
~~Salinity (%)~~ DTW	28.59	29.00	29.02	

Sampling Method: 3 Well Volume

Remarks: PID reading at wellhead = 0

DTW = 28.59

169 − DTW (28.59) × 0.43 + 50 = 110

110 gal

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: GW, JAC

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
	feet	msl	mean sea-level	s.u.	Standard units
	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: Northrop Grumman | Project No. M00194806.0004 | Page 1 of 1

Site Location: Bethpage, NY | Date 7/10/06

Site/Well No. BPOW 1-2 | Replicate No. 0/0 | Code No. —

Weather: Cloudy, 85° | Sampling Time: Begin 14:30 End 14:35

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	335
Depth to ~~Water~~ Packer (ft bmp)	294
Water-Level Elevation (ft)	—
Water Column in Well (ft)	41
Casing Diameter/Type	4" (0.65)
Gallons in Well	26.65 ×3
Gallons Pumped/Bailed Prior to Sampling	80.00
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 14:15 end 14:30
Pumping Rate (gpm)	—
Evacuation Method	Dedicated pump/packer (submersible)

Field Parameters

	I	1V	2V	3V
Color	colorless	cloudy	colorless	
Odor	odorless	odorless	odorless	
Appearance	clear	cloudy	clear	
pH (s.u.)	5.32	5.20	5.15	5.10
Conductivity ~~(mS/cm)~~	—	—	—	—
(µmhos/cm)	53.9	43.9	45.2	46.2
Turbidity (NTU)	—	—	—	8.5
Temperature (°C)	16.0	14.7	13.9	13.3
Dissolved Oxygen (mg/L)	—	—	—	—
~~Salinity~~ (%) DTW	31.1	31.88	31.85	31.85

Sampling Method: 3 well volume

Remarks: PID at wellhead = 0

294 − DTW (31.1) × 0.43 × 50 = 165

10 gpm

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: GW, JAC

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: Northrop Grumman — Project No. NY001344.0006.0000 — Page 1 of 1

Site Location: Bethpage, NY — Date: 7/10/06

Site/Well No.: BPOW 1-3 — Replicate No.: n/a — Code No.: —

Weather: cloudy, 85° — Sampling Time: Begin / End /

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	/
Land Surface Elevation (ft)	/
Sounded Well Depth (ft bmp)	419
Depth to ~~Water~~ packer (ft bmp)	344
Water-Level Elevation (ft)	/
Water Column in Well (ft)	75
Casing Diameter/Type	4" (0.65)
Gallons in Well	48.75 ×3
Gallons Pumped/Bailed Prior to Sampling	146.25
Sample Pump Intake Setting (ft bmp)	/
Purge Time	begin / end /
Pumping Rate (gpm)	/
Evacuation Method	Dedicated Submersible pump/packer

Field Parameters

	I	1V	2V	3V
Color	colorless			
Odor	odorless			
Appearance	clear			
pH (s.u.)	4.93	4.89	4.90	4.90
Conductivity ~~(mS/cm)~~	—	—	—	—
(µmhos/cm)	89.3	144.0	139.3	123.4
Turbidity (NTU)	—	—	—	49
Temperature (°C)	17.2	14.5	13.7	14.4
Dissolved Oxygen (mg/L)	—	—	—	—
~~Salinity~~ (%) DTW	31.85	—	—	—

Sampling Method: 3 well Volume

Remarks: DTW = 31.85bls
344 − DTW (31.85) × 0.433 + 50 = 185
DTW m-scope (is broken)
PID at wellhead = 0

185 psi

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: GW, JAC

Well Casing Volumes

Gal./Ft.	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: Northrop Grumman | Project No. NY001348.0406.00002 | Page 1 of 1

Site Location: Bethpage, NY | Date: 7/12/06

Site/Well No.: BPOW 2-1 | Replicate No.: MS/MSD | Code No.: —

Weather: Partly Cloudy, 80° | Sampling Time: Begin 13:50 End 13:55

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	400
Depth to ~~Water~~ Packer (ft bmp)	310
Water-Level Elevation (ft)	—
Water Column in Well (ft)	90
Casing Diameter/Type	4" (0.65)
Gallons in Well	58.5 x3
Gallons Pumped/Bailed Prior to Sampling	176
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 13:30 end 13:50
Pumping Rate (gpm)	—
Evacuation Method	Dedicated submersible pump/packer

Field Parameters

	I	1V	2V	3V
Color	Colorless			
Odor	Odorless			
Appearance	CLEAR			
pH (s.u.)	4.67	4.96	5.00	4.95
Conductivity ~~(mS/cm)~~ (µmhos/cm)	71.9	126.6	103.2	91.7
Turbidity (NTU)	—	—	—	7.3
Temperature (°C)	17.9	15.8	15.3	15.4
Dissolved Oxygen (mg/L)	—	—	—	—
~~Salinity~~ (%) DTW 20.02	—	—	—	—

Sampling Method: 3 well volume

Remarks: PID at wellhead = N/A

DTW = 20.02' bls

310 − 20.02 x.43 +50 = 175

~~3 m-sleeve is broken~~

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: GW/JAC

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: Northrop Grumman | Project No.: NY001304.0406.00002 | Page 1 of 1

Site Location: Bethpage, NY | Date: 7/12/06

Site/Well No.: BPOW 2-2 | Replicate No.: ~~Duplicate~~ | Code No.: —

Weather: Cloudy, 80° | Sampling Time: Begin 14:50 End 14:55

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	/
Land Surface Elevation (ft)	/
Sounded Well Depth (ft bmp)	495
Depth to ~~Water~~ Product (ft bmp)	419
Water-Level Elevation (ft)	/
Water Column in Well (ft)	76
Casing Diameter/Type	4" (0.65)
Gallons in Well	49.40
Gallons Pumped/Bailed Prior to Sampling	x3 = 149
Sample Pump Intake Setting (ft bmp)	/
Purge Time	begin 14:30 end 14:50
Pumping Rate (gpm)	/
Evacuation Method	Dedicated submersible pump/packer

Field Parameters

Field Parameters	I	1V	2V	3V
Color	Colorless	Colorless	slight yellow	colorless
Odor	Odorless	Odorless	slight odor	odorless
Appearance	clear	clear	clear	clear
pH (s.u.)	4.73	4.95	4.90	4.86
Conductivity ~~(mS/cm)~~ (µmhos/cm)	71.1	83.1	81.9	75.0
Turbidity (NTU)	—	—	—	20
Temperature (°C)	17.7	15.5	14.7	14.5
Dissolved Oxygen (mg/L)	—	—	—	—
~~Salinity~~ (%) DTW	19.5	—	—	—

Sampling Method: 3well volume

Remarks: PID at wellhead = N/A

DTW = 19.5

419 - (19.5) x .43 + 50 = 225 ft

In-scope is broken

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: GW/SAC

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: Northrop Grumman | Project No.: NY001348.0426.00002 | Page: 1 of 1

Site Location: Bethpage, NY | Date: 7/13/06

Site/Well No.: BPOW 3-1 | Replicate No.: — | Code No.: —

Weather: Partly cloudy, 75°F | Sampling Time: Begin 15:45 End 15:50

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	516
Depth to ~~Water~~ Gauge (ft bmp)	414
Water-Level Elevation (ft)	—
Water Column in Well (ft)	102
Casing Diameter/Type	4" (0.65)
Gallons in Well	66.3
	x3
Gallons Pumped/Bailed Prior to Sampling	198.9 (~3 3/4 runs)
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin — end 15:45
Pumping Rate (gpm)	—
Evacuation Method	Dedicated submersible pump/bailer

Field Parameters

	I	IV	2V	3V
Color		colorless		
Odor		odorless		
Appearance		CLEAR		
pH (s.u.)	4.15	4.11	4.26	4.28
Conductivity ~~(mS/cm)~~ (µmhos/cm)	—	—	—	—
	1018	956	1072	1097
Turbidity (NTU)	—	—	—	10.3
Temperature (°C)	13.5	16.2	14.9	15.3
Dissolved Oxygen (mg/L)	—	—	—	—
~~Salinity~~ (%)	DTW [illegible] 25.50	—	—	—
Sampling Method	3 well volume			

Remarks: DTW = 25.50 ft bls

414 − (25.50) × 0.43 + 50 = 220 psi

PID at wellhead = n/a

Tape-scope is broken (25.50) DTW

Constituents Sampled

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: GW/JAC

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: Northrop Grumman | Project No. NY001348.0406.0002 | Page 1 of 1

Site Location: Bethpage, NY | Date: 7/13/06

Site/Well No.: BPOW 3-2 | Replicate No.: — | Code No.: —

Weather: cloudy, 75°F | Sampling Time: Begin 13:50 | End 13:55

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	647
Depth to ~~Water~~ Packer (ft bmp)	503
Water-Level Elevation (ft)	—
Water Column in Well (ft)	144
Casing Diameter/Type	4"(0.65)
Gallons in Well	93.6
Gallons Pumped/Bailed Prior to Sampling	280 +3
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin — end ~~13:50~~
Pumping Rate (gpm)	—
Evacuation Method	Dedicated submersible pump/packer

Field Parameters

Field Parameters	I	1V	2V	3V
Color	colorless	colorless		
Odor	slight odor	odorless		
Appearance	clear	CLEAR		
pH (s.u.)	5.53	4.77	4.96	5.21
Conductivity ~~(mS/cm)~~ (µmhos/cm)	56.6	126.4	84.9	62.7
Turbidity (NTU)	—	—	—	21.3
Temperature (°C)	16.9	15.3	15.4	17.2
Dissolved Oxygen (mg/L)	—	—	—	—
~~Salinity (%)~~ DTW	27.35	—	—	—

Sampling Method: 3 well volume

Remarks: PID at wellhead = n/a

503 - DTW(27.35) x 0.93 + 50 = 255 ft

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: GW/JAC

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: Northcop Grumman | Project No. NY001348.0406.00002 | Page 1 of 1

Site Location: Bethpage, NY | Date 7/18/06

Site/Well No. BPOW 4-1 | Replicate No. REP71206 | Code No.

Weather: Partly cloudy, 85° | Sampling Time: Begin 1220 End 1235

Evacuation Data

Measuring Point	TOC	
MP Elevation (ft)	/	
Land Surface Elevation (ft)	Standpipe	Screen
Sounded Well Depth (ft bmp)	652	692
Depth to Water (ft bmp) packer	503	652
Water-Level Elevation (ft)	/	/
Water Column in Well (ft)	149	40
Casing Diameter/Type	4" (0.65)	2" (0.16)
Gallons in Well	290 (96.6 x 3)	19.2 (6.4 x 3)
Gallons Pumped/Bailed Prior to Sampling	309 (290 + 19.2) (5.6 (SSG) DI WS)	
Sample Pump Intake Setting (ft bmp)	/	
Purge Time	begin / end 1220	
Pumping Rate (gpm)	/	
Evacuation Method	Dedicated submersible pump / packer	

Field Parameters

	I	1V	2V	3V
Color	colorless			S
Odor	odorless	slight odor		odorless
Appearance	CLEAR			
pH (s.u.)	5.70	5.55	5.84	5.77
Conductivity (mS/cm)	—	—	—	—
(µmhos/cm)	41.6	78.6	53.9	42.4
Turbidity (NTU)	—	—	—	33.0
Temperature (°C)	16.0	14.3	14.7	15.6
Dissolved Oxygen (mg/L)	—	—	—	—
~~Salinity (%)~~ DTW	—	—	—	—
~~ORP~~ Sampling Method	3 well volume			

Remarks: PID at wellhead = 0/0

DTW = 14.3

PSI = 252

BPOW 4-1 located closer to treeline.

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: GW/JAC

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: Northrop Grumman | Project No.: NY001348.0406.0002 | Page: 1 of 1

Site Location: Bethpage, NY | Date: 7/11/06

Site/Well No.: BPOW 4-2 | Replicate No.: | Code No.:

Weather: partly cloudy, 85° | Sampling Time: Begin: | End:

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	/
Land Surface Elevation (ft)	/
Sounded Well Depth (ft bmp)	764
Depth to ~~Water~~ packer (ft bmp)	503
Water-Level Elevation (ft)	/
Water Column in Well (ft)	261
Casing Diameter/Type	4"(0.65)
Gallons in Well	169.65 ×3
Gallons Pumped/Bailed Prior to Sampling	509 (9 ¼ (55G) drums)
Sample Pump Intake Setting (ft bmp)	/
Purge Time	begin / end /
Pumping Rate (gpm)	/
Evacuation Method	Dedicated submersible pump / packer

Field Parameters

	I	1V	2V	3V
Color	Colorless			
Odor	odorless			
Appearance	CLEAR			
pH (s.u.)	4.81	4.48	4.48	4.61
Conductivity ~~(mS/cm)~~ (µmhos/cm)	38.2	114.8	68.7	60.4
Turbidity (NTU)	—	—	—	10.3
Temperature (°C)	21.1	16.4	14.7	15.2
Dissolved Oxygen (mg/L)	—	—	—	—
~~Salinity (%)~~ DTW	26.25	25.85	—	—

Sampling Method: 3 well volume

Remarks: PID at well head = 0 ppm

DTW = 26.25 24/8

503 − DTW (26.55) × 0.43 + 50 = 488

In-scope is broken.

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: GW / JAC

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 00002 Well ID: GM-13D
Date: 9/19/06 Sampled By: [illegible]
Sampling Time: 6:30pm Recorded By: [illegible]
Weather: 75°F Light Rain, overcast Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): — Serial #: —

Purging Information
Casing Material: PVC Purge Method: Dedicated Bladder / Low Flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 200 Bottom 210
Sounded Depth (ft bmp): 210 Pump Intake Depth (ft bmp): 205
Depth to Water (ft bmp): 44.89 Purge time Start: 5:20 pm Finish: 6:20 pm

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp. (°C)	pH (SI Units)	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
5:20	—	—	—	18.9	5.94	151.9	16	1.81	—	—	—
5:25	—	—	—	17.7	5.81	144.7	-20	.92	—	44.86	—
5:30	—	—	—	17.4	5.76	141.1	-33	.70	—	—	—
5:35	—	—	—	17.4	5.72	140.7	-39	.59	—	—	—
5:40	—	—	—	17.4	5.75	140.5	-41	.64	—	44.85	—
5:45	—	—	—	17.3	5.76	140.5	-49	.65	—	—	—
5:50	—	—	—	17.4	5.80	140.2	-56	.67	—	44.83	—
5:55	—	—	—	17.2	5.77	140.3	-61	.64	—	—	—
6:00	—	—	—	17.2	5.81	140.2	-67	.74	—	44.82	—
6:05	—	—	—	17.3	5.78	140.2	-66	.75	—	—	—
6:10	—	—	—	17.2	5.83	140.2	-72	.77	—	44.83	—
6:15	—	—	—	17.2	5.81	139.7	-73	.76	—	—	5.81 = pH
6:20	—	—	—	17.2	5.82	139.9	-74	.79	—	44.84	—

Sample Condition Color: Colorless Odor: None Appearance: clear

Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading: NO PID due to Rain

Comments: No turbidity meter
Needs new lock

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ARCADIS

Water Sampling Log

Project N-Grumman OU2 Project No. NY001348.0406.00002 Page 1 of 1

Site Location Bethpage, NY Date 9/28/06

Site/Well No. GM-15S Replicate No. N/A

Weather Breezy 70°F Sampling Time: Begin 4:38 End 4:40

Evacuation Data

Measuring Point	TOC
Sounded Well Depth (ft bmp)	80
Depth to Water (ft bmp)	43.62
Depth to Packer (ft bmp)	—
Water Column in Well (ft)	36.38
Casing Diameter	4" (0.65)
Gallons in Well	23.65
Gallons Pumped/Bailed	x3
Prior to Sampling	71
Sample Pump Intake Setting (ft bmp)	75
Packer Pressure (psi)	—
Pumping Rate (gpm)	2
Evacuation Method	Rediflow pump
Sampling Method	3 well volume
Purge Time Begin	4:02 End —

Field Parameters

	1	1V	2V	3V
Color	Lt Brown	Clear	" "	" "
Odor	Slight	" "	" "	" "
Appearance	Clear	" "	" "	" "
pH (s.u.)	6.57	5.97	5.77	5.71
Conductivity (mS/cm)	—	—	—	—
(µmhos/cm)	146.7	511	544	568
Temperature (°C)	16.4	15.5	15.4	15.4
DO (mg/L)	—	—	—	—
Turbidity (NTU)	13	10	9.0	9.0
Time	4:02	4:14	4:26	4:38 pm
DTW (ft bmp)	36.38	—	—	—

Remarks: Q=2 T=35.5 1V=12 minutes
PID not working

Constituents Sampled: See COC Sampling Personnel: PP DZ Prezorski Zuck

Well Casing Volumes

Gal./Ft.				
	1 1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1 1/2" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	mS/cm	Milisiemens per centimeter	VOC	Volatile Organic Compounds
°C	Degrees Celsius	s.u.	Standard units	umhos/cm	Micromhos per centimeter
ft	feet	NTU	Nephelometric Turbidity Units		
gpm	Gallons per minute	N/A	Not Applicable		
mg/L	Miligrams per liter	COC	Chain of Custody		

Water Sampling Log

Project: N-Grumman OU2 | Project No.: NY001318.0406.00002 | Page 1 of 1

Site Location: Bethpage, NY | Date: 9/20/06

Site/Well No.: GM-15I | Replicate No.: N/A | Code No.: —

Weather: Partly cloudy, 71°F, Breezy | Sampling Time: Begin 5:43pm End 5:45pm

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	/
Land Surface Elevation (ft)	/
Sounded Well Depth (ft bmp)	105
Depth to Water (ft bmp)	packer Di 94
Water-Level Elevation (ft)	/
Water Column in Well (ft)	11
Casing Diameter/Type	4" (0.65)
Gallons in Well	7.15 x3
Gallons Pumped/Bailed Prior to Sampling	(SDE 22
Sample Pump Intake Setting (ft bmp)	/
Purge Time	begin 4:43pm end 5:42pm
Pumping Rate (gpm)	/
Evacuation Method	Dedicated Bladder packer

Field Parameters

Field Parameters	I	1V	2V	3V
Color	colorless	colorless	colorless	colorless
Odor	None	None	None	None
Appearance	clear	clear	clear	clear
pH (s.u.)	5.79	5.47	5.36	5.41
Conductivity (mS/cm)	—	—	—	—
(µmhos/cm)	295	284	286	288
Turbidity (NTU)	—	—	—	—
Temperature (°C)	16.3	15.3	15.3	15.2
Dissolved Oxygen (mg/L)	—	—	—	—
Salinity (%)	—	5 gallon container ½	½	½

Sampling Method: 3 well volume

Remarks: DTW = 43.50

94 − 43.50 x .43 + 50 = 75psi

4 = 5 gallons rounded up

No Turbidity meter PID reading 0ppm at wellhead

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: QP

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/l	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 00002 Well ID: GM-15D

Date: 9/20/06 Sampled By: GP

Sampling Time: 4:00pm Recorded By: GP

Weather: Mostly cloudy, 71°F Breezy, Coded Replicate No.: N/A

Instrument Identification

Water Quality Meter(s): Serial #:

Purging Information

Casing Material: PVC Purge Method: Dedicated Bladder/ Low Flow

Casing Diameter: 4" Screen Interval (ft bmp): Top 332 Bottom 342

Sounded Depth (ft bmp): 342 Pump Intake Depth (ft bmp): 337

Depth to Water (ft bmp): 45.97 Purge time Start: 3:00pm Finish: 4:00pm

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
3:00	–	–	–	19.0	6.12	144.2	84	4.79	–	–	–
3:05	–	–	–	17.0	5.07	149.9	86	1.88	–	45.98	–
3:10	–	–	–	17.4	4.93	149.6	97	3.80	–	–	–
3:15	–	–	–	17.7	4.90	148.5	107	4.08	–	45.98	–
3:20	–	–	–	17.7	4.88	148.1	114	3.45	–	–	–
3:25	–	–	–	17.6	4.87	147.7	119	4.00	–	45.98	–
3:30	–	–	–	17.6	4.87	146.9	120	3.68	–	–	–
3:35	–	–	–	17.8	4.86	146.1	123	4.26	–	45.99	–
3:40	–	–	–	17.8	4.86	145.8	126	4.08	–	–	–
3:45	–	–	–	18.1	4.87	145.2	128	4.44	–	45.99	–
3:50	–	–	–	18.0	4.85	145.3	130	4.26	–	–	–
3:55	–	–	–	17.9	4.87	144.8	130	4.04	–	45.98	–
4:00	–	–	–	17.9	4.87	144.8	130	4.36	–	–	–

Sample Condition Color: colorless Odor: Appearance: clear

Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading: 0 ppm at wellhead

Comments: No turbidity meter

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 00002 Well ID: GM-15D2
Date: 9/13/06 Sampled By: PP
Sampling Time: 3:00pm Recorded By: PP
Weather: Mostly cloudy, 72°F Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): / Serial #: /

Purging Information
Casing Material: PVC Purge Method: Dedicated Bladder / Low Flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 536 Bottom 556
Sounded Depth (ft bmp): 556 Pump Intake Depth (ft bmp): 546
Depth to Water (ft bmp): 49.06 Purge time Start: 1:55pm Finish: 3:00pm

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
1:55	—	—	—	18.8	5.57	148.1	152	4.27	—	—	—
2:00	—	—	—	17.9	5.39	139.0	167	3.91	—	49.06	—
2:05	—	—	—	17.6	5.27	103.4	178	2.62	—	—	—
2:10	—	—	—	17.8	5.18	97.9	180	1.79	—	49.06	—
2:15	—	—	—	18.4	5.12	89.6	184	1.47	—	—	—
2:20	—	—	—	18.8	5.10	81.7	184	1.86	—	49.05	—
2:25	—	—	—	19.1	5.17	81.6	186	2.44	—	—	—
2:30	—	—	—	19.3	6.11	154.7	184	3.25	—	49.05	pH meter checked
2:35	—	—	—	19.3	5.43	128.6	184	3.38	—	—	—
2:40	—	—	—	19.6	5.22	96.2	185	3.47	—	49.05	—
2:45	—	—	—	19.9	5.13	90.7	187	3.82	—	—	—
2:50	—	—	—	19.9	5.10	96.4	190	4.15	—	49.05	—
2:55	—	—	—	19.6	5.18	85.0	192	4.20	—	—	—
3:00	—	—	—	19.4	5.15	83.9	195	4.08	—	49.05	—

Sample Condition Color: Colorless Odor: None Appearance: clear

Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading: 0 ppm at wellhead

Comments: Needs new lock
No turbidity meter

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ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 00002 Well ID: GM-17 I

Date: 9/15/06 Sampled By: PP

Sampling Time: 3:50pm Recorded By: PP

Weather: Rain overcast Coded Replicate No.: N/A

Instrument Identification

Water Quality Meter(s): ____ Serial #: ____

Purging Information

Casing Material: PVC Purge Method: Dedicated Bladder / Low Flow

Casing Diameter: 4" Screen Interval (ft bmp): Top 100 Bottom 120

Sounded Depth (ft bmp): 120 Pump Intake Depth (ft bmp): 110

Depth to Water (ft bmp): 46.79 Purge time Start: 2:50pm Finish: 3:50pm

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (mS/cm) µS	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
2:50	–	–	–	18.9	6.02	130.3	74	7.47	–	–	–
2:55	–	–	–	17.6	6.20	105.4	63	5.82	–	46.80	–
3:00	–	–	–	17.5	6.26	105.8	56	5.18	–	–	–
3:05	–	–	–	17.6	6.28	106.0	49	5.29	–	46.80	–
3:10	–	–	–	17.6	6.30	105.6	42	5.25	–	–	–
3:15	–	–	–	17.6	6.32	105.3	36	4.84	–	–	Thunderstorm
3:20	–	–	–	17.6	6.30	105.3	32	5.10	–	–	–
3:25	–	–	–	17.5	6.30	105.3	28	5.26	–	–	Thunderstorm
3:30	–	–	–	17.5	6.32	105.5	24	5.19	–	–	–
3:35	–	–	–	17.4	6.32	105.3	20	4.64	–	–	–
3:40	–	–	–	17.3	6.32	105.3	18	4.95	–	–	–
3:45	–	–	–	17.3	6.32	105.3	17	4.84	–	46.79	–
3:50	–	–	–	17.3	6.32	105.5	20	5.01	–	–	–

Sample Condition Color: Colorless Odor: none Appearance: Clear

Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading: No PID due to Rain

Comments: No turbidity meter

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ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 00002 Well ID: GM-17D
Date: 9/13/06 Sampled By: RP
Sampling Time: 4:55pm Recorded By: RP
Weather: Mostly cloudy 72°F Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): ✓ Serial #: ✓

Purging Information
Casing Material: PVC Purge Method: Dedicated Bladder / Low Flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 278 Bottom 298
Sounded Depth (ft bmp): 298 Pump Intake Depth (ft bmp): 288
Depth to Water (ft bmp): 48.82 Purge time Start: 3:55pm Finish: 4:55pm

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
3:55	—	—	—	19.7	5.11	96.7	192	6.84	—	—	—
4:00	—	—	—	19.5	5.15	96.6	194	5.84	—	48.82	—
4:05	—	—	—	18.7	6.79	351	192	5.59	—	—	Recal pH meter
4:10	—	—	—	19.4	6.06	162.5	189	5.71	—	48.82	—
4:15	—	—	—	18.2	5.52	104.7	190	5.51	—	—	—
4:20	—	—	—	17.9	5.29	99.7	191	6.29	—	48.82	—
4:25	—	—	—	17.6	5.25	98.9	192	5.78	—	—	—
4:30	—	—	—	17.5	5.25	98.3	193	6.21	—	48.82	—
4:35	—	—	—	17.3	5.25	97.8	194	6.20	—	—	—
4:40	—	—	—	17.2	5.27	97.8	194	5.78	—	48.81	—
4:45	—	—	—	17.6	5.27	97.6	194	5.79	—	—	—
4:50	—	—	—	17.8	5.26	97.5	194	5.25	—	48.81	—
4:55	—	—	—	18.0	5.26	97.0	196	5.98	—	—	—

Sample Condition Color: colorless Odor: None Appearance: clear
Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading: 0ppm at wellhead
Comments: No turbidity meter

Water Sampling Log

Project: N-Grumman OU2 | Project No.: NY001348.0406.0002 | Page: 1 of 1

Site Location: Bethpage, NY | Date: 9/22/06

Site/Well No.: GM-18I | Replicate No.: N/A | Code No.: —

Weather: Partly cloudy, 73°F | Sampling Time: Begin 2:03pm End 2:05pm

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	105
Depth to Water (ft bmp)	94
Water-Level Elevation (ft)	—
Water Column in Well (ft)	11
Casing Diameter/Type	4" (0.65)/PVC
Gallons in Well	7.15 x3
Gallons Pumped/Bailed Prior to Sampling	22
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 12:45pm end 2:00pm
Pumping Rate (gpm)	—
Evacuation Method	dedicated bladder pump

Field Parameters

	1	1V	2V	3V
Color	Colorless with Black tiny particles	Colorless little black particles	"	"
Odor	None	None	None	None
Appearance	clear	clear	clear	clear
pH (s.u.)	5.92	5.82	5.67	5.64
Conductivity (mS/cm)	—	—	—	—
(µmhos/cm)	272	159.9	158.8	157.6
Turbidity (NTU)	—	—	—	—
Temperature (°C)	16.9	16.4	16.6	16.6
Dissolved Oxygen (mg/L)	—	—	—	—
Salinity (%)	—	1/2	1/2	1/2

Sampling Method: 3 well volume

Remarks: 1 = 5 gallons
DTW = 41.61
PID reading at wellhead 0 ppm
94 − 41.61 × .43 + 50 = 80 PSI
no Turbidity meter

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: PP

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 00002 Well ID: GM-18D
Date: 9/15/06 Sampled by: PP
Sampling Time: 1:55pm Recorded by: PP
Weather: windy, 69°F drizzle, overcast Coded Replicate No.: N/A
Instrument Identification
Water Quality Meter(s): Serial #:

Purging Information

Casing Material: PVC Purge Method: Dedicated Bladder / Low Flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 290 Bottom 300
Sounded Depth (ft bmp): 300 Pump Intake Depth (ft bmp): 295
Depth to Water (ft bmp): 44.42 Purge time Start: 12:55pm Finish: 1:55pm

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
12:55	—		—	18.2	5.54	96.0	135	6.02	—	—	—
1:00	—		—	17.2	5.52	94.5	130	5.25	—	44.41	—
1:05	—		—	17.1	5.48	94.6	128	6.13	—	—	—
1:10	—		—	17.1	5.46	95.0	125	6.68	—	44.39	—
1:15	—		—	17.1	5.47	95.6	118	6.14	—	—	—
1:20	—		—	17.1	5.47	95.1	115	5.90	—	44.39	—
1:25	—		—	17.3	5.47	95.2	113	5.99	—	—	—
1:30	—		—	17.4	5.47	93.8	115	6.53	—	44.39	—
1:35	—		—	17.5	5.47	94.0	116	6.52	—	—	—
1:40	—		—	17.5	5.47	94.1	111	6.24	—	44.39	—
1:45	—		—	17.5	5.47	94.3	108	6.43	—	—	—
1:50	—		—	17.4	5.47	94.2	106	6.44	—	44.39	—
1:55	—		—	17.4	5.47	94.2	106	6.58	—	—	—

Sample Condition Color: Colorless Odor: None Appearance: clear
Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading: Rain

Comments: No Turbidity meter

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: N-Grumman UV2 | Project No.: NY001348.0406.00002 | Page 1 of 1

Site Location: Bethpage, NY | Date: 9/20/06

Site/Well No.: GM-20I | Replicate No.: N/A | Code No.: —

Weather: Partly cloudy 74°F | Sampling Time: Begin 12:25 | End 12:26 pm

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	105
Depth to Water (ft bmp)	94 (packer)
Water-Level Elevation (ft)	—
Water Column in Well (ft)	11
Casing Diameter/Type	4" (0.65)
Gallons in Well	7.15
Gallons Pumped/Bailed Prior to Sampling	x3 = 22
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 11:29 AM end 12:23
Pumping Rate (gpm)	Dedicated Bladder/Packer
Evacuation Method	—

Field Parameters

	I	1V	2V	
Color	colorless	colorless	colorless	colorless
Odor	None	None	None	None
Appearance	clear	clear	clear	clear
pH (s.u.)	10.55	10.45	10.47	10.50
Conductivity (mS/cm)	—	—	—	—
(µmhos/cm)	128.2	120.9	113.5	118.6
Turbidity (NTU)	—	—	—	—
Temperature (°C)	18.1	16.4	16.1	16.2
Dissolved Oxygen (mg/L)	—	—	—	—
Salinity (%)	—	½	½	½

5 gal containers

Sampling Method: 3 well volume

Remarks: DTW = 34.65

94 − 34.65 × .43 + 50 = 80 PSI (rounded up)

ϕ = 5 gallon containers

PID at wellhead 0ppm

No turbidity meter

Constituents Sampled	Container Description	Number	Preservative
See COC			½

Sampling Personnel: PP

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: N-Grumman OU2 | Project No.: NY001348.0406.00002 | Page 1 of 1

Site Location: Bethpage, NY | Date: 9/20/06

Site/Well No.: GM-20D | Replicate No.: N/A | Code No.: —

Weather: Clear, 72°F | Sampling Time: Begin 11:02 AM | End 11:05 AM

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	226
Depth to Water (ft bmp)	packer D: 215'
Water-Level Elevation (ft)	—
Water Column in Well (ft)	11
Casing Diameter/Type	4" (0.65)
Gallons in Well	7.15 x3
Gallons Pumped/Bailed Prior to Sampling	22
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 10:05 AM end 11:00 AM
Pumping Rate (gpm)	—
Evacuation Method	Dedicated Bladder/packer

Field Parameters

	I	1V	2V	3V
Color	colorless	colorless	colorless	colorless
Odor	NONE	NONE	NONE	NONE
Appearance	clear	clear	clear	clear
pH (s.u.)	6.50	6.19	5.78	5.76
Conductivity (mS/cm)	—	—	—	—
(µmhos/cm)	371	100.6	94.7	93.6
Turbidity (NTU)	—	—	—	—
Temperature (°C)	18.6	15.3	14.6	14.4
Dissolved Oxygen (mg/L)	—	—	—	—
Salinity (%)	—	½	½	½

5 gallon containers

Sampling Method: 3 well volume

Remarks: DTW = 37.06

215 − 37.06 × .43 + 50 = 130 psi roundedup

= 5 gal

PID reading at wellhead open

Not turbidity meter

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: QP

Well Casing Volumes

Gal/Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/l	Milligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS

Water Sampling Log

Project N-Grumman OU2 Project No. NY001348.0406.00002 Page 1 of 1

Site Location Bethpage, NY Date 9/28/06

Site/Well No. GM-21S Replicate No. N/A

Weather 70s Sampling Time: Begin 1235 End 1237pm

Evacuation Data

Measuring Point	TOC
Sounded Well Depth (ft bmp)	67
Depth to Water (ft bmp)	34.75
Depth to Packer (ft bmp)	—
Water Column in Well (ft)	32.25
Casing Diameter	2" (.16) PVC
Gallons in Well	5.16 x3
Gallons Pumped/Bailed Prior to Sampling	16
Sample Pump Intake Setting (ft bmp)	65
Packer Pressure (psi)	—
Pumping Rate (gpm)	—
Evacuation Method	Redflow Pump
Sampling Method	3 well volume
Purge Time Begin	1217 End 1235

Field Parameters

	1	1V	2V	3V
Color	Brown	Lt Brown	"	"
Odor	None	None	"	"
Appearance	Turbid	Slt. Turb.	"	Clear
pH (s.u.)	10.17	8.69	7.63	6.78
Conductivity (mS/cm)	—	—	—	—
(umhos/cm)	87.7	100.0	98.3	96.0
Temperature (°C)	16.4	16.9	17.7	18.6
DO (mg/L)	—	—	—	—
Turbidity (NTU)	—	—	—	24
Time	1217	1223	1229	1235pm
DTW (ft bmp)				

Remarks: PID Not working
1V = 6 minutes, Q = 1, T = 16

Constituents Sampled: See COC Sampling Personnel: PP DZ Prezorski Zuck

Well Casing Volumes

Gal./Ft.	1 1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1 1/2" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	mS/cm	Milisiemens per centimeter	VOC	Volatile Organic Compounds
°C	Degrees Celsius	s.u.	Standard units	umhos/cm	Micromhos per centimeter
ft	feet	NTU	Nephelometric Turbidity Units		
gpm	Gallons per minute	N/A	Not Applicable		
mg/L	Miligrams per liter	COC	Chain of Custody		

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: N-Grumman | Project No.: NY001348.0406.00002 | Page 1 of 1

Site Location: Bethpage, NY | Date: 9/20/06

Site/Well No.: GM-21I | Replicate No.: N/A | Code No.:

Weather: Partly cloudy, 75°F | Sampling Time: Begin 1:49pm End 1:51pm

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	/
Land Surface Elevation (ft)	/
Sounded Well Depth (ft bmp)	140
Depth to Water (ft bmp)	129 (packer)
Water-Level Elevation (ft)	/
Water Column in Well (ft)	11
Casing Diameter/Type	4" (0.65)
Gallons in Well	7.15 x3
Gallons Pumped/Bailed Prior to Sampling	22
Sample Pump Intake Setting (ft bmp)	/
Purge Time	begin 12:58pm end 1:47
Pumping Rate (gpm)	/
Evacuation Method	Dedicated bladder packer

Field Parameters

	I	1V	2V	3V
Color	colorless	colorless	colorless	colorless
Odor	none	none	none	none
Appearance	clear	clear	clear	clear
pH (s.u.)	9.60	9.72	9.58	9.59
Conductivity (mS/cm)	—	—	—	—
(umhos/cm)	107.6	107.7	107.3	105.6
Turbidity (NTU)	—	—	—	—
Temperature (°C)	17.0	16.5	16.2	16.0
Dissolved Oxygen (mg/L)	—	—	—	—
Salinity (%)	—	½	½	½

Sampling Method: 3 well volume

Remarks: DTW = 36.30

129 − 36.30 x .43 + 50 = 90 PSI Rounded up

½ = 5 gallons

PID reading at wellhead 0ppm

No turbidity meter

Constituents Sampled	Container Description	Number	Preservative
See COC			ice

Sampling Personnel: PB

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/l	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 0002 Well ID: GM-21 D

Date: 9/18/06 Sampled By: PP

Sampling Time: 3:40 pm Recorded By: PP

Weather: 80°F clear, light breeze Coded Replicate No.: MS/MSD

Instrument Identification

Water Quality Meter(s): / Serial #: /

Purging Information

Casing Material: PVC Purge Method: Dedicated Bladder / Low Flow

Casing Diameter: 4" Screen Interval (ft bmp): Top 278 Bottom 288

Sounded Depth (ft bmp): 288 Pump Intake Depth (ft bmp): 283

Depth to Water (ft bmp): 41.83 Purge time Start: 2:40pm Finish: 3:40pm

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (µS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
2:40	–	–	–	24.6	4.54	89.0	116	5.35	–	–	–
2:45	–	–	–	23.0	4.71	84.0	107	3.95	–	41.84	–
2:50	–	–	–	22.6	4.65	83.0	89	3.76	–	–	–
2:55	–	–	–	22.4	4.85	82.8	107	3.31	–	41.84	–
3:00	–	–	–	22.6	4.91	84.6	101	3.33	–	–	–
3:05	–	–	–	23.0	4.84	81.9	104	3.66	–	41.83	–
3:10	–	–	–	23.3	4.89	82.4	103	3.38	–	–	–
3:15	–	–	–	23.3	4.87	79.6	112	3.42	–	41.83	–
3:20	–	–	–	22.2	4.86	77.5	109	4.16	–	–	–
3:25	–	–	–	20.9	4.78	77.7	104	4.14	–	41.85	–
3:30	–	–	–	20.4	4.88	78.7	100	4.39	–	–	4.81 = pH
3:35	–	–	–	20.2	4.79	78.6	10.5	4.49	–	41.87	–
3:40	–	–	–	20.1	4.73	78.8	102	4.24	–	–	–

Sample Condition Color: Colorless Odor: None Appearance: clear

Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading: 0ppm at wellhead

Comments: no turbidity meter

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ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 00002 Well ID: GM-33D2
Date: 10/3/06 Sampled By: PP Pre-rinsed
Sampling Time: 11:75AM Recorded By: PP
Weather: Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): Serial #:

Purging Information
Casing Material: PVC Purge Method: Dedicated Bladder / Low Flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 500 Bottom 520
Sounded Depth (ft bmp): 520 Pump Intake Depth (ft bmp): 510
Depth to Water (ft bmp): 48.40 Purge time Start: 10:35AM Finish: 11:35AM

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
10:35	—	—	—	18.3	6.36	107.4	-307	7.85	—		
10:40	—	—	—	17.8	6.33	98.1	-305	6.88	—	48.42	
10:45	—	—	—	17.8	6.24	93.0	-271	5.97	—		
10:50	—	—	—	17.5	5.51	92.6	-251	6.17	—	48.42	
10:55	—	—	—	17.4	5.49	92.9	-241	6.52	—		
11:00	—	—	—	17.3	5.56	92.5	-236	6.85	—	48.42	-236=ORP
11:05	—	—	—	17.1	5.62	92.3	-255	6.65	—		
11:10	—	—	—	17.0	5.61	91.9	-241	7.14	—	48.42	
11:15	—	—	—	16.9	5.61	91.9	-230	6.95	—		
11:20	—	—	—	16.8	5.62	91.7	-202	6.65	—	48.40	
11:25	—	—	—	16.8	5.66	92.0	-194	6.69	—		
11:30	—	—	—	16.8	5.69	92.3	-187	6.52	—	48.40	
11:35	—	—	—	16.9	5.71	92.2	-181	6.85	—		

Sample Condition Color: colorless Odor: None Appearance: clear

Sample Collection
Parameter: See COC Container: No. Preservative:

PID Reading 0

Comments

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY00131/8.0406 Task: 00002 Well ID: GM-34D
Date: 9/29/06 Sampled By: P. Presinski/D. Zuck
Sampling Time: 1455 Recorded By: D. Zuck
Weather: 63°F Mostly cloudy Coded Replicate No.: Rp092906

Instrument Identification
Water Quality Meter(s): Serial #:

Purging Information
Casing Material: Steel Purge Method: Non-dedicated Bladder / Low Flow
Casing Diameter: 2" Screen Interval (ft bmp): Top 309 Bottom 319
Sounded Depth (ft bmp): 319 Pump Intake Depth (ft bmp): 314
Depth to Water (ft bmp): 13.82 Purge time Start: 1350 Finish: 1450

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
1350	~~0~~	≈400		15.6	7.87	138.9	11	2.07		13.82	
1355				15.1	8.12	154.2	-12	1.88		13.95	
1400				15.3	8.41	158.9	-27	1.34			
1405	15			15.5	8.73	153.1	-49	.79			
1410				16.0	9.54	143.3	-118	.76		13.96	
1415				17.3	9.20	160.5	-179	.80			
1420	30			17.2	8.37	164.3	-144	.89			
1425				15.9	7.94	166.9	-139	1.00		13.96	
1430				16.0	7.53	166.0	-155	1.07			
1435	45			16.4	7.12	166.1	-158	1.09		13.96	
1440				16.4	7.07	166.3	-158	1.10			
1445				16.2	6.99	166.4	-155	1.18		13.96	
1450	60			16.1	6.95	165.8	-148	.75 #	22		# DO Injected By tube probe

Sample Condition Color: None Odor: None Appearance: Clear
Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading 0.0

Comments

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 00002 Well ID: GM-34D2
Date: 9/29/06 Sampled By: PP Prezorski
Sampling Time: 1315 Recorded By: PP
Weather: Mostly cloudy, 63°F Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): / Serial #: /

Purging Information
Casing Material: steel Purge Method: Non-dedicated Bladder / Low flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 510 Bottom 520
Sounded Depth (ft bmp): 520 Pump Intake Depth (ft bmp): 515
Depth to Water (ft bmp): 15.81 Purge time Start: 12:05 Finish: 1315

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
12:05	0	≈400		16.4	6.62	100.4	62	2.13		15.81	
12:10				15.1	7.20	88.1	28	.81		[illegible]	
12:15				15.4	7.46	87.4	25	.61		15.81	
12:20	15			15.9	7.84	86.8	19	.57			
12:25				16.9	7.72	86.2	9	.32		15.81	
12:30				16.2	8.20	83.0	-3	.51			
12:35	30			15.9	9.06	76.2	-21	.69			
12:40				15.7	7.19	91.8	-4	2.75		15.79	
12:45				15.4	6.32	93.4	-1	3.66			
12:50	45			15.4	6.17	92.7	2	4.19			
1255				15.9	6.10	91.6	6	4.68		15.79	
1300				15.3	6.05	91.2	11	4.76			
1305	60			15.7	5.98	90.7	16	4.96			
1310				16.1	6.01	90.2	18	4.96		15.78	
1315				15.9	6.03	90.0	19	4.96	.22		

Sample Condition Color: — Odor: — Appearance: —
Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading 0

Comments

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ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: N-Grumman UV2 | Project No.: N00134.0406.0002 | Page: 1 of 1

Site Location: Bethpage, NY | Date: 9/21/06

Site/Well No.: GM-35D2 | Replicate No.: N/A | Code No.: —

Weather: Partly cloudy, 69°F | Sampling Time: Begin 2:05 | End 2:09 pm

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	530
Depth to Water (ft bmp)	507 (packer)
Water-Level Elevation (ft)	—
Water Column in Well (ft)	23
Casing Diameter/Type	4" (0.65) / PVC
Gallons in Well	14.95
Gallons Pumped/Bailed Prior to Sampling	45 (x3)
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 12:52 pm end 2:00 pm
Pumping Rate (gpm)	—
Evacuation Method	Dedicated Bladder/packer

Field Parameters

Field Parameters	I	1V	2V	3V
Color	Colorless	colorless	colorless	colorless
Odor	none	none	none	none
Appearance	clear	clear	clear	clear
pH (s.u.)	5.56	5.65	5.55	5.59
Conductivity (mS/cm)	—	—	—	—
(µmhos/cm)	112.2	112.8	112.2	110.6
Turbidity (NTU)	—	—	—	—
Temperature (°C)	15.0	14.6	14.7	15.1
Dissolved Oxygen (mg/L)	5 gallon containers	✓	✓	✓
Salinity (%)	—	✓	✓	✓
Sampling Method		3 well volume		

Remarks: DTW = 39.52

507 − 39.52 × .43 + 50 = 255 psi (rounded up)

✓ = 5 gallon container

No turbidity meter

Split sample with Bethpage Water District

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: RF

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 00002 Well ID: G-38D
Date: 9/21/06 Sampled By: PP
Sampling Time: 3:55pm Recorded By: PP
Weather: Partly cloudy, 69°F Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): Serial #:

Purging Information
Casing Material: PVC Purge Method: Dedicated Bladder / Low Flow
Casing Diameter: 4" Screen Interval (ft bmp): Top Bottom
Sounded Depth (ft bmp): 40.340 Pump Intake Depth (ft bmp):
Depth to Water (ft bmp): 38.26 Purge time Start: 2:45pm Finish: 3:55pm

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
2:45	—	—	—	14.3	5.24	125.4	145	3.67	—	—	—
2:50	—	—	—	14.1	5.25	124.5	153	1.87	—	—	—
2:55	—	—	—	13.7	5.28	125.5	150	.74	—	38.20	—
3:00	—	—	—	13.6	5.35	126.8	85	.49	—	—	—
3:05	—	—	—	13.7	5.42	126.9	46	.48	—	38.19	—
3:10	—	—	—	13.6	5.28	124.9	35	.50	—	—	—
3:15	—	—	—	13.6	5.23	123.9	43	.47	—	38.18	—
3:20	—	—	—	13.4	5.22	124.0	46	.38	—	—	—
3:25	—	—	—	13.4	5.22	123.9	25	.39	—	38.18	—
3:30	—	—	—	13.4	5.21	124.1	47	.43	—	—	—
3:35	—	—	—	13.4	5.23	124.5	47	.44	—	38.17	—
3:40	—	—	—	13.4	5.23	124.6	43	.42	—	—	—
3:45	—	—	—	13.4	5.24	124.3	31	.42	—	38.16	—
3:50	—	—	—	13.4	5.24	124.5	28	.40	—	—	—
3:55	—	—	—	13.4	5.25	124.6	27	.37	—	38.16	—

Sample Condition Color: Colorless Odor: None Appearance: clear
Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading At wellhead 0 ppm

Comments Lock sticks
GM-38D closer to Arthur Ave
No turbidity meter
Split sample with Bethpage water District

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: N4001348.0406 Task: 00002 Well ID: GM-38D2
Date: 9/21/06 Sampled By: PP
Sampling Time: 5:05pm Recorded By: AR
Weather: Partly cloudy, 69°F Coded Replicate No.: Rep 092106

Instrument Identification
Water Quality Meter(s): / Serial #: /

Purging Information
Casing Material: PVC Purge Method: Dedicated Bladder / Low Flow
Casing Diameter: 4" Screen Interval (ft bmp): Top / Bottom /
Sounded Depth (ft bmp): 495 Pump Intake Depth (ft bmp): /
Depth to Water (ft bmp): 40.97 Purge time Start: 4:05pm Finish: 5:05

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. µS (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
4:05	—	—	—	14.9	5.18	72.1	72	4.92	—	—	—
4:10	—	—	—	14.1	5.15	69.1	62	2.77	—	—	—
4:15	—	—	—	13.8	5.11	68.1	59	1.96	—	40.99	—
4:20	—	—	—	14.0	5.15	67.8	56	1.93	—	—	—
4:25	—	—	—	14.5	5.13	67.5	56	2.06	—	41.02	—
4:30	—	—	—	14.4	5.13	67.7	48	.94	—	—	—
4:35	—	—	—	14.3	5.07	68.8	35	.58	—	41.05	—
4:40	—	—	—	14.1	5.08	69.6	25	.55	—	—	—
4:45	—	—	—	14.0	5.09	69.3	28	.53	—	41.07	—
4:50	—	—	—	13.9	5.09	68.9	20	.51	—	—	—
4:55	—	—	—	13.9	5.11	68.5	19	.51	—	41.03	41.03
5:00	—	—	—	13.8	5.11	68.5	22	.50	—	—	—
5:05	—	—	—	13.7	5.09	68.7	26	.48	—	40.99	—

Sample Condition Color: Colorless Odor: None Appearance: Clear
Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading: At wellhead 0 ppm

Comments: No turbidity meter
GM-38D2 located 10' from GM-38D
Split sample with Bethpage water District

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 00002 Well ID: GM-39D
Date: 9/18/06 Sampled By: PP
Sampling Time: 1:50 pm Recorded By: PP
Weather: Partly cloudy 83°F Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): Serial #:

Purging Information
Casing Material: PVC Purge Method: Dedicated Bladder / Low Flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 262 ~~270~~ Bottom ~~290~~ 282
Sounded Depth (ft bmp): ~~290~~ 282 Pump Intake Depth (ft bmp): 272 ~~275~~
Depth to Water (ft bmp): 37.65 Purge time Start: 12:50 pm Finish: 1:50 pm

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (mS/cm) (µS)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
12:50	—	—	—	27.5	5.76	371	-124	6.40	—	—	—
12:55	—	—	—	23.9	5.72	112.0	-254	6.76	—	37.65	—
1:00	—	—	—	23.4	5.92	105.7	-240	6.03	—	—	—
1:05	—	—	—	24.8	5.53	101.4	-199	5.96	—	37.65	—
1:10	—	—	—	25.7	5.59	99.7	-164	5.71	—	—	—
1:15	—	—	—	26.3	5.59	99.2	-148	5.06	—	37.65	—
1:20	—	—	—	26.3	5.58	99.3	-95	5.20	—	—	—
1:25	—	—	—	26.5	5.55	99.0	-125	5.10	—	37.65	—
1:30	—	—	—	26.7	5.61	98.4	-118	5.63	—	—	—
1:35	—	—	—	26.8	5.62	98.4	-100	5.43	—	37.67	—
1:40	—	—	—	26.3	5.62	97.8	-77	5.64	—	—	—
1:45	—	—	—	26.3	5.60	97.7	-71	5.02	—	37.65	—
1:50	—	—	—	26.2	5.62	97.5	-61	5.42	—	37.65	—

Sample Condition Color: Colorless Odor: None Appearance: Clear
Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading: 0 ppm at wellhead

Comments: Long purge hose (around car)
No turbidity meter. Temp from wellhead 19.0°C taken after sample.

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 00002 Well ID: GM-39D2
Date: 9/18/06 Sampled By: PP
Sampling Time: Recorded By: PP
Weather: clear 77°F Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): Serial #:

Purging Information
Casing Material: PVC Purge Method: Dedicated Bladder / Low Flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 410 Bottom 420
Sounded Depth (ft bmp): 420 Pump Intake Depth (ft bmp): 415
Depth to Water (ft bmp): 40.60 Purge time Start: 5:25pm Finish: 6:25pm

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp. (°C)	pH (SI Units)	Spec. Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
5:25	—	—	—	22.0	5.96	106.8	128	7.21	—	—	—
5:30	—	—	—	19.4	5.29	101.7	117	5.76	—	40.61	—
5:35	—	—	—	19.1	5.36	104.9	116	5.70	—	—	—
5:40	—	—	—	17.8	5.43	104.6	113	6.33	—	40.61	101.0 = uS
5:45	—	—	—	17.4	5.36	100.8	96	6.21	—	—	—
5:50	—	—	—	17.0	5.36	101.3	87	7.67	—	40.60	—
5:55	—	—	—	17.2	5.37	100.9	90	7.37	—	—	—
6:00	—	—	—	17.0	5.32	100.5	90	6.59	—	40.60	—
6:05	—	—	—	17.1	5.32	100.3	72	7.42	—	—	—
6:10	—	—	—	16.9	5.34	100.9	65	7.32	—	40.63	—
6:15	—	—	—	16.9	5.36	100.8	60	7.53	—	—	—
6:20	—	—	—	16.8	5.33	100.8	57	6.30	—	40.59	—
6:25	—	—	—	16.9	5.36	100.7	56	6.64	—	—	—

Sample Condition Color: Colorless Odor: None Appearance: clear
Sample Collection
Parameter: See CoC Container: No. Preservative:

PID Reading At wellhead 0 ppm
Comments no turbidity meter

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 00002 Well ID: GM-73D
Date: 9/14/06 Sampled By: PP
Sampling Time: 4:20pm Recorded By: PP
Weather: Rain, overcast 70°F Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): Serial #:

Purging Information
Casing Material: PVC Purge Method: Dedicated Bladder / Low Flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 401 Bottom 411
Sounded Depth (ft bmp): 411 Pump Intake Depth (ft bmp): 406
Depth to Water (ft bmp): 42.95 Purge time Start: 3:20 pm Finish: 4:20 pm

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. µS/cm	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
3:20	—	—	—	17.2	4.98	105.2	219	6.64	—	—	—
3:25	—	—	—	16.8	4.99	104.8	217	6.29	—	42.96	—
3:30	—	—	—	16.6	5.09	104.8	212	6.89	—	—	—
3:35	—	—	—	16.5	5.08	104.1	215	6.55	—	42.96	—
3:40	—	—	—	16.4	5.14	103.5	215	7.27	—	—	—
3:45	—	—	—	16.3	5.14	103.4	215	7.19	—	42.96	—
3:50	—	—	—	16.3	5.14	103.6	216	6.37	—	—	—
3:55	—	—	—	16.5	5.15	103.6	217	6.50	—	42.96	—
4:00	—	—	—	17.1	5.15	103.3	216	6.60	—	—	—
4:05	—	—	—	17.2	5.13	103.3	217	7.18	—	42.96	—
4:10	—	—	—	17.2	5.14	103.1	217	6.91	—	—	—
4:15	—	—	—	17.2	5.14	103.2	219	7.07	—	42.96	—
4:20	—	—	—	17.3	5.14	103.1	219	6.84	—	—	—

Sample Condition Color: Colorless Odor: None Appearance: Clear
Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading: NO PID due to Rain

Comments: No turbidity Meter

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: M00134.0406 Task: 0002 Well ID: GM-73D2
Date: 9/14/06 Sampled By: PP
Sampling Time: 6:00pm Recorded By: PP
Weather: Overcast 69°F Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): Serial #:

Purging Information
Casing Material: PVC Purge Method: Dedicated Bladder / Low Flow
Casing Diameter: 4 Screen Interval (ft bmp): Top 532 Bottom 552
Sounded Depth (ft bmp): 552 Pump Intake Depth (ft bmp): 542
Depth to Water (ft bmp): 44.98 Purge time Start: 5:00pm Finish: 6:00pm

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
5:00	—	—	—	19.0	5.04	104.8	209	7.46	—	—	—
5:05	—	—	—		5.13	99.7	213	7.02	—	44.95	—
5:10	—	—	—	18.2	5.17	97.3	208	7.50	—	—	—
5:15	—	—	—	18.0	5.20	96.5	205	6.33	—	44.93	—
5:20	—	—	—	17.8	5.19	96.2	208	5.80	—	—	—
5:25	—	—	—	17.8	5.20	95.9	209	5.50	—	44.91	—
5:30	—	—	—	17.7	5.18	95.8	211	6.02	—	—	—
5:35	—	—	—	17.7	5.15	95.8	206	5.81	—	44.92	—
5:40	—	—	—	17.7	5.13	95.9	211	6.16	—	—	—
5:45	—	—	—	17.7	5.12	95.9	212	6.42	—	44.91	—
5:50	—	—	—	17.6	5.12	95.8	214	6.52	—	—	—
5:55	—	—	—	17.6	5.12	95.9	208	5.60	—	44.93	—
6:00	—	—	—	17.5	5.12	95.8	213	5.48	—	—	—

Sample Condition Color: Colorless Odor: Appearance: Clear
Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading: No PID due to Rain
Comments: Located 22' from GM-73D

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001349.0406 Task: 00002 Well ID: GM-74I
Date: 9/14/06 Sampled By: PP
Sampling Time: 1105pm Recorded By: PP
Weather: Rain, overcast 69°F Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): Serial #:

Purging Information
Casing Material: PVC Purge Method: Dedicated Bladder / Low Flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 94 Bottom 114
Sounded Depth (ft bmp): 114 Pump Intake Depth (ft bmp): 104
Depth to Water (ft bmp): 38.54 Purge time Start: 12:20 pm Finish: 1205pm

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
12:20	—	—	—	18.7	5.27	132.0	208	6.84	—	—	—
12:25	—	—	—	18.0	5.42	106.3	208	5.66	—	38.58	—
12:30	—	—	—	17.7	5.53	99.1	202	5.75	—	—	—
12:35	—	—	—	17.8	5.53	96.2	200	5.85	—	38.58	—
12:40	—	—	—	17.9	5.56	93.9	201	6.51	—	—	—
12:45	—	—	—	17.9	5.58	92.6	201	5.81	—	38.58	—
12:50	—	—	—	17.9	5.59	91.9	200	5.73	—	—	—
12:55	—	—	—	17.9	5.57	90.7	197	5.68	—	38.58	—
1:00	—	—	—	17.9	5.60	90.2	199	6.35	—	—	—
1:05	—	—	—	17.9	5.60	90.2	199	6.21	—	38.58	—

Sample Condition Color: Colorless Odor: None Appearance: clear
Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading: No PID due to Rain
Comments: No turbidity Meter

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 0002 Well ID: GM-74D
Date: 9/14/06 Sampled By: BB
Sampling Time: 2130pm Recorded By: BB
Weather: Rain 70s Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): / Serial #: /

Purging Information
Casing Material: PVC Purge Method: Dedicated Bladder / Low Flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 295 Bottom 305
Sounded Depth (ft bmp): 305 Pump Intake Depth (ft bmp): 300
Depth to Water (ft bmp): 44.20 Purge time Start: 1:30 pm Finish: 2:30 pm

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
1:30	—		—	18.4	4.91	93.2	208	5.55	—	—	—
1:35	—		—	18.3	4.83	86.4	224	4.21	—	44.20	—
1:40	—		—	18.3	4.84	85.3	225	4.41	—	—	—
1:45	—		—	18.2	4.86	84.1	226	4.86	—	44.20	—
1:50	—		—	18.2	4.84	83.4	223	4.95	—	—	—
1:55	—		—	18.1	4.85	83.1	226	5.26	—	44.20	—
2:00	—		—	18.1	4.89	83.2	228	5.16	—	—	—
2:05	—		—	18.0	4.87	83.2	230	5.00	—	44.20	—
2:10	—		—	17.9	4.88	83.5	223	5.58	—	—	—
2:15	—		—	17.9	4.86	83.5	228	5.09	—	44.20	—
2:20	—		—	17.8	4.87	83.6	230	5.44	—	—	—
2:25	—		—	17.8	4.85	83.5	231	5.07	—	44.20	—
2:30	—		—	17.8	4.86	83.5	226	4.96	—	—	—

Sample Condition Color: colorless Odor: None Appearance: clear
Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading: No PID due to Rain
Comments: No turbidity meter

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 00002 Well ID: GM-74D2
Date: 9/15/06 Sampled By: PP
Sampling Time: 1205 Recorded By: PP
Weather: Overcast 68°F Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): ✓ Serial #: ✓

Purging Information
Casing Material: PVC Purge Method: Dedicated Bladder / Low Flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 542 Bottom 562
Sounded Depth (ft bmp): 562 Pump Intake Depth (ft bmp): 552
Depth to Water (ft bmp): 50.33 Purge time Start: 10:55AM Finish: 1205

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. µS/cm	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
10:55	—	—	—	19.0	5.00	160.1	152	4.81	—	—	—
11:00	—	—	—	18.9	5.04	135.0	151	3.65	—	50.33	—
11:05	—	—	—	18.7	5.03	101.0	150	2.66	—	—	—
11:10	—	—	—	18.4	5.09	87.5	150	1.23	—	50.33	—
11:15	—	—	—	18.3	5.29	85.8	129	1.67	—	—	—
11:20	—	—	—	18.3	5.44	84.8	133	1.81	—	50.35	—
11:25	—	—	—	18.2	5.46	83.2	136	2.43	—	—	—
11:30	—	—	—	18.2	5.42	81.4	139	2.61	—	50.35	—
11:35	—	—	—	18.2	5.38	80.1	143	2.56	—	—	—
11:40	—	—	—	18.4	5.30	77.3	143	2.51	—	50.35	—
11:45	—	—	—	18.4	5.28	75.9	144	2.68	—	—	—
11:50	—	—	—	18.5	5.23	75.3	144	2.66	—	50.35	—
11:55	—	—	—	18.5	5.23	74.9	129	2.45	—	—	—
12:00	—	—	—	18.6	5.19	74.4	134	2.57	—	50.35	—
1205	—	—	—	18.5	5.19	74.1	139	2.34	—	—	—

Sample Condition Color: colorless Odor: None Appearance: clear
Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading: 0 ppm at wellhead

Comments: No turbidity meter
No cap on well. Retrieved well cap 5.5' below top of casing.

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001349.0406 Task: 00002 Well ID: GM-75D2
Date: 9/22/06 Sampled By: PP
Sampling Time: 4:00pm Recorded By: PP
Weather: Breezy, Partly cloudy, 72°F Coded Replicate No.: N/A
Instrument Identification
Water Quality Meter(s): Serial #:

Purging Information
Casing Material: PVC Purge Method: Dedicated Bladder / Low Flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 505 Bottom 525
Sounded Depth (ft bmp): 525 Pump Intake Depth (ft bmp): 515
Depth to Water (ft bmp): 34.75 Purge time Start: 3:00pm Finish: 4:00pm

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
3:00	—	—	—	17.7	5.08	122.9	96	6.06	—	—	—
3:05	—	—	—	15.4	5.10	122.0	97	4.26	—	34.73	—
3:10	—	—	—	15.8	5.07	120.6	103	3.60	—	—	—
3:15	—	—	—	15.8	5.05	119.3	105	3.44	—	34.72	5.05 = pH
3:20	—	—	—	15.6	5.07	118.4	109	3.42	—	—	—
3:25	—	—	—	15.5	5.05	118.7	108	3.82	—	34.72	—
3:30	—	—	—	15.5	5.06	118.6	111	3.09	—	—	—
3:35	—	—	—	15.5	5.07	118.8	113	3.52	—	34.71	—
3:40	—	—	—	15.5	5.07	118.3	114	3.10	—	—	—
3:45	—	—	—	15.7	5.01	118.2	116	3.48	—	34.70	—
3:50	—	—	—	15.7	5.01	118.0	119	3.35	—	—	—
3:55	—	—	—	15.5	4.93	118.0	123	3.34	—	34.72	—
4:00	—	—	—	15.5	5.01	118.0	124	3.49	—	—	—

Sample Condition Color: Colorless Odor: None Appearance: Clear
Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading: At wellhead 0ppm
Comments: no turbidity meter

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: NOC Quarterly | Project No.: NY003148.0406.0002 | Page: 1 of 1

Site Location: Bethpage, NY | Date: 9/26/06

Site/Well No.: GM-78S | Replicate No.: N/A | Code No.: —

Weather: / | Sampling Time: Begin 1525 End 1527

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	70.00
Depth to Water (ft bmp)	40.18
Water-Level Elevation (ft)	—
Water Column in Well (ft)	29.82
Casing Diameter/Type	4"
Gallons in Well	≈ 19.3
Gallons Pumped/Bailed Prior to Sampling	≈ 58
Sample Pump Intake Setting (ft bmp)	65'
Purge Time	begin 1458 end 1525
Pumping Rate (gpm)	2 gpm
Evacuation Method	Redi Flow Pump

Field Parameters

	I	1V	2V	3V
Color	None	"	"	"
Odor	None	"	"	"
Appearance	clear	"	"	"
pH (s.u.)	5.93	6.99	5.93	6.23
Conductivity (mS/cm)	274	282	291	289
~~(umhos/cm)~~	—	—	—	—
Turbidity (NTU)	519	179	5.29	6.69
Temperature (°C)	16.0	15.1	15.0	15.1
Dissolved Oxygen (mg/L)				
Salinity (%)				

Sampling Method: Redi flow/3w Volume

Remarks: 0.0 @ well Head.

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: P.P./D. Zuck

Well Casing Volumes

Gal./Ft.	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 00002 Well ID: GM-78 I
Date: 9/20/06 Sampled By: R. Prezanski / D. Zack
Sampling Time: 1645 Recorded By: D. Zack
Weather: Sunny 70° Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): ✓ Serial #: ✓

Purging Information
Casing Material: PVC Purge Method: Rodi flo / Low Flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 90 Bottom 110
Sounded Depth (ft bmp): 110 Pump Intake Depth (ft bmp): 100
Depth to Water (ft bmp): 40.6 Purge time Start: 1545 Finish: 1645

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
1545	0	~400	—	15.9	6.22	141.4	131	4.50	—	40.6	
1550	5			15.7	6.08	145.7	121	4.51	2.14	40.23	
1555	10			16.2	6.06	146.7	110	4.31	1.67		
1600	15			16.5	6.05	144.2	103	4.14	1.05		
1605	20			16.8	6.03	142.5	74	3.90	.87		
1610	25			16.8	6.02	141.8	60	4.00	.85	40.22	
1615	30			16.6	6.02	140.7	44	3.95	.63		
1620	35			16.4	6.03	140.4	54	3.99	.64		
1625	40			16.3	6.03	140.4	36	4.03	.72	40.21	
1630	45			16.2	6.02	140.0	28	4.05	.68		
1635	50			16.2	6.03	139.9	32	3.99	.59	40.22	
1640	55			16.3	6.03	139.1	45	3.98	.56		
1645	60			16.3	6.03	138.9	43	4.01	.80	40.22	

Sample Condition Color: — Odor: — Appearance: —

Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading 0.0

Comments

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 00002 Well ID: GM-79I
Date: 9/12/06 Sampled By: RP
Sampling Time: 4:20pm Recorded By: RP
Weather: 78°F clear Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): Serial #:

Purging Information
Casing Material: PVC Purge Method: Dedicated bladder / Low Flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 170 Bottom 180
Sounded Depth (ft bmp): 180 Pump Intake Depth (ft bmp): 175
Depth to Water (ft bmp): 39.81 Purge time Start: 3:35pm Finish: 4:20pm

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. µS (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
3:35	—	—	—	13.2	5.77	100.4	141	6.59	—	—	—
3:40	—	—	—	13.3	5.31	99.1	143	6.29	—	39.81	—
3:45	—	—	—	14.5	5.35	98.4	146		—	—	—
3:50	—	—	—	15.2	5.38	98.0	145	5.77	—	39.81	—
3:55	—	—	—	16.4	5.41	96.4	144	5.07	—	—	—
4:00	—	—	—	17.0	5.40	96.1	145	5.22	—	39.81	—
4:05	—	—	—	17.5	5.46	95.7	146	5.07	—	—	—
4:10	—	—	—	17.6	5.44	95.4	147	4.98	—	39.81	—
4:15	—	—	—	17.6	5.44	95.1	148	4.82	—	—	—
4:20	—	—	—	17.8	5.42	95.0	149	4.88	—	39.81	pH=5.42

Sample Condition Color: Colorless Odor: None Appearance: clear
Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading: 0ppm at wellhead
Comments: no Turbidity meter

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 00002 Well ID: GM-79D
Date: 9/12/06 Sampled By: BP
Sampling Time: 5:40pm Recorded By: BP
Weather: 75°F, clear Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): Serial #:

Purging Information
Casing Material: PVC Purge Method: Dedicated Bladder/Low Flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 280 Bottom 290
Sounded Depth (ft bmp): 290 Pump Intake Depth (ft bmp): 285
Depth to Water (ft bmp): 41.25 Purge time Start: 4:35pm Finish: 5:40pm

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. MS (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
4:35	—	—	—	15.0	5.41	95.6	158	6.02	—	—	—
4:40	—	—	—	13.8	5.38	95.3	159	5.65	—	41.25	—
4:45	—	—	—	14.6	5.23	96.8	164	4.83	—	—	—
4:50	—	—	—	14.2	5.14	97.1	168	3.76	—	41.25	—
4:55	—	—	—	14.1	5.20	96.4	168	4.02	—	—	—
5:00	—	—	—	14.10	5.17	96.2	168	4.26	—	41.25	96.2 = Spec Cond
5:05	—	—	—	14.10	5.18	95.7	169	4.66	—	—	—
5:10	—	—	—	13.9	5.15	95.4	170	4.72	—	41.25	—
5:15	—	—	—	13.8	5.17	95.4	171	4.91	—	—	—
5:20	—	—	—	13.7	5.16	95.6	171	4.83	—	41.25	—
5:25	—	—	—	13.6	5.16	95.7	172	4.93	—	—	—
5:30	—	—	—	13.6	5.15	95.7	161	5.17	—	41.25	—
5:35	—	—	—	13.6	5.14	95.6	162	4.86	—	—	—
5:40	—	—	—	13.5	5.13	95.8	166	4.77	—	41.25	—

Sample Condition Color: colorless Odor: None Appearance: clear
Sample Collection
Parameter: See COC Container: No. Preservative:

PID Reading 0ppm at wellhead
Comments no turbidity meter

ARCADIS

Water Sampling Log

Project: N- Grumman OU2 | Project No.: Na0134B.0466.00002 | Page: 1 of 1

Site Location: Bethpage, NY | Date: 10/5/06

Site/Well No.: FW-03 | Replicate No.: N/A

Weather: ✓ | Sampling Time: Begin 1108 End 1109

Evacuation Data

Measuring Point	TOC
Sounded Well Depth (ft bmp)	64
Depth to Water (ft bmp)	54.76
Depth to Packer (ft bmp)	—
Water Column in Well (ft)	9.24
Casing Diameter	2" (0.16)
Gallons in Well	1.48 x3
Gallons Pumped/Bailed Prior to Sampling	4.5
Sample Pump Intake Setting (ft bmp)	✓
Packer Pressure (psi)	✓
Pumping Rate (gpm)	
Evacuation Method	ReAcflow Pump
Sampling Method	3 well volume
Purge Time	Begin 1103 End 1107

Field Parameters

		1	1V	2V	3V
Color		Brown	tan	tan	light tan
Odor		none	slight	slight	slight
Appearance		Turbid	turbid	turbid	cloudy
pH (s.u.)		6.67	6.89	6.94	6.92
Conductivity	(mS/cm)	—	—	—	—
	(µmhos/cm)	412	403	408	415
Temperature (°C)		14.3	14.2	14.2	14.3
DO (mg/L)					
Turbidity (NTU)					
Time		1103	1105	1106	~~1109~~ 1107
DTW (ft bmp)					

Remarks: PID reading at wellhead zero

Constituents Sampled: See COC | Sampling Personnel: Prezorski / Williams

Well Casing Volumes

Gal./Ft.				
	1 1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1 1/2" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	mS/cm	Milisiemens per centimeter	VOC	Volatile Organic Compounds
°C	Degrees Celsius	s.u.	Standard units	umhos/cm	Micromhos per centimeter
ft	feet	NTU	Nephelometric Turbidity Units		
gpm	Gallons per minute	N/A	Not Applicable		
mg/L	Miligrams per liter	COC	Chain of Custody		

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 00002 Well ID: N-10624
Date: 10/2/09 Sampled By: D. Zuck
Sampling Time: 1421 Recorded By: D. Zuck
Weather: P/C ≈68° Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): ~ Serial #: ~

Purging Information
Casing Material: Steel Purge Method: Non-dedicated Bladder / Low flow
Casing Diameter: 2" Screen Interval (ft bmp): Top 190 Bottom 194
Sounded Depth (ft bmp): 194 Pump Intake Depth (ft bmp): 192
Depth to Water (ft bmp): 52.72 Purge time Start: 13:20 Finish: 1420

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
1320	0	≈400		16.5	9.98	99.0	-278	6.21		52.72	
1325				16.1	9.74	100.9	-309	3.62			
1330				16.1	9.80	101.3	-311	3.39		56.62	
1335	15			16.5	9.71	104.7	-316	2.62			
1340				17.6	9.81	105.2	-326	1.64		57.45	
1345				17.2	10.00	102.3	-331	1.33			
1350	30			16.2	10.04	102.6	-338	1.43		59.41	
1355				15.7	10.07	102.4	-343	1.11			
1400				15.9	10.04	102.0	-346	.96		60.21	
1405	45			15.2	9.99	102.4	-331	1.29			
1410				15.2	10.02	102.9	-335	1.20		60.64	
1415				15.7	9.99	102.2	-332	1.31			
1420	60			15.9	9.88	101.6	-329	1.23	85	—	

Sample Condition Color: None Odor: None Appearance: Clear → Slt. Turb.
Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading 0.0

Comments

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001346.0406 Task: 00002 Well ID: N-10627
Date: 10/2/06 Sampled By: D. Zuck
Sampling Time: 15:47 Recorded By: D. Zuck
Weather: P/C x 68° Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): ✓ Serial #: ✓

Purging Information
Casing Material: Steel Purge Method: Non-dedicated Bladder / Low flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 290 Bottom 295
Sounded Depth (ft bmp): 295 Pump Intake Depth (ft bmp): 293
Depth to Water (ft bmp): 31.65 Purge time Start: 1445 Finish: 1545

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp. (°C)	pH (SI Units)	Spec. Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
1445	0	≈400	0	16.7	9.35	138.3	-268	2.15		31.65	
1450				15.6	9.68	160.7	-303	1.86			
1455				15.5	9.85	166.6	-305	1.62			
1500	15			15.7	10.02	179.4	-311	1.49		32.85	
1505				15.7	10.23	195.0	-322	1.06			
1510				16.9	10.14	196.5	-336	.47			
1515	30			16.5	10.25	198.6	-331	.99		33.55	
1520				15.9	10.27	199.0	-322	1.14			
1525				15.9	10.29	195.9	-316	1.12			
1530	45			15.6	10.31	196.4	-315	1.09		33.55	
1535				16.1	10.22	179.0	-313	.96			
1540				16.2	10.17	168.9	-310	.99			
1545	60			16.2	10.14	168.7	-303	1.02	50	34.22	

Sample Condition Color: None Odor: None Appearance: Clear
Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading 0.0

Comments

ARCADIS

Water Sampling Log

Project: N-Grumman OU2 Project No.: NY001348.0406.00002 Page: 1 of 1

Site Location: Bethpage, NY Date: 10/2/16

Site/Well No.: N-10631 Replicate No.: N/A

Weather: P/C ≈ 68° Sampling Time: Begin ~~4:38~~ 4:53 End ~~4:53~~ 4:56 pm

Evacuation Data

Measuring Point	TOC
Sounded Well Depth (ft bmp)	67
Depth to Water (ft bmp)	37.31
Depth to Packer (ft bmp)	—
Water Column in Well (ft)	29.69
Casing Diameter	2" (.16)
Gallons in Well	4.75 x3
Gallons Pumped/Bailed Prior to Sampling	15
Sample Pump Intake Setting (ft bmp)	
Packer Pressure (psi)	—
Pumping Rate (gpm)	1
Evacuation Method	Rediflow Pump
Sampling Method	3 well volume
Purge Time	Begin 4:36pm End 4:53

Field Parameters

		1	1V	2V	3V
Color		Brown	Lt. Gray	Clear	" "
Odor		Slight	" "	" "	" "
Appearance		Turbid	" "	Clear	" "
pH (s.u.)		9.30	7.61	7.00	~~6.49~~
Conductivity	~~(mS/cm)~~	—	—	—	—
	(µmhos/cm)	150.2	129.1	124.8	125.1
Temperature (°C)		17.9	14.2	13.5	13.6
DO (mg/L)		—	—	—	—
Turbidity (NTU)		130	75	23	17
Time		~~4:36pm~~	4:43	4:49	4:53
DTW (ft bmp)		4:38			

Remarks:

Constituents Sampled: See COC Sampling Personnel: D. Zuck / P. Prezorski

Well Casing Volumes

Gal./Ft.				
	$1^{1/4}$" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	$1^{1/2}$" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	mS/cm	Milisiemens per centimeter	VOC	Volatile Organic Compounds
°C	Degrees Celsius	s.u.	Standard units	umhos/cm	Micromhos per centimeter
ft	feet	NTU	Nephelometric Turbidity Units		
gpm	Gallons per minute	N/A	Not Applicable		
mg/L	Miligrams per liter	COC	Chain of Custody		

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Water Sampling Log

Project NGC Quarterly Sampling Project No. NY001348.0406.00002 Page 1 of 1

Site Location Bethpage, NY Date 9/28/06

Site/Well No. MW-1GF Replicate No. N/A

Weather windy 70°F Sampling Time: Begin 5:30 End 5:32

Evacuation Data

Measuring Point	TOC
Sounded Well Depth (ft bmp)	58
Depth to Water (ft bmp)	44.27
Depth to Packer (ft bmp)	—
Water Column in Well (ft)	13.73
Casing Diameter	~~4"~~ 4" (.65)
Gallons in Well	8.9
Gallons Pumped/Bailed	x3
Prior to Sampling	27
Sample Pump Intake Setting (ft bmp)	
Packer Pressure (psi)	/
Pumping Rate (gpm)	2
Evacuation Method	Redflow pump
Sampling Method	3 well volume
Purge Time	Begin 5:15 End 5:30pm

Field Parameters

	1	1V	2V	3V
Color	None	None	"	"
Odor	None	None	"	"
Appearance	Slt. turb	Clear	"	"
pH (s.u.)	5.27	5.30	5.34	5.36
Conductivity (mS/cm)	—	—	—	—
Conductivity (µmhos/cm)	366	377	363	355
Temperature (°C)	17.0	17.0	17.1	17.2
DO (mg/L)	—	—	—	—
Turbidity (NTU)	30	12	9.1	10.0
Time	5:15pm	5:19	5:25	5:30
DTW (ft bmp)	44.27	—	—	—

Remarks: PID not working
Q=2 T=13.5 Iv=5

Constituents Sampled: See COC Sampling Personnel: D. Zuch/P. Pucarski

Well Casing Volumes

Gal./Ft.				
	1 1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1 1/2" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	mS/cm	Milisiemens per centimeter	VOC	Volatile Organic Compounds
°C	Degrees Celsius	s.u.	Standard units	umhos/cm	Micromhos per centimeter
ft	feet	NTU	Nephelometric Turbidity Units		
gpm	Gallons per minute	N/A	Not Applicable		
mg/L	Miligrams per liter	COC	Chain of Custody		

ARCADIS

Water Sampling Log

Project N-Grumman OU2 Project No. NY001348.8406.00002 Page 1 of 1

Site Location Bethpage, NY Date 9/28/06

Site/Well No. MW-2GF Replicate No. N/A

Weather 70's Sampling Time: Begin 1144 End 1146

Evacuation Data

Measuring Point	TOC
Sounded Well Depth (ft bmp)	59
Depth to Water (ft bmp)	43.53
Depth to Packer (ft bmp)	—
Water Column in Well (ft)	15.47
Casing Diameter	4" (.65)/PVC
Gallons in Well	10.05
Gallons Pumped/Bailed	x3
Prior to Sampling	31
Sample Pump Intake Setting (ft bmp)	✓
Packer Pressure (psi)	✓
Pumping Rate (gpm)	1
Evacuation Method	Rediflow Pump
Sampling Method	3 well volume
Purge Time	Begin 11:15AM End 11:48

Field Parameters

		1	1V	2V	3V
Color	colorless	" "	" "	" "
Odor	None	" "	" "	" "
Appearance	clear	" "	" "	" "
pH (s.u.)		6.01	6.37	6.38	6.31
Conductivity (~~mS/cm~~)		—	—	—	—
(µmhos/cm)		155.2	150.6	149.8	152.4
Temperature (°C)		15.6	15.2	15.1	15.2
DO (mg/L)		✓	—	—	—
Turbidity (NTU)		23	29	21	19
Time		11:15	11:26	11:37	11:48
DTW (ft bmp)					

Remarks: PID not working

Constituents Sampled: See COC Sampling Personnel: PP Prezorski DZ Zuck

Well Casing Volumes

Gal./Ft.	1 1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1 1/2" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	mS/cm	Milisiemens per centimeter	VOC	Volatile Organic Compounds
°C	Degrees Celsius	s.u.	Standard units	umhos/cm	Micromhos per centimeter
ft	feet	NTU	Nephelometric Turbidity Units		
gpm	Gallons per minute	N/A	Not Applicable		
mg/L	Miligrams per liter	COC	Chain of Custody		

ARCADIS

Water Sampling Log

Project NGC Grinded Scrap Project No. NY001348.0406.00002 Page 1 of 1

Site Location Bethpage NY Date 9/29/16

Site/Well No. PLT MW-04 Replicate No. N/A

Weather Mostly Cloudy 70° Sampling Time: Begin 3:18 End 3:18

Evacuation Data

Measuring Point	TOC
Sounded Well Depth (ft bmp)	56.5
Depth to Water (ft bmp)	42.74
Depth to Packer (ft bmp)	—
Water Column in Well (ft)	13.76
Casing Diameter	2" C.16) PVC
Gallons in Well	2.2
Gallons Pumped/Bailed	x3
Prior to Sampling	7
Sample Pump Intake Setting (ft bmp)	
Packer Pressure (psi)	✓
Pumping Rate (gpm)	1
Evacuation Method	Rediflow pump
Sampling Method	3 well Volume
Purge Time Begin	3:09 End 3:18

Field Parameters

		1V	2V	3V
Color	None	" "	" "	" "
Odor	None	" "	" "	" "
Appearance	Clear	" "	" "	" "
pH (s.u.)	6.22	6.21	6.21	6.20
Conductivity ~~(mS/cm)~~	—	—	—	—
(µmhos/cm)	322	325	324	325
Temperature (°C)	15.7	14.4	14.4	14.4
DO (mg/L)	—	—	—	—
Turbidity (NTU)	16	8.7	7.5	7.4
Time	3:09	3:12	3:15	3:18
DTW (ft bmp)				

Remarks: PID not working
1V = 3 minutes

Constituents Sampled: See COC Sampling Personnel: PP DZ
Preparer Zvolt

Well Casing Volumes

Gal./Ft.	1 1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1 1/2" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	mS/cm	Milisiemens per centimeter	VOC	Volatile Organic Compounds
°C	Degrees Celsius	s.u.	Standard units	umhos/cm	Micromhos per centimeter
ft	feet	NTU	Nephelometric Turbidity Units		
gpm	Gallons per minute	N/A	Not Applicable		
mg/L	Miligrams per liter	COC	Chain of Custody		

ARCADIS

Water Sampling Log

Project NY001348.0406 Project No. 00002 Page 1 of 1

Site Location Bethpage, NY Date 9/28/06

Site/Well No. PLT MW-05 Replicate No. N/A

Weather 1/C x70° Sampling Time: Begin 2:49 End 2:50

Evacuation Data

Measuring Point	TOC
Sounded Well Depth (ft bmp)	58
Depth to Water (ft bmp)	41.20
Depth to Packer (ft bmp)	—
Water Column in Well (ft)	16.8
Casing Diameter	2" (.16) / PVC
Gallons in Well	2.69
Gallons Pumped/Bailed	x3
Prior to Sampling	8.07
Sample Pump Intake Setting (ft bmp)	51
Packer Pressure (psi)	—
Pumping Rate (gpm)	1
Evacuation Method	Rediflow Pump
Sampling Method	3 well volume
Purge Time	Begin 2:40pm End 2:49pm

Field Parameters

	1	1V	2V	3V
Color	Brown	LT. Brown	" "	None
Odor	None	None	" "	None
Appearance	Turbid	" "	Slight Turb	Clear
pH (s.u.)	5.97	5.99	5.98	6.00
Conductivity (mS/cm)	—	—	—	—
Conductivity (µmhos/cm)	136.1	139.2	140.4	138.5
Temperature (°C)	16.3	15.8	15.8	15.9
DO (mg/L)	—	—	—	—
Turbidity (NTU)	850	380	110	35
Time	2:40pm	2:43	2:46	2:49
DTW (ft bmp)	41.20	—	—	

Remarks: PID Not working
1V = 3 minutes

Constituents Sampled: See COC Sampling Personnel: PP DZ
Prezorski Zvck

Well Casing Volumes

Gal./Ft.				
	1 1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1 1/2" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	mS/cm	Milisiemens per centimeter	VOC	Volatile Organic Compounds
°C	Degrees Celsius	s.u.	Standard units	umhos/cm	Micromhos per centimeter
ft	feet	NTU	Nephelometric Turbidity Units		
gpm	Gallons per minute	N/A	Not Applicable		
mg/L	Miligrams per liter	COC	Chain of Custody		

ARCADIS

Water Sampling Log

Project: N-Grumman OU2 Project No.: NY001349.0406.00002 Page: 1 of 1

Site Location: Bethpage, NY Date: 9/28/06

Site/Well No.: PLT MW-06 Replicate No.: N/A

Weather: Windy 70s Sampling Time: Begin 2:19 End 2:21

Evacuation Data

Measuring Point	TOC
Sounded Well Depth (ft bmp)	62
Depth to Water (ft bmp)	43.77
Depth to Packer (ft bmp)	/
Water Column in Well (ft)	18.23
Casing Diameter	2" (.16)
Gallons in Well	2.92
Gallons Pumped/Bailed	x 3
Prior to Sampling	9
Sample Pump Intake Setting (ft bmp)	
Packer Pressure (psi)	/
Pumping Rate (gpm)	1
Evacuation Method	Redi-flow pump
Sampling Method	3 well volume
Purge Time	Begin 2:10 End 2:27
	2119

Field Parameters

Color	Lt Brown	" "	None	" "
Odor	Slight	trace	None	" "
Appearance	Turbid	Slt. Turb	Clear	" "
	1	1V	2V	3V
pH (s.u.)	5.94	5.75	5.73	5.70
Conductivity (~~mS/cm~~)	—	—	—	—
(µmhos/cm)	141.6	182.6	180.3	182.3
Temperature (°C)	20.0	17.2	17.1	17.1
DO (mg/L)	—	—	—	—
Turbidity (NTU)	400	150	32	17
Time	2:10	2:13	2:16	2:19
DTW (ft bmp)				

Remarks: PID not working well

Constituents Sampled: See COC Sampling Personnel: PP DZ Prazoski Zuck

Well Casing Volumes

Gal./Ft.	1 1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1 1/2" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	mS/cm	Milisiemens per centimeter	VOC	Volatile Organic Compounds
°C	Degrees Celsius	s.u.	Standard units	umhos/cm	Micromhos per centimeter
ft	feet	NTU	Nephelometric Turbidity Units		
gpm	Gallons per minute	N/A	Not Applicable		
mg/L	Milligrams per liter	COC	Chain of Custody		

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0406 Task: 00002 Well ID: HN-24I
Date: 9/29/06 Sampled By: P. Premoski / D. Zuck
Sampling Time: 1732 Recorded By: D. Zuck
Weather: P/C ~65° Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): Serial #:

Purging Information
Casing Material: PVC Purge Method: Rediflow Pump / Low Flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 148 Bottom 158
Sounded Depth (ft bmp): 158 Pump Intake Depth (ft bmp): 153
Depth to Water (ft bmp): 54.27 Purge time Start: 1630 Finish: 1730

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (mS/cm)	ORF* (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
1630	0	~2400		14.9	5.54	426	-817	5.69		54.27	
1635	"			15.2	5.54	426	-823	5.21			
1640				15.5	5.56	425	-854	4.92		54.24	
1645	15			15.2	5.56	421	-757	4.63			
1650				15.2	5.56	422	-747	4.55		54.25	
1655				15.1	5.56	420	-644	4.58			
1700	30			15.2	5.56	420	-561	4.37			
1705	"			15.2	5.57	420	-644	4.43		54.25	
1710	"			15.2	5.57	418	-568	4.39			
1715	45			15.2	5.57	[illegible]	-340	4.42			* 448
1720	"			15.1	5.58	419	-158	4.43		54.24	
1725	"			15.0	5.57	417	-159	4.37			
1730	60			15.0	5.57	417	-160	4.42	13		

Sample Condition Color: None Odor: None Appearance: Clear
Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading: At wellhead (open)

Comments: Wasp nest inside well cap
* ORP Sporadic Data readings

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project No. NY001348.0406.00002 Project Name NFC Quarterly Page 1 of 1

Site Location Bethpage NY Date 9/27/06

Site/Well No. HN-405 Replicate No. N/A Code No. N/A

Weather P/C ≈72° Sampling Time: Begin 1447 End 1449

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	/
Land Surface Elevation (ft)	/
Sounded Well Depth (ft bmp)	59
Depth to Water (ft bmp)	47.91
Water-Level Elevation (ft)	/
Water Column in Well (ft)	11
Casing Diameter/Type	4" (.65)
Gallons in Well	7.22 (x3)
Gallons Pumped/Bailed Prior to Sampling	21.65
Sample Pump Intake Setting (ft bmp)	54
Purge Time	begin 1429 end 1446
Pumping Rate (gpm)	1.5
Evacuation Method	Rediflo

Field Parameters

	I	IV	2V	3V
Color	None	"	"	"
Odor	None	"	"	"
Appearance	Slt. turb	Clear	"	"
pH (s.u.)	5.41	5.45	5.43	5.47
Conductivity (mS/cm)	118.9	125.3	145.6	154.3
(µmhos/cm)	—	—	—	—
Turbidity (NTU)	26	16	13	11
Temperature (°C)	15.8	15.4	15.4	15.3

Dissolved Oxygen (mg/L)

Salinity (%)

Sampling Method Rediflow/Low flow

Remarks

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel D. Zuck / P. Prezioso

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	5-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/l	Milligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001349.0406 Task: 00002 Well ID: HN-40I
Date: 4/27/06 Sampled by: D. Zack / P. Prezorski
Sampling Time: 1605 Recorded by: D. Zack
Weather: P/C ~72° Coded Replicate No.: MS/MSD

Instrument Identification
Water Quality Meter(s): ✓ Serial #: ✓

Purging Information
Casing Material: PVC Purge Method: Redi flo / Low Flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 108 Bottom 118
Sounded Depth (ft bmp): 119 Pump Intake Depth (ft bmp): 113
Depth to Water (ft bmp): 47.66 Purge time Start: 1515 Finish: 1600

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
1515	0	~300	—	19.5	4.69	295	128	7.17		47.66	
1520				17.3	5.38	296	133	7.06			
1525				17.4	5.39	292	132	6.97			
1530	15			17.4	5.37	198.5	132	6.94		47.50	
1535				19.0	5.12	190.5	131	6.91			
1540				18.7	5.25	190.5	131	6.81			
1545	30			18.4	5.25	190.4	131	6.94		47.47	
1550				18.5	5.27	191.2	132	7.06			
1555				18.4	5.26	190.5	132	6.97			
1600	45			18.3	5.25	189.4	133	6.97	15	47.47	

Sample Condition Color: None Odor: None Appearance: Cloudy
Sample Collection

Parameter:	Container:	No.	Preservative:
See COC			

PID Reading ✓

Comments

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: N-Grumman OU2 | Project No. NY001348.0406.00002 | Page 1 of 1

Site Location: Bethpage, NY | Date: 9/27/06

Site/Well No.: HN-42S | Replicate No.: N/A | Code No.: —

Weather: Partly cloudy, 71°F | Sampling Time: Begin 12:51 | End 1252

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	/
Land Surface Elevation (ft)	/
Sounded Well Depth (ft bmp)	60.00
Depth to Water (ft bmp)	49.85
Water-Level Elevation (ft)	/
Water Column in Well (ft)	10.15
Casing Diameter/Type	4" (0.65)
Gallons in Well	6.59
Gallons Pumped/Bailed Prior to Sampling	≈19.5
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1231 end 1232
Pumping Rate (gpm)	1
Evacuation Method	Rediflo pump

Field Parameters

	I	1V	2V	3V
Color	None	"	"	"
Odor	None	"	"	"
Appearance	Clear	"	"	"
pH (s.u.)	6.27	5.85	5.74	5.76
Conductivity ~~µS (mS/cm)~~	599	607	614	619
~~(µmhos/cm)~~	—	—	—	—
Turbidity (NTU)	13	9.5	8.0	7.8
Temperature (°C)	15.3	15.1	15.3	15.4

Dissolved Oxygen (mg/L):

Salinity (%):

Sampling Method: 3 well volume

Remarks:

PID reading at wellhead 0ppm

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: DZ BP

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS G&M, Inc.

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0400 Task: 00002 Well ID: HN-42I
Date: 9/27/08 Sampled By: D. Zack / P. Prozeski
Sampling Time: 12:10 Recorded By: D. Zack
Weather: P/C ≈70° Coded Replicate No.: N/A

Instrument Identification
Water Quality Meter(s): ✓ Serial #: ✓

Purging Information
Casing Material: PVC Purge Method: Rock Flo / Low Flow
Casing Diameter: 4" Screen Interval (ft bmp): Top 100 Bottom 110
Sounded Depth (ft bmp): 110 Pump Intake Depth (ft bmp): 105
Depth to Water (ft bmp): 49.18 Purge time Start: 10:55 Finish: 12:10

Field Parameter Measurements Taken During Purging

Time	Minutes Elapsed	Rate (mL/min)	Volume Purged	Temp (°C)	pH (SI Units)	Spec. Cond. (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Depth to Water (ft bmp)	Comments
1055	0	≈400	—	15.4	11.80	727	-1	6.58	—	49.18	
1100	5	|	|	15.3	11.82	690	-14	5.81	|		
1105	10	|	|	15.6	11.80	641	-28	5.37	|		
1110	15	|	|	16.0	11.76	617	-36	5.05	|	49.19	
1115	20	|	|	16.4	11.69	606	-43	5.03	|		
1120	25	|	|	16.9	11.64	588	-47	4.97	|	49.21	
1125	30	|	|	16.9	11.60	585	-50	5.00	|		
1130	35	|	|	17.1	11.58	576	-50	4.93	|	49.21	
1135	40	|	|	17.3	11.53	568	-53	4.97	+		
1140	45	|	|	17.5	11.51	550	-55	4.94	24	49.21	
1145	50	|	|	17.7	11.48	539	-56	4.96	|		
1150	55	|	|	17.9	11.42	492	-57	4.97	|		* Conductivity probe fouled
1155	60	|	|	17.9	11.39	457	-57	4.94	|		
1200	65	V	+	17.7	11.36	441	-57	5.00	|		
1205	70	|	|	17.9	11.34	426	-57	4.97	.19		
1210	75	|	|	18.0	11.32	416	-57	4.95	|		
		|	|					|		
		|	|					|		

Sample Condition Color: None Odor: None Appearance: Clear
Sample Collection
Parameter: Container: No. Preservative:
SpCnd

PID Reading 0.0

Comments

ARCADIS Geraghty & Miller

Water Sampling Log

Project: NORTHROP-GRUMMAN Project No.: NY006348041.0002 Page: 1 of 1

Site Location: BETHPAGE NY Date: 10-6-06

Site/Well No.: BPOW-11 Replicate No.: MS/MSD Code No.: —

Weather: OVERCAST 60° Sampling Time: Begin — End: 3:15

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	241
Depth to Water (ft bmp)	PAGER 29.19 169
Water-Level Elevation (ft)	—
Water Column in Well (ft)	72
Casing Diameter/Type	4" (0.65)
Gallons in Well	46.8 x3
Gallons Pumped/Bailed Prior to Sampling	140
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 2:30 end 3:00
Pumping Rate (gpm)	—
Evacuation Method	Dedicated submersible pump/peristaltic

Field Parameters

Field Parameters	1	2	3	3J
Color	—	—	—	COLORLESS
Odor	—	—	—	NONE
Appearance	—	—	—	CLEAR
pH (s.u.)	4.94	4.87	4.99	5.02
Conductivity (mS/cm)	—	—	—	—
(µmhos/cm)	166.7	151.8	153.4	152.6
Turbidity (NTU)	—	—	—	—
Temperature (°C)	15.0	13.9	12.8	12.9
Dissolved Oxygen (mg/L)	—	—	—	—
DTW Salinity (%)	29.19	29.15	29.24	2.23
Sampling Method	3	2	1	

Remarks: 169 − 30 x .43 + 50 = 110 ± 5

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: GWilliams

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: NORTHROP-GRUMMAN Project No. M00128B.0046.00002 Page 1 of 1

Site Location: BETHPAGE NY Date: 10-6-06

Site/Well No.: BPOW-1-2 Replicate No.: REP-10-6-06 Code No.: —

Weather: OVERCAST 60° Sampling Time: Begin 1205 End 2000

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	335
Depth to Water (ft bmp)	30.02 294
Water-Level Elevation (ft)	—
Water Column in Well (ft)	41
Casing Diameter/Type	4" (0.65)
Gallons in Well	26.65 x 3
Gallons Pumped/Bailed Prior to Sampling	80
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1130 end 1150
Pumping Rate (gpm)	—
Evacuation Method	dedicated submersible pump/packer

Field Parameters

Field Parameters	I	1	2	3
Color	—	—	—	COLORLESS
Odor	—	—	—	NONE
Appearance	—	—	—	CLEAR
pH (s.u.)	4.70	4.72	4.57	4.43
Conductivity (mS/cm)	—	—	—	—
(µmhos/cm)	38.6	38.9	52.1	53.6
Turbidity (NTU)	—	—	—	4.72
Temperature (°C)	16.4	14.7	14.2	14.7
Dissolved Oxygen (mg/L)	—	—	—	—
~~Salinity (‰)~~ DTW	8.02	30.09	30.65	—

Sampling Method: —

Remarks: 294 - 30.43 = 450 = 165

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: G Williams

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/l	Milligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: NORTHROP GRUMMAN Project No. NY001348.0006.00002 Page 1 of 1

Site Location: BETHPAGE Date: 10.6.05

Site/Well No.: BPOW-1-3 Replicate No.: N/A Code No.: —

Weather: OVERCAST 60° Sampling Time: Begin 11:30 End —

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	~~440~~ 419
Depth to Water (ft bmp)	~~58.18~~ 344
Water-Level Elevation (ft)	—
Water Column in Well (ft)	75
Casing Diameter/Type	4 (0.65)
Gallons in Well	48.75 ×3
Gallons Pumped/Bailed Prior to Sampling	146.25
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 11:50 end —
Pumping Rate (gpm)	—
Evacuation Method	Dedicated submersible pump/packer

Field Parameters

	1	1J	2J	3J
Color	—	—	—	COLORLESS
Odor	—	—	—	NONE
Appearance	—	—	—	CLEAR
pH (s.u.)	~~5.19~~ 6.69	4.83	9.72	4.74
Conductivity (mS/cm)	—	—	—	—
(µmhos/cm)	389	517	1882	176.0
Turbidity (NTU)	—	—	—	25.0
Temperature (°C)	11.1	10.4	10.3	10.0
Dissolved Oxygen (mg/L)	—	—	—	—
Salinity (%)	32.25 DTW	32.56	32.32	—
Sampling Method	—	—	—	—

Remarks: 344 − 352.7 x .43 + 50 = 185

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: G Williams

Well Casing Volumes

Gal./ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/l	Milligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS

Water Sampling Log

Project: N-Grumman OU2 | Project No.: NY001378.0406.00002 | Page: 1 of 1

Site Location: Bethpage, NY | Date: ~~10/4/06~~ 10/5/06

Site/Well No.: BPOW-2-1 | Replicate No.: N/A

Weather: ✓ | Sampling Time: Begin 3:53 End 3:55

Evacuation Data

Measuring Point	TOC
Sounded Well Depth (ft bmp)	400
Depth to Water (ft bmp)	✓
Depth to Packer (ft bmp)	310
Water Column in Well (ft)	90
Casing Diameter	4" (0.65)
Gallons in Well	58.5
Gallons Pumped/Bailed	x3
Prior to Sampling	175.5
Sample Pump Intake Setting (ft bmp)	✓
Packer Pressure (psi)	175
Pumping Rate (gpm)	✓
Evacuation Method	Dedicated submersible pump/packer
Sampling Method	3 Well volume
Purge Time	Begin 3:31 End 3:53 pm

Field Parameters

	1	1V	2V	3V
Color	colorless	colorless	colorless	colorless
Odor	None	None	None	None
Appearance	clear	clear	clear	clear
pH (s.u.)	5.00	5.00	4.91	4.88
Conductivity (mS/cm)	—	—	—	—
(µmhos/cm)	111.5	135.6	118.5	110.2
Temperature (°C)	16.2	12.2	11.3	11.2
DO (mg/L)				
Turbidity (NTU)				
Time				
DTW (ft bmp)	19.61	20.43	20.45	20.06

Remarks: PID reading at wellhead zero

Constituents Sampled: See COC | Sampling Personnel: Prezorski / Williams

Well Casing Volumes

Gal./Ft.				
	1 1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1 1/2" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	mS/cm	Milisiemens per centimeter	VOC	Volatile Organic Compounds
°C	Degrees Celsius	s.u.	Standard units	umhos/cm	Micromhos per centimeter
ft	feet	NTU	Nephelometric Turbidity Units		
gpm	Gallons per minute	N/A	Not Applicable		
mg/L	Miligrams per liter	COC	Chain of Custody		

ARCADIS

Water Sampling Log

Project: N-Grumman OU2 | Project No.: NY001314.0406.00002 | Page: 1 of 1

Site Location: Bethpage, NY | Date: 10/5/06

Site/Well No.: BPOW 2-2 | Replicate No.: N/A

Weather: / | Sampling Time: Begin 2:23 End 2:26pm

Evacuation Data

Measuring Point	TOC
Sounded Well Depth (ft bmp)	495
Depth to Water (ft bmp)	19.78
Depth to Packer (ft bmp)	419
Water Column in Well (ft)	76
Casing Diameter	4" (0.65)
Gallons in Well	49.40
Gallons Pumped/Bailed	x3
Prior to Sampling	148.20
Sample Pump Intake Setting (ft bmp)	/
Packer Pressure (psi)	225
Pumping Rate (gpm)	/
Evacuation Method	Dedicated submersible pump/bladder
Sampling Method	3 well volume
Purge Time	Begin 2:04 End 2:23pm

Field Parameters

	1	1V	2V	3V
Color	colorless	Colorless	colorless	Colorless
Odor	None	None	None	None
Appearance	clear	clear	clear	clear
pH (s.u.)	5.19	4.75	4.72	4.72
Conductivity (~~mS/cm~~)	—	—	—	—
(µmhos/cm)	111.5	93.4	93.7	82.8
Temperature (°C)	12.8	11.4	11.0	11.3
DO (mg/L)				
Turbidity (NTU)				
Time				
DTW (ft bmp)	19.78	22.15	22.34	/

Remarks: PID reading at wellhead 0

Constituents Sampled: See COC | Sampling Personnel: Prezorski / Williams

Well Casing Volumes

Gal./Ft.				
	1 1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1 1/2" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	mS/cm	Milisiemens per centimeter	VOC	Volatile Organic Compounds
°C	Degrees Celsius	s.u.	Standard units	umhos/cm	Micromhos per centimeter
ft	feet	NTU	Nephelometric Turbidity Units		
gpm	Gallons per minute	N/A	Not Applicable		
mg/L	Miligrams per liter	COC	Chain of Custody		

ARCADIS

Water Sampling Log

Project: NGC 062 | Project No.: NY001368.0406.00002 | Page 1 of 1

Site Location: Bethpage, NY | Date: 10/9/06

Site/Well No.: BPOW-3-1 | Replicate No.: N/A

Weather: Clear ≈70° | Sampling Time: Begin 1704 End 1705

Evacuation Data

Measuring Point	TOC
Sounded Well Depth (ft bmp)	516
Depth to Water (ft bmp)	26.07
Depth to Packer (ft bmp)	414
Water Column in Well (ft)	102
Casing Diameter	4" (.65)
Gallons in Well	66.3
Gallons Pumped/Bailed	x3
Prior to Sampling	198.9
Sample Pump Intake Setting (ft bmp)	
Packer Pressure (psi)	(414)-(26.07)x(.43)(50)=217
Pumping Rate (gpm)	
Evacuation Method	Dedicated Sub/Peristaltic
Sampling Method	3 well volume
Purge Time	Begin 1623 End 1704

Field Parameters

	I	1V	2V	3V
Color	None	"	"	"
Odor	None	"	"	"
Appearance	Clear	"	"	"
pH (s.u.)	3.77	3.97	3.98	4.01
Conductivity (mS/cm)				
(µmhos/cm)	226	143.4	143.7	143.2
Temperature (°C)	15.9	12.0	11.6	12.1
DO (mg/L)				
Turbidity (NTU)				
Time	16:23	1634	1644	1704
DTW (ft bmp)	28.07	31.62	31.16	28.38

Remarks: Outer fill around well casing has sunk ≈12' Down

Constituents Sampled: See COC | Sampling Personnel: D. Zuck / P. Prezorski

Well Casing Volumes

Gal./Ft.				
	1 1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1 1/2" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	mS/cm	Millisiemens per centimeter	VOC	Volatile Organic Compounds
°C	Degrees Celsius	s.u.	Standard units	umhos/cm	Micromhos per centimeter
ft	feet	NTU	Nephelometric Turbidity Units		
gpm	Gallons per minute	N/A	Not Applicable		
mg/L	Milligrams per liter	COC	Chain of Custody		

ARCADIS

Water Sampling Log

Project: NGC 042 | Project No.: NY003958406.2 | Page: 1 of 1

Site Location: Rotterdam NY | Date: 10/9/06

Site/Well No.: BROW-3-2 | Replicate No.: N/A | Code No.: N/A

Weather: Sunny ≈ 75° | Sampling Time: Begin ____ End ____

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	—
Sounded Well Depth (ft bmp)	647
Depth to Water (ft bmp)	27.31
~~Water Level Elevation~~ (ft) (DTW Packer)	273+503
Water Column in Well (ft)	144
Casing Diameter/Type	4" / 6.65
Gallons in Well	93.6
Gallons Pumped/Bailed Prior to Sampling	x3 = 280
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1318 end ____
Pumping Rate (gpm)	—
Evacuation Method	Dedicated Submersible/tubing

Field Parameters

	1318	1333	1349	
	I	1V	2V	3V
Color	clear	None	"	"
Odor	yes	trace	None	"
Appearance	clear	clear	"	"
pH (s.u.)	5.32	4.61	4.45	4.90
~~Conductivity (mS/cm)~~	—	—	—	—
(µmhos/cm)	115.4	150.7	99.7	77.9
Turbidity (NTU)	—	—	—	—
Temperature (°C)	14.7	12.7	14.7	13.9
Dissolved Oxygen (mg/L)	—	—	—	—
~~Salinity (%)~~ DTW	27.31	27.84	27.85	27.58
Sampling Method	3 Well Volume			

Remarks: 503 − 27.31 = 475.69 V. 43 = 204.54 + 50 = 255 PSI

- Left To Dump H2O @ 1400

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: D. Zuck / P. Pierzonski

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS

Water Sampling Log

Project: NGC 042 | Project No.: NY001348.0406.2 | Page: 1 of 1
Site Location: Batavia NY | Date: 10/10/06
Site/Well No.: BPOW-(4-1) | Replicate No.: N/A | Code No.: N/A
Weather: Sunny ≥ 20° | Sampling Time: Begin — End —

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	—
Land Surface Elevation (ft)	Standpipe / screen
Sounded Well Depth (ft bmp)	652 / 692
Depth to Water (ft bmp)	26.92
Depth to Packer	503 / 652
~~Water Level Elevation (ft)~~	
Water Column in Well (ft)	149 / 40
Casing Diameter/Type	4" (.65) / 2" (.16)
Gallons in Well	96.9 / 6.4
Gallons Pumped/Bailed Prior to Sampling	x3 290 / x3 19.2 (Total 103)
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin — end —
Pumping Rate (gpm)	—
Evacuation Method	Dedicated pump

Field Parameters

	I	1V	2V	3V
Color	None	Lt Brown	Tint Brown	" "
Odor	None	trace	" "	" "
Appearance	Clear	turb.	slt. turb	Clear
pH (s.u.)	5.22	5.72	5.81	5.49
Conductivity ~~(mS/cm)~~	—	—	—	—
(µmhos/cm)	63.9	86.0	64.8	5.59
Turbidity (NTU)	—	—	—	—
Temperature (°C)	15.6	12.3	12.6	12.9
Dissolved Oxygen (mg/L)	—	—	—	—
~~Salinity (%)~~ DTW	26.92	29.36	29.06	29.06

Sampling Method: 3 well volume
Remarks: Gas set @ 255 psi

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: K. Williams / D. Zuck

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean see-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: MW001348.0406.00002 Project No.: NGC042 Page: 1 of: 6

Site Location: Bethpage NY Date: 10/10/06

Site/Well No.: BPOW-4(-2) Replicate No.: N/A Code No.: N/A

Weather: Sunny 70° Sampling Time: Begin 1530 End 1532

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	/
Land Surface Elevation (ft)	/
Sounded Well Depth (ft bmp)	764
Depth to Water (ft bmp)	503
Water-Level Elevation (ft)	/
Water Column in Well (ft)	261
Casing Diameter/Type	4" (.65)
Gallons in Well	169.65
Gallons Pumped/Bailed Prior to Sampling	509
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin — end 1530
Pumping Rate (gpm)	—
Evacuation Method	

Field Parameters

Field Parameters	I	1V	2V	3V
Color	None	"	"	"
Odor	None	"	"	"
Appearance	clear	"	"	"
pH (s.u.)	4.50	4.38	4.20	~~5.59~~ (4.59)
Conductivity (mS/cm)	—	—	—	—
(µmhos/cm)	75.0	156.2	1066	79.3
Turbidity (NTU)	—	—	—	—
Temperature (°C)	13.9	12.6	13.6	13.1
Dissolved Oxygen (mg/L)	—	—	—	—
~~Salinity (%)~~ DTW	26.92	25.66	25.50	25.45

Sampling Method: 3 Well Volume

Remarks: Pressure set @ ≈ 25 psi

Constituents Sampled	Container Description	Number	Preservative
See COC			

Sampling Personnel: G. Williams / D. Zuk

Well Casing Volumes

Gal./Ft.				
	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	below measuring point	ml	milliliter	NTU	Nephelometric Turbidity Units
°C	Degrees Celsius	mS/cm	Milisiemens per centimeter	PVC	Polyvinyl chloride
ft	feet	msl	mean sea-level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
mg/L	Miligrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

Appendix C

Chain Of Custody Records

ARCADIS

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number/Name NY001348.0406.00002

Project Location BETHPAGE NY.

Laboratory SEVERN-TRENT-SHELTON

Project Manager CARLO SAN GIOVANNI

Sampler(s)/Affiliation G.W.

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 4 OMI VOA UOC TCL 2000 ASP (HCL)						Remarks	Total
GM-21D	L	7-5-06		2							2
GM-21I	L	1		2							2
FB 7-5-06	L	1		2							2

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/ Containers: 6

				Seal Intact?
Relinquished by: [signature]	Organization: ARCADIS	Date 7/5/06	Time _____	
Received by: _____	Organization: _____	Date / /	Time _____	Yes No N/A
Relinquished by: _____	Organization: _____	Date / /	Time _____	Seal Intact?
Received by: _____	Organization: _____	Date / /	Time _____	Yes No N/A

Special Instructions/Remarks: REPORT TO MELISSA KERNER

Delivery Method: ☐ In Person ☐ Common Carrier _____ (SPECIFY) ☐ Lab Courier ☐ Other _____ (SPECIFY)

ARCADIS

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number/Name NY001348.0406.00002

Project Location ~~DMEZ~~ BETHPAGE NY

Laboratory SEVERN-TRENT SHELTON

Project Manager CARLO SAN GIOVANNI

Sampler(s)/Affiliation G. Wi DZ

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	40ml VOA TCL VOC 2000 ASP (W/CL)						Remarks	Total
GM-34D	L	7-6-06		2							2
GM-34D-2				2							2
GM-79D				2							2
GM-79S				2							2
FB-7-6-06				2							2
TB-7-6-06				2							2

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/ Containers: 12

Relinquished by: [signature]	Organization: ARCADIS	Date 7/06/06	Time _____	Seal Intact?	
Received by: _____	Organization: _____	Date / /	Time _____	Yes No N/A	
Relinquished by: _____	Organization: _____	Date / /	Time _____	Seal Intact?	
Received by: _____	Organization: _____	Date / /	Time _____	Yes No N/A	

Special Instructions/Remarks: REPORT TO MELISSA REDNOR

Delivery Method: ☐ In Person ☒ Common Carrier FED EX (SPECIFY) ☐ Lab Courier ☐ Other _____ (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name NYOC 1348.0406.00002

Project Location Bethpage, NY

Laboratory STL

Project Manager Carlo SanGiovanni

Sampler(s)/Affiliation D. Zuck: Arcadis

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40mL VOAs HCl Pres. TCL VOC 2000 ASP						Remarks	Total
~~DUP~~ TB 7-7.06	L	7/7/06		2							2
GM-33D2	L	"		2							2
GM-75D	L	"		2							2
										Total No. of Bottles/ Containers	6

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: Dan Zuck	Organization: Arcadis	Date 7/7/06	Time 17:30	Seal Intact? (Yes) No N/A
Received by:	Organization:	Date / /	Time	
Relinquished by:	Organization:	Date / /	Time	Seal Intact? Yes No N/A
Received by:	Organization:	Date / /	Time	

Special Instructions/Remarks: Please Report Results To Melissa Rudel

Delivery Method: ☐ In Person ☒ Common Carrier FedEx (SPECIFY) ☐ Lab Courier ☐ Other _____ (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name NY 001348.0406.00002

Project Location BETHPAGE NY

Laboratory SEVERN TRENT SHELTON

Project Manager CARLO SALVATORE

Sampler(s)/Affiliation G.W. JC

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40 ml VOC 502.2						Remarks	Total
BPOW-1	L	7-10-06		2							2
BPOW-1-2	↓	↓		2							2
BPOW-1-3				2							2
FB 7-10-06				2							2

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/ Containers: 8

					Seal Intact?
Relinquished by: Gary Williams	Organization: Arcadis	Date 07/12/06	Time 5:40 pm		
Received by: _____	Organization: _____	Date / /	Time _____		Yes No N/A
Relinquished by: _____	Organization: _____	Date / /	Time _____		Seal Intact?
Received by: _____	Organization: _____	Date / /	Time _____		Yes No N/A

Special Instructions/Remarks:

Please send results to Melissa

ARCADIS

Laboratory Task Order No./P.O. No. _____ **CHAIN-OF-CUSTODY RECORD** Page ____ of ____

Project Number/Name B4001318.0406.00002

Project Location BETHPAGE NY

Laboratory SEVERN - TRENT - SHELTON

Project Manager CAROL SAN GIOVANNI

Sampler(s)/Affiliation G.W. T.C.

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40ml VOA VOC 502.2						Remarks	Total
BPOW-4-2	L	7-11-06		2							2
TB 7-11-06	✓	✓		2							2
										Total No. of Bottles/ Containers	4

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: [signature]	Organization: ARCADIS	Date 7/11/06	Time 6:01	Seal Intact? Yes No N/A
Received by:	Organization:	Date / /	Time	
Relinquished by:	Organization:	Date / /	Time	Seal Intact? Yes No N/A
Received by:	Organization:	Date / /	Time	

Special Instructions/Remarks: REPORT TO DAVE STERN

Delivery Method: ☐ In Person ☒ Common Carrier FED-EX SPECIFY ☐ Lab Courier ☐ Other SPECIFY

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number/Name NY001348.0406.00002

Project Location BETHPAGE NY

Laboratory SEVERN-TRENT SHELTON

Project Manager CARLO SAN GIOVANNI

Sampler(s)/Affiliation G.W. J.C.

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40ml VOA VOC 502.2 (HCl)	Remarks	Total
BPOW-4-1	L	7-12-06		2		2
BPOW-2-1	↓	↓		6*		6*
BPOW 2-2				2		2
REP-7-12-06				2		2
TB 7-12-06				2		2

Total No. of Bottles/ Containers 14

Sample Matrix: L = Liquid; S = Solid; A = Air

					Seal Intact?
Relinquished by: G.W.	Organization: ARCADIS	Date 7/12/06	Time 5:00		
Received by:	Organization:	Date / /	Time		Yes No N/A
Relinquished by:	Organization:	Date / /	Time		Seal Intact?
Received by:	Organization:	Date / /	Time		Yes No N/A

Special Instructions/Remarks: REPORT TO DAVE STERN

Delivery Method: ☐ In Person ☒ Common Carrier FED-EX SPECIFY ☐ Lab Courier ☐ Other _____ SPECIFY

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. _____ **CHAIN-OF-CUSTODY RECORD** Page ____ of ____

Project Number/Name NY 001348-D406-00002

Project Location BETHPAGE NY

Laboratory SEVERN-TRENT SHELTON

Project Manager CARLO SANGIOVANNI

Sampler(s)/Affiliation G.W. JE.

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40 m. VOA VOC 502.2 (HCl)						Remarks	Total
BPOW-31	L	7-13-06		2							2
BPOW-32				2							2
TB-7-13-06				2							2
										Total No. of Bottles/ Containers	6

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: [signature]	Organization: ARCADIS	Date 7/13/06	Time _____	Seal Intact?	
Received by: _____	Organization: _____	Date / /	Time _____	Yes	No N/A
Relinquished by: _____	Organization: _____	Date / /	Time _____	Seal Intact?	
Received by: _____	Organization: _____	Date / /	Time _____	Yes	No N/A

Special Instructions/Remarks: REPORT TO MELISSA RENNIE

Delivery Method: ☐ In Person ☒ Common Carrier FED EX SPECIFY ☐ Lab Courier ☐ Other _____ SPECIFY

AG 05-12/01

ARCADIS

GROUNDWATER

Laboratory Task Order No./P.O. No. OU-2 **CHAIN-OF-CUSTODY RECORD** Page ____ of ____

Project Number/Name NORTHROP-GRUMMAN N400B348.0406 00002

Project Location BETHPAGE

Laboratory SEVERN-TRENT STRATTON

Project Manager CHRIS SAN GIOVANNI

Sampler(s)/Affiliation G-W.

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	40ml VOA VOC 200 (HCl)						Remarks	Total
GM-20D	GW	7.21.06		6*							6*
GM-20I				2							2
REP-7-21-06				2							2
TB-7-21-06				2							2
										Total No. of Bottles/ Containers	12

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by:	Organization:	Date / /	Time	Seal Intact? Yes No N/A
Received by:	Organization:	Date / /	Time	
Relinquished by:	Organization:	Date / /	Time	Seal Intact? Yes No N/A
Received by:	Organization:	Date / /	Time	

Special Instructions/Remarks:

* PLEASE USE THIS SAMPLE FOR AN MS/MSD QA/QC SAMPLE

REPORT TO MELISSA, RESULT

Delivery Method: ☐ In Person ☒ Common Carrier FED EX SPECIFY ☐ Lab Courier ☐ Other SPECIFY

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name NGC 2006 2nd Quart. Samp.

Project Location Bethpage NY

Laboratory STL Shelton

Project Manager Carlo Santiovanni

Sampler(s)/Affiliation D Zuck : Arcadis

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40 mL Vials HCl preserved VOCs 2000 MSP						Remarks	Total
TB 7-28-06	L	7/28/06		2							2
MW-35D2	L	" "		2							2

Total No. of Bottles/ Containers 4

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: G. Williams / D Zuck	Organization: Arcadis	Date 7/29/06	Time _____	Seal Intact?	
Received by: _____	Organization: _____	Date / /	Time _____	(Yes) No N/A	
Relinquished by: _____	Organization: _____	Date / /	Time _____	Seal Intact?	
Received by: _____	Organization: _____	Date / /	Time _____	Yes No N/A	

Special Instructions/Remarks: Please Report Results to Malea Riedel

Delivery Method: ☐ In Person ☒ Common Carrier FedEx (SPECIFY) ☐ Lab Courier ☐ Other _____ (SPECIFY)

ARCADIS

Laboratory Task Order No./P.O. No. ______

CHAIN-OF-CUSTODY RECORD

Project Number/Name: NGC Bethpage Water Dist.

Project Location: Bethpage NY.

Laboratory: H2M

Project Manager: ~~[illegible]~~ Molloy

Sampler(s)/Affiliation: D. Zuck Arcadis

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40 mL vials, HCl preserved VOCs 2000 ASP						Remarks	Total
GM-35D2	L	7/28/06		3							3

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers: 3

Relinquished by: G. Williams	Organization: Arcadis	Date 7/28/06	Time 16:37	Seal Intact?
Received by: S. Nelson	Organization: H2M LABS	Date 7/28/06	Time 16:37	Yes No N/A
Relinquished by:	Organization:	Date / /	Time	Seal Intact?
Received by:	Organization:	Date / /	Time	Yes No N/A

Special Instructions/Remarks:

Delivery Method: ☒ In Person ☐ Common Carrier ______ (SPECIFY) ☐ Lab Courier ☐ Other ______ (SPECIFY)

ARCADIS

Laboratory Task Order No./P.O. No. _____ **CHAIN-OF-CUSTODY RECORD** Page ____ of ____

Project Number/Name NY 001348.0406.00002

Project Location BETHPAGE NY.

Laboratory SEVERN-TRENT SHELTON

Project Manager CARLO SALVATORE

Sampler(s)/Affiliation G.W.

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40ml VOA VOC 2000 ASP (ACL)						Remarks	Total
ONCT-1	L	8-1-06		2							2
ONCT-2				2							2
ONCT 3				2							2
ONCT INFLUENT				2							2
ONCT EFFLUENT				2							2
GP-1				6*							6*
GP-3				2							2
GP-1/3 INFLUENT				2							2
GP-1/3 EFFLUENT				2							2
REP-8-1-06				2							2
TB 8-1-06				2							2

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/ Containers 26

Relinquished by: SHW	Organization: ARCADIS	Date 8/1/06	Time	Seal Intact? Yes No N/A
Received by:	Organization:	Date / /	Time	
Relinquished by:	Organization:	Date / /	Time	Seal Intact? Yes No N/A
Received by:	Organization:	Date / /	Time	

Special Instructions/Remarks: REPORT TO MELISSA REINOL

* PLEASE USE THIS SAMPLE for AW MS/MSD QA/QC SAMPLE

Delivery Method: ☐ In Person ☒ Common Carrier FED EX (SPECIFY) ☐ Lab Courier ☐ Other _____ (SPECIFY)

ARCADIS

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number/Name: NY001348

Project Location: BETHPAGE

Laboratory: STL VT

Project Manager: DAVE STERN

Sampler(s)/Affiliation: G.W.

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: SUMMA CANISTER TO-15						Remarks	Total
ONCT INFLUENT	AIR	8-1-06		1							1
ONCT EFFLUENT	"	"		1							1
										Total No. of Bottles/ Containers	2

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: [signature]	Organization: ARCADIS	Date 8/1/06	Time	Seal Intact?	Yes No N/A
Received by:	Organization:	Date / /	Time		
Relinquished by:	Organization:	Date / /	Time	Seal Intact?	Yes No N/A
Received by:	Organization:	Date / /	Time		

Special Instructions/Remarks: REPORT TO DAVE STERN

Delivery Method: ☐ In Person ☒ Common Carrier FED-EX SPECIFY ☐ Lab Courier ☐ Other _____ SPECIFY

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. Grumman 002

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name NY001348.0406.00002

Project Location Bethpage, NY

Laboratory Severn Trent - Shelton

Project Manager Dave Stern

Sampler(s)/Affiliation PP

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	40 ml vial VOC 8260 Air (HCL)						Remarks	Total
TB091206	L	9/12/06		2							2
GM-79I	↓	↓		2							2
GM-79D	↓	↓		2							2

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/ Containers 6

Relinquished by: Pat Grajonka	Organization: Arcadis	Date 9/12/06	Time 6:50pm	Seal Intact?		
Received by:	Organization:	Date / /	Time	Yes	No	N/A
Relinquished by:	Organization:	Date / /	Time	Seal Intact?		
Received by:	Organization:	Date / /	Time	Yes	No	N/A

Special Instructions/Remarks: Report to Dave Stern

2 week TAT

Shipped: ☐ In Person ☒ Common Carrier Fed Ex (SPECIFY) ☐ Lab Courier ☐ Other (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. Grumman OU2

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name NY001348.0406.00002

Project Location Bethpage, NY

Laboratory Severn Trent - shelton

Project Manager Dave Stern

Sampler(s)/Affiliation PP

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40 ml vial VOC 8260 ASP (HCL)						Remarks	Total
TB091306	L	9/13/06		2							2
GM-15D2	↓	↓		2							2
GM-17D	↓	↓		2							2
										Total No. of Bottles/ Containers	6

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: Pat Pagliaroli	Organization: Arcadis	Date 9/13/06	Time 6:15pm	Seal Intact?	
Received by:	Organization:	Date / /	Time	Yes	No N/A
Relinquished by:	Organization:	Date / /	Time	Seal Intact?	
Received by:	Organization:	Date / /	Time	Yes	No N/A

Special Instructions/Remarks: Report to Dave Stern

2-week TAT

Delivery Method: ☐ In Person ☒ Common Carrier Fed Ex SPECIFY ☐ Lab Courier ☐ Other SPECIFY

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. Grumman 002

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name NY001348.0406.00002

Project Location Bethpage, NY

Laboratory Severn Trent - Shelton

Project Manager Dave Stern

Sampler(s)/Affiliation BP

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40 ml Vial VOC 2000 A/V (HCL)						Remarks	Total
TB091406	L	9/14/06		2							2
GM-73D2	↓	↓		2							2
GM-73D				2							2
GM-74D				2							2
GM-74I				2							2
										Total No. of Bottles/ Containers	10

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: Pat Colgrove	Organization: Arcadis	Date 9/14/06	Time 7:00pm	Seal Intact?	
Received by:	Organization:	Date / /	Time	Yes	No N/A
Relinquished by:	Organization:	Date / /	Time	Seal Intact?	
Received by:	Organization:	Date / /	Time	Yes	No N/A

Special Instructions/Remarks: Report to Dave Stern

2-Week TAT

Delivery Method: ☐ In Person ☒ Common Carrier Fed Ex (SPECIFY) ☐ Lab Courier ☐ Other (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. Grumman OU2

CHAIN-OF-CUSTODY RECORD

Project Number/Name NY001348.0406.00002

Project Location Bethpage, NY

Laboratory Severn Trent - Shelton

Project Manager Dave Stern

Sampler(s)/Affiliation PP

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40 ml vial VOC 2000 Aq (HCL)						Remarks	Total
TB091506	L	9/15/06		2							2
GM-7YD2	"	"		2							2
GM-18D	"	"		2							2
GM-17I	"	"		2							2
		2 Week TAT.									

Total No. of Bottles/ Containers: 8

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: Cat Galgowski	Organization: Arcadis	Date 9/15/06	Time 5:30pm	Seal Intact? Yes No N/A
Received by:	Organization:	Date / /	Time	
Relinquished by:	Organization:	Date / /	Time	Seal Intact? Yes No N/A
Received by:	Organization:	Date / /	Time	

Special Instructions/Remarks: Report to Dave Stern

Delivery Method: ☐ In Person ☒ Common Carrier Fed Ex (SPECIFY) ☐ Lab Courier ☐ Other (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. Grumman 002

CHAIN-OF-CUSTODY RECORD

Project Number/Name NY001348.0406.00002

Project Location Bethpage, NY

Laboratory Severn Trent - Shelton

Project Manager Dave Stern

Sampler(s)/Affiliation PP

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40 mL Vial VOC 2000 ASP (HCl)						Remarks	Total
TB091806	L	9/18/06		2							2
GM-39D	↓	↓		2							2
GM-21D	↓	↓		*6							6
GM-39D2	↓	↓		2							2
2-Week TAT											

Total No. of Bottles/ Containers: 12

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: Pat Rafferty	Organization: Arcadis	Date 9/18/06	Time 7:15pm	Seal Intact?	Yes No N/A
Received by:	Organization:	Date / /	Time		
Relinquished by:	Organization:	Date / /	Time	Seal Intact?	Yes No N/A
Received by:	Organization:	Date / /	Time		

Special Instructions/Remarks: Report to Dave Stern

* Please use this sample as a MS/MSD QA/QC sample

Delivery Method: ☐ In Person ☒ Common Carrier Fed Ex (SPECIFY) ☐ Lab Courier ☐ Other (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. Grumman 002

CHAIN-OF-CUSTODY RECORD

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Project Number/Name NY001378.0406.00002

Project Location Bethpage, NY

Laboratory Severn Trent - Shelton

Project Manager Dave Stern

Sampler(s)/Affiliation PP

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40 ml Vial VOC 8260 ASP (TCL)						Remarks	Total
TB092006	L	9/20/06		2							2
GM-20D	↓	↓		2							2
GM-20I				2							2
GM-21I				2							2
GM-15D				2							2
GM-15I				2							2

Total No. of Bottles/ Containers: 12

Sample Matrix: L = Liquid; S = Solid; A = Air

				Seal Intact?
Relinquished by: Pat Profumo	Organization: Arcadis	Date 9/20/06	Time 7:00 pm	Yes No N/A
Received by:	Organization:	Date / /	Time	
Relinquished by:	Organization:	Date / /	Time	Seal Intact?
Received by:	Organization:	Date / /	Time	Yes No N/A

Special Instructions/Remarks: Report to Dave Stern

2-week TAT

Delivery Method: ☐ In Person ☒ Common Carrier Fed Ex (SPECIFY) ☐ Lab Courier ☐ Other (SPECIFY)

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ARCADIS

Laboratory Task Order No./P.O. No. Grumman OU2

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name: NY001348.0406.00002

Project Location: Bethpage, NY

Laboratory: Severn Trent - Shelton

Project Manager: Dave Stern

Sampler(s)/Affiliation: RF

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40 mL VOC 2000 ASP (HCl)						Remarks	Total
Rep091906	L	9/19/06		2							2
TB091906	↓	↓		2							2
GM-38D				2							2
GM-38D2				2							2
GM-13D				2							2
2 Week TAT											

Note: Rep 091906 is GM-38D2
Both vials GM-38D broke upon arrival to Lab
Rep091906 & GM-38D2 discarded.
GM-38D2 to be split with Bethpage water district

Total No. of Bottles/ Containers: 10

Sample Matrix: L = Liquid; S = Solid; A = Air

					Seal Intact?
Relinquished by: Ed Rafanek	Organization: Arcadis	Date 9/19/06	Time 7:15pm		Yes No N/A
Received by:	Organization:	Date / /	Time		
Relinquished by:	Organization:	Date / /	Time		Seal Intact?
Received by:	Organization:	Date / /	Time		Yes No N/A

Special Instructions/Remarks: Report to Dave Stern

Delivery Method: ☐ In Person ☒ Common Carrier Fed Ex (SPECIFY) ☐ Lab Courier ☐ Other (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. Grumman **CHAIN-OF-CUSTODY RECORD** Page 1 of 1

Project Number/Name Bethpage Water District

Project Location Bethpage, NY

Laboratory H2M

Project Manager Dave Stern

Sampler(s)/Affiliation P. Prezorski

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40 ml Vial 8260 (Aromatic Analytes Only)						Remarks	Total
GM-35D2	L	9/21/06		2		2:07 pm					2
GM-38D	↓	↓		2		3:57 pm					2
GM-38D2	↓	↓		2		5:07 pm					2

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers: 6

					Seal Intact?
Relinquished by: Chet Stern	Organization: Arcadis	Date 9/21/06	Time 6:05 pm		Yes No N/A
Received by: Rebecca Mercer	Organization: H2M LAB	Date 9/21/06	Time 6:05 PM		
Relinquished by:	Organization:	Date / /	Time		Seal Intact?
Received by:	Organization:	Date / /	Time		Yes No N/A

Special Instructions/Remarks:

Delivery Method: ☑ In Person ☐ Common Carrier SPECIFY ☐ Lab Courier ☐ Other SPECIFY

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. Grumman OU2

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name NY001348.0406.00002

Project Location Bethpage NY

Laboratory Severn Trent - Shelton

Project Manager Dave Stern

Sampler(s)/Affiliation PP

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40 ml vial VOC 8260B ARP (HCL)						Remarks	Total
TB092106	L	9/21/06		2							2
Rep092106				2							2
GM-35D2				2							2
GM-38D				2							2
GM-38D2				2							2
										Total No. of Bottles/ Containers	10

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: Pat Rafferty	Organization: Arcadis	Date 9/21/06	Time 1600	Seal Intact?	
Received by:	Organization:	Date / /	Time	Yes	No N/A
Relinquished by:	Organization:	Date / /	Time	Seal Intact?	
Received by:	Organization:	Date / /	Time	Yes	No N/A

Special Instructions/Remarks: Report to Dave Stern

2-Week TAT

Delivery Method: ☐ In Person ☒ Common Carrier Fed Ex (SPECIFY) ☐ Lab Courier ☐ Other (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. Grumman 002

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name NY001348.0406.00002

Project Location Bethpage, NY

Laboratory Severn Trent - Shelton

Project Manager Dave Stern

Sampler(s)/Affiliation PP

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40 ml Vial VOC 8260 As (HCL)						Remarks	Total
TB092206	L	9/22/06		2							2
GM-18I	↓			2							2
GM-75D2	↓	↓		2							2

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/ Containers: 6

					Seal Intact?
Relinquished by: Cat Pelganski	Organization: Arcadis	Date 9/22/06	Time 7:00pm		
Received by:	Organization:	Date / /	Time		Yes No N/A
Relinquished by:	Organization:	Date / /	Time		Seal Intact?
Received by:	Organization:	Date / /	Time		Yes No N/A

Special Instructions/Remarks: Report to Dave Stern

2-Week TAT

Delivery Method: ☐ In Person ☒ Common Carrier Fed Ex (SPECIFY) ☐ Lab Courier ☐ Other (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. Grumman 002

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name: NY001348.0406.00007

Project Location: Bethpage, NY

Laboratory: Severn Trent - Shelton

Project Manager: Dave Stern

Sampler(s)/Affiliation: D Zuck, P Ferrucci

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	40 ml vial VOC 2 unpres	500 ml plastic Total Cr/Cr Unfiltered (HNO3)	500 ml plastic Dissolved Cr/Cr (HNO3)				Remarks	Total
TB092606	L	9/26/06		2							2
FB092606	↓	↓		2	1						3
GM-78I				2	1	1					4
GM-78S				2	1	1					4

Total No. of Bottles/Containers: 13

Sample Matrix: L = Liquid; S = Solid; A = Air

					Seal Intact?
Relinquished by: Pat Profonski	Organization: Arcadis	Date 9/26/06	Time 6:30pm		Yes No N/A
Received by:	Organization:	Date / /	Time		
Relinquished by:	Organization:	Date / /	Time		Seal Intact?
Received by:	Organization:	Date / /	Time		Yes No N/A

Special Instructions/Remarks: Report to Dave Stern

2-Week TAT

Delivery Method: ☐ In Person ☒ Common Carrier Fed Ex (SPECIFY) ☐ Lab Courier ☐ Other (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. Grumman OU2

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name: NY001348.0406.00002

Project Location: Bathpage, NY

Laboratory: Severn Trent-Shelton

Project Manager: Dave Stern

Sampler(s)/Affiliation: P. Prezorski, D. Zuck

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40 ml vial VOC 200 ASP (HCL)	Remarks	Total
TB092706	L	9/27/06		2		2
FB092706				2		2
HN-42I				2		2
HN-42S				2		2
HN-40S				2		2
HN-40I				*6		6
					Total No. of Bottles/ Containers	16

Sample Matrix: L = Liquid; S = Solid; A = Air

					Seal Intact?
Relinquished by: Pat Prezorski	Organization: Arcadis	Date 9/27/06	Time 6:00pm		Yes No N/A
Received by:	Organization:	Date / /	Time		
Relinquished by:	Organization:	Date / /	Time		Seal Intact?
Received by:	Organization:	Date / /	Time		Yes No N/A

Special Instructions/Remarks: Report to Dave Stern

2-Week TAT

* Please use this sample as a MS/MSD QA/QC sample

Delivery Method: ☐ In Person ☒ Common Carrier Fed Ex (SPECIFY) ☐ Lab Courier ☐ Other (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. Grumman 002

CHAIN-OF-CUSTODY RECORD

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Project Number/Name NY001348.0406.00002

Project Location Bethpage, NY

Laboratory Severn Trent - Shelton

Project Manager Dave Stern

Sampler(s)/Affiliation P. Prezorski, D Zuck

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40 ml vial VOC 8260 App IX (HCL)						Remarks	Total
TB092906	L	9/29/06		2							2
FB092906				2							2
Rep092906				2							2
GM-34D2				2							2
GM-34D				2							2
HN-24I				2							2

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers 12

					Seal Intact?
Relinquished by: Pat Prezorski	Organization: Arcadis	Date 9/29/06	Time 7:00pm		
Received by:	Organization:	Date / /	Time		Yes No N/A
Relinquished by:	Organization:	Date / /	Time		Seal Intact?
Received by:	Organization:	Date / /	Time		Yes No N/A

Special Instructions/Remarks: Report to Dave Stern

2-week TAT

Delivery Method: ☐ In Person ☒ Common Carrier Fed Ex (SPECIFY) ☐ Lab Courier ☐ Other (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. NGC 002

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name NY001348.0406.00002

Project Location Bethpage, NY

Laboratory STL

Project Manager Carlo San Giovanni

Sampler(s)/Affiliation D Zuck/P. Proscia

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: VOC 8260 ASP 40ml Vials Hcl preserved	Metals Cd/Cr Total	Metals Cd/Cr Dissolved				Remarks	Total
FB 10-02-06	L	10/2/06		2	1						3
TB 10-02-06				2							2
N-10624				2							2
N-10627				2							2
N-10621				2	1	1					4
10631											

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers: 13

Relinquished by: D. Zuck	Organization: Arcadis	Date 10/2/06	Time 6:20 PM	Seal Intact?
Received by:	Organization:	Date / /	Time	Yes No N/A
Relinquished by:	Organization:	Date / /	Time	Seal Intact?
Received by:	Organization:	Date / /	Time	Yes No N/A

Special Instructions/Remarks: Please Report Results to Dave Stern

Delivery Method: ☐ In Person ☒ Common Carrier Fed Ex (SPECIFY) ☐ Lab Courier ☐ Other (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. Grumman OU2

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name NY001349.0406.00002

Project Location Bethpage, NY

Laboratory Severn Trent - Shelton

Project Manager Dave Stern

Sampler(s)/Affiliation P. Prizorski

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40 mL Vial Voc + 250 ASP (HCL)						Remarks	Total
GM-33D2	L	10/3/06		2							2
TB100306	↓	↓		2							2

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/ Containers: 4

						Seal Intact?
Relinquished by: Pat Prizorski	Organization: Arcadis	Date 10/3/06	Time 6:15pm	Yes	No	N/A
Received by:	Organization:	Date / /	Time	Yes	No	N/A
Relinquished by:	Organization:	Date / /	Time	Seal Intact?		
Received by:	Organization:	Date / /	Time	Yes	No	N/A

Special Instructions/Remarks: Report to Dave Stern

2 Week TAT

Delivery Method: ☐ In Person ☒ Common Carrier Fed Ex ☐ Lab Courier ☐ Other

SPECIFY

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. OU-2 **CHAIN-OF-CUSTODY RECORD** Page 1 of 1

Project Number/Name NY001348.0406.00002
Project Location BETHPAGE NY
Laboratory SEVERN-TRENT SHELTON
Project Manager MIKE WOLFERT
Sampler(s)/Affiliation GW PP

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40ml VOA VOC 502.2 (HCl)	40ml VOA VOC 2000 ASP (HCl)	Remarks	Total
fw-03	L	10-5-06			2		2
BPOW-2-1	"	"		2			2
BPOW-2-2	"	"		2			2
TB 10-5-06*	"	"		2			2
						Total No. of Bottles/ Containers	8

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: [signature]	Organization: ARCADIS	Date 10/5/06	Time 6:45pm	Seal Intact? Yes No N/A
Received by:	Organization:	Date / /	Time	
Relinquished by:	Organization:	Date / /	Time	Seal Intact? Yes No N/A
Received by:	Organization:	Date / /	Time	

Special Instructions/Remarks:
USE TB 10-5-06 FOR VALIDATION of VOC 2000 ASP REPORT TO MELISSA KENDOL
USE FB 10-5-06 FOR VALIDATION of VOC 2000 ASP (FB 10-5-06 ON SEPERATE COC PO # NY001348.0406.00

Delivery Method: ☐ In Person ☐ Common Carrier _____ SPECIFY ☐ Lab Courier ☐ Other _____ SPECIFY

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. _____ **CHAIN-OF-CUSTODY RECORD** Page _____ of _____

Project Number/Name NY001348.0406.00002

Project Location BETHPAGE NY.

Laboratory SEVERN-TRENT SHELTON

Project Manager MIKE WOLFERT

Sampler(s)/Affiliation G.W.

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40ml VOA's @ VOC 8022 (HCl)						Remarks	Total
BPOW-1-1	L	10606		6*							6*
BPOW-1-2	↓			2							2
BPOW-1-3				2							2
REP-10606				2							2
TB 10606	↓			2							2

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/ Containers 14

Relinquished by: [signature]	Organization: ARCADIS	Date 10/6/2006	Time _____	Seal Intact? Yes No N/A
Received by: _____	Organization: _____	Date __/__/__	Time _____	
Relinquished by: _____	Organization: _____	Date __/__/__	Time _____	Seal Intact? Yes No N/A
Received by: _____	Organization: _____	Date __/__/__	Time _____	

Special Instructions/Remarks: *PLEASE USE THIS SAMPLE for AN MS/MSD QA/QC SAMPLE

REPORT TO MELISSA REDDOL

Delivery Method: ☐ In Person ☒ Common Carrier FED EX (SPECIFY) ☐ Lab Courier ☐ Other _____ (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. Grumman outpost **CHAIN-OF-CUSTODY RECORD** Page 1 of 1

Project Number/Name NY001348.0406.00002

Project Location Bethpage, NY

Laboratory Severn Trent - Shelton

Project Manager Dave Stern

Sampler(s)/Affiliation P. Pazorski, D Zuck

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	40ml vial VOC 502.2 (HCL)	ANALYSIS / METHOD / SIZE					Remarks	Total
TB100906	L	10/9/06		2							2
BPOW 3-1	↓	↓		2							2
BPOW 3-2	↓	↓		2							2
										Total No. of Bottles/ Containers	6

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: [signature]	Organization: Arcadis	Date 10/9/06	Time 1805	Seal Intact?		
Received by:	Organization:	Date / /	Time	(Yes)	No	N/A
Relinquished by:	Organization:	Date / /	Time	Seal Intact?		
Received by:	Organization:	Date / /	Time	Yes	No	N/A

Special Instructions/Remarks: Report to Dave Stern

VOC 502.2 Analysis

Delivery Method: ☐ In Person ☒ Common Carrier Fed Ex (SPECIFY) ☐ Lab Courier ☐ Other (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number/Name MYDD13480406.00002

Project Location BATHTUB NJ

Laboratory SEVERN - TROUT STATION

Project Manager MIKE WOLFART

Sampler(s)/Affiliation G.W.D.Z.

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40ml VOA VOC 8021 (WI)						Remarks	Total
BPOW-4-1	L	2		2							2
BPOW-4-2	L	2		2							2
TB@10-10-06	L	2		2							2

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/ Containers 6

Relinquished by: [signature]	Organization: ARCADIS	Date 10/10/06	Time 5:00	Seal Intact?	
Received by:	Organization:	Date / /	Time	Yes	No N/A
Relinquished by:	Organization:	Date / /	Time	Seal Intact?	
Received by:	Organization:	Date / /	Time	Yes	No N/A

Special Instructions/Remarks: REPORT TO MEETS RL

Delivery Method: ☐ In Person ☒ Common Carrier FED EX SPECIFY ☐ Lab Courier ☐ Other _____ SPECIFY

ARCADIS

Laboratory Task Order No./P.O. No. Grumman 002

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name NY001348.0006.00002

Project Location Bethpage, NY

Laboratory Severn Trent - Shelton

Project Manager Dave Stern

Sampler(s)/Affiliation P. Prazorski, D Zuck

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	40 ml vial VOC 2000 ASP	500 ml plastic Total (HCL)	500 ml plastic Dissolved (HNO3)	500 ml plastic Cr only (HNO3)			Remarks	Total
TB092806	L	9/29/06		2							2
FB092806				2	1						3
MW-2GF					1	1					2
GM-21S				2							2
PLTI MW-04							1				1
PLTI MW-05							1				1
PLTI MW-06							1				1
GM-15S				2			1				3
MW-1GF					1	1					2

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/ Containers: 17

				Seal Intact?
Relinquished by: Cat Grfonk	Organization: Arcadis	Date 9/28/06	Time 7:00pm	
Received by:	Organization:	Date / /	Time	Yes No N/A
Relinquished by:	Organization:	Date / /	Time	Seal Intact?
Received by:	Organization:	Date / /	Time	Yes No N/A

Special Instructions/Remarks: Report to Dave Stern

2-week TAT

Delivery Method: ☐ In Person ☒ Common Carrier Fed Ex (SPECIFY) ☐ Lab Courier ☐ Other (SPECIFY)

AG 05-12/01

ARCADIS

Laboratory Task Order No./P.O. No. NGC 96 + 102

CHAIN-OF-CUSTODY RECORD

Project Number/Name NY001348.0406.00002

Project Location Bethpage, NY.

Laboratory STL VT ~~Stern~~ STERN *

Project Manager ~~Dave~~ ~~Steven~~ ~~B. Uittek~~ PAR 10/12

Sampler(s)/Affiliation D. McCafferty / Arcadis

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	6 Liter Summa	TO-15	Grab	Standard TAT	Timed	Tank #'s	Remarks	Total
Tower 102 INF		10/11/06 1045		↓	↓	↓	↓	30 sec	3528	Start -29.9 End 0	1
Tower 102 EFF		1050						28 sec	3270	Start -29.8 End 0	1
* 96 Tower ~~Eff.~~ INF	PAR 10/12	1420						28 sec	3530	Start -30 End 0	1
To A+B Beds											
T96 Eff. Tank ~~A+~~B		1425						25 secs	4110	Start -30 End 0	1
~~Beds~~	PAR 10/12										
* T96 Total Effluent		1430						25 secs	3158	Start -30 End 0	1
~~96~~	PAR 10/12										
										Returning 1	1
										unused tank,	
										gauge also.	

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers 6

Relinquished by: D. McCafferty	Organization: Arcadis	Date 10/11/06	Time 1500	Seal Intact? Yes No N/A
Received by:	Organization:	Date / /	Time	
Relinquished by:	Organization:	Date / /	Time	Seal Intact? Yes No N/A
Received by:	Organization:	Date / /	Time	

Special Instructions/Remarks: Attn: Peter Pigusch - Returning 1 unused tank + gauge, also 6 fittings. Results to R. Wittek at Arcadis. Thank you.

Delivery Method: ☐ In Person ☒ Common Carrier Fed. Ex. (SPECIFY) ☐ Lab Courier ☐ Other ______ (SPECIFY)

ARCADIS

Laboratory Task Order No./P.O. No. NGC 96-102

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name: NY001348.0406.00002

Project Location: BETHPAGE, NY.

Laboratory: STL VT

Project Manager: D. STOKEN

Sampler(s)/Affiliation: D. MCCAFFERTY/ARCADIS

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	40 ML VOAS (HCL)	VOC's METHOD ASP 2000	6 LAB STANDARD TAT			Remarks	Total
TOWER 102 EFF.	L	10/11/06 1100								2
TOWER 102 EFF-MS		1100								2
TOWER 102 EFF. MSD		1100								2
WELL 19		1205								2
GP WELL 1		1240								2
WELL 17		1255								2
WELL 18		1310								2
REP 111006									(Rep is Well 19)	2
GP WELL 3		1326								2
TOWER 9 EFF.		1342								2
T.B. 111006										2

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers: 22

Relinquished by: K. McCafferty	Organization: ARCADIS	Date 10/11/06	Time 1515	Seal Intact?	
Received by:	Organization:	Date / /	Time	Yes	No N/A
Relinquished by:	Organization:	Date / /	Time	Seal Intact?	
Received by:	Organization:	Date / /	Time	Yes	No N/A

Special Instructions/Remarks: ATTN: TU-HANG NGUYEN - MS/MSD IS OF TOWER 102 EFF. AND MARKED AS SUCH.

Delivery Method: ☐ In Person ☒ Common Carrier FED. EX SPECIFY ☐ Lab Courier ☐ Other SPECIFY