First Quarter 2004 Groundwater Monitoring Report

Operable Unit 2
Northrop Grumman Corporation,
Bethpage, New York
NYSDEC Site #1-30-0003A

ARCADIS

Infrastructure, buildings, environment, communications

ARCADIS

David E. Stern
Senior Hydrogeologist

Carlo San Giovanni
Project Manager

Michael F. Wolfert
Hydrogeologist/Project Director

First Quarter Groundwater Monitoring Report

Operable Unit 2
Northrop Grumman Corporation,
Bethpage, New York
NYSDEC Site #1-30-0003A

Prepared for:
Northrop Grumman Corporation

Prepared by:
ARCADIS G&M, Inc.
88 Duryea Road
Melville
New York 11747
Tel 631 249 7600
Fax 631 249 7610

Our Ref.:
NY001348.0404.00004

Date:
30 November 2004

Table of Contents

Tables

Figures

Appendices

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 (NGC) Bethpage, New York facility. These activities are currently being conducted by NGC, in accordance with the New York State Department of Environmental Conservation (NYSDEC)-approved OU2 Groundwater Monitoring Plan (ARCADIS Geraghty & Miller, Inc., 2001), to meet the remedial objectives set forth in the March 2001 Record of Decision (ROD)(NYSDEC 2001).

This report describes the routine performance and effectiveness monitoring of the on-site portion of the OU2 groundwater remedy for the period December 30, 2003 through March 31, 2004, which corresponds to the First Quarter of 2004 (and is referred to herein as the subject period). In compliance with the requirements set forth in the OU2 ROD and the Public Water Supply Contingency Plan (PWSCP) (ARCADIS G&M, Inc. 2003a), the Department of the Navy installed nine outpost wells in 2003. NGC implemented quarterly groundwater monitoring of the outpost wells, beginning in April 2004. The groundwater quality data obtained from the first quarterly outpost well monitoring round is also included in this report and is evaluated, and reported herein. The annual report that will be prepared at the end of 2004 will include additional evaluation of long-term data trends of all wells monitored. A complete description of the monitoring program and rationale/basis for evaluation of the data provided herein can be found in the 2002 Annual Report (ARCADIS G&M, Inc. 2003b). The findings and conclusions of this report 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 the subject period are provided in Tables 1 through 14 and are described/discussed in the following report sections: Performance Monitoring (Section 3), Groundwater Flow (Section 4), and Groundwater Quality (Section 5).

Except as described on Tables 1 through 14, the procedures, methodologies, and monitoring network utilized for the subject 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).

The locations of the NGC site, the OU2 groundwater remedy, the neighboring properties (i.e., the Naval Weapons Industrial Reserve Plant [NWIRP] and the Occidental Chemical Corporation [OCC]/RUCO Polymer Corporation site), 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. Performance Monitoring

The following performance monitoring of the on-site portion of the OU2 groundwater remedy was carried out during the First Quarter of 2004: (1) remedial well and industrial supply well water quality monitoring, remedial systems effluent water quality monitoring and remedial systems treatment efficiency monitoring, (2) monitoring of remedial well and industrial supply well pumpage and remedial systems treated effluent discharge to on-site recharge basins, (3) monitoring of remedial systems volatile organic compound (VOC) mass removal, and (4) monitoring of remedial well specific capacities.

3.1 Remedial Wells Water Quality, Treatment Efficiencies, and Mass Removal

Tables 1 and 9 provide the total VOC (TVOC) concentrations detected in the OU2 remedial wells and Well GP-3. Table 1 also provides the TVOC mass removed, and efficiencies of the GP-1 and ONCT air stripper systems during the First Quarter 2004.

Based on the ratio of the influent to effluent TVOC concentrations, the treatment efficiencies of the ONCT and GP-1 remedial systems have remained above 99 percent for the subject period.

A total of approximately 3,900 pounds of VOC mass was removed by the OU2 remedial wells and Well GP-3 during the First Quarter 2004.

3.2 Remedial System Pumpage and Discharge

Table 1 summarizes and encompasses the pumpage of the OU2 remedial wells to the model developed design criteria; Well GP-3 pumpage is also given. The remedial wells collectively pumped approximately 434 million gallons (MG) of groundwater, which is equivalent to 96 percent of the design remedial well pumpage volume of 452 MG; Well GP-3 pumped at an average actual rate of 461 gpm with an actual total pumpage of approximately 58.3 MG. Based on weekly flow rate measurements

collected by ARCADIS from the remedial systems and receiving recharge basins for the First Quarter 2004, the South Recharge Basins collectively received the treated effluent discharge from the ONCT remedial system (approximately 2,300 gallons per minute [gpm]), incidental stormwater runoff, along with approximately 600 gpm from the GP-1 remedial system. Northrop Grumman directed approximately 400 gpm of treated effluent from the GP-1 remedial system to the adjacent Calpine facility for consumptive use (Wolfert, 2004). The West Recharge Basins received an average of approximately 530 gpm from the GP-1 remedial system, which represents the balance of the treated effluent from the GP-1 remedial system.

Table 2 summarizes the water-level measurement data, corresponding instantaneous pumping rates, and the calculated (i.e., adjusted to account for regional water level changes) static depth to water, drawdowns and specific capacities for the OU2 remedial wells for the First Quarter 2004. Based on the data presented herein, the specific capacities of all the remedial wells exceeded the minimum values needed to maintain the design pumping rates.

4. Groundwater Flow

This report section describes the results of hydraulic monitoring performed during the First Quarter 2004 (i.e., measured on April 6, 2004). 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 subject period are provided in Table 3. Vertical hydraulic gradients calculated for select well pairs and a comparison to model-predicted gradients (see Appendix B of the OU2 Feasibility Study; ARCADIS Geraghty & Miller 2000) are provided in Table 4. Figure 2 depicts the water-table configuration and Figure 3 depicts the potentiometric surface elevation and groundwater flow direction in the intermediate zone.

The vertical hydraulic gradients in shallow-intermediate well pairs are oriented downward and are close to or greater than model predicted values. 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 First Quarter 2004. The observed mounding extends around and beneath the South Recharge Basins and across the entire 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 VOCs in the shallow and intermediate zones.

4.2 Deep and D2 Zones

Vertical hydraulic gradients (see Table 4) 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 NGC site southern boundary.

Figure 4 depicts the cumulative capture zone formed by the combined pumpage of the OU2 remedial wells and Well GP-3 during the First Quarter 2004. The capture zone extends across the entire NGC site southern boundary approximately 780 ft south of the NGC site and in a downgradient direction. These data are consistent with previous water-level rounds and support the conclusion that the pumpage of the remedial well and Well GP-3 forms a hydraulic barrier to groundwater flow that continues to be effective in preventing the off-site migration of VOCs 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 and Well GP-3 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 VOCs.

5. Groundwater Quality

This report section describes the analytical results of the various groundwater quality monitoring activities that are specified in and required under the NYSDEC-approved Groundwater Monitoring Plan (ARCADIS G&M, Inc. 2001). Analytical results for the First Quarter 2004 are summarized in Tables 5 through 14.

5.1 Volatile Organic Compounds

A complete discussion of the expected effect of the on-site portion of the OU2 groundwater remedy on groundwater quality is provided in the 2002 Annual Report (ARCADIS G&M, Inc. 2003). In summary, changes in groundwater quality are generally expected to occur slowly. Wells within the plume and that are located upgradient of the hydraulic barrier, in areas of the NGC and NWIRP sites that are not actively remediated, may exhibit several trend changes over the short- to mid-term that would be consistent with the VOC plume heterogeneity. Off-site wells, immediately downgradient of the hydraulic barrier, are expected to exhibit decreasing VOC concentration trends as a result of the operation of the on-site portion of the OU2 groundwater remedy in the shortest timeframe. Wells located further downgradient of the hydraulic barrier are expected to exhibit varying trends in VOC concentrations in the short- to mid-term until the "clean zone", which results from the bifurcation of the VOC plume at the NGC site southern boundary, expands downgradient into the area of these off-site wells. When this occurs, the long-term decreasing trend in VOC concentrations in these off-site wells (resulting from operation of the on-site portion of the OU2 groundwater remedy) will be apparent.

The evaluation of VOC concentrations is presented herein in 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 NGC 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 Values.

A summary of total VOCs detected in the select wells at the NGC site southern perimeter and a comparison to SCGs is provided in Table 5.

5.1.1 Shallow and Intermediate Zones

The complete First Quarter 2004 groundwater analytical results for shallow and intermediate monitoring wells are provided in Tables 6 and 7, respectively. In general, the water quality data from the shallow and intermediate wells sampled this quarter support the interpretation of the hydraulic data 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. A detailed discussion of the water quality data for the shallow and intermediate zones follows.

5.1.1.1 Upgradient

Six of the seven upgradient shallow wells (FW-01, HN-40S, HN-42S, GM-14, GM-16SR, and GM-23S) exhibited no SCG exceedences. Well GM-32S exhibited the only exceedence of an SCG (Table 6).

Three of the six upgradient intermediate wells (HN-24I, HN-40I, and GM-16I) exhibited exceedences of at least one of the SCGs (Table 7) while Wells HN-29I, HN-42I, and GM-23I did not exhibit SCG exceedences. The three wells with SCG exceedences exhibited TVOC concentrations ranging from 41.6 ug/L to 102 micrograms per liter (ug/L).

5.1.1.2 NGC Site Southern Boundary

All six shallow wells that are located at or immediately downgradient of the NGC site southern boundary (Tables 5 and 6) exhibited no detections or trace concentrations of VOCs and did not exhibit SCG exceedances. Five of the six similarly located intermediate wells (Tables 5 and 7) exhibited either no detections or trace detections of VOC's and did not exhibit SCG exceedences. Well 15I exhibited the only exceedence of an SCG.

5.1.1.3 Downgradient

The single shallow well (N-10634 – Table 6) that is located downgradient of the hydraulic barrier, exhibited no detectable concentrations of VOC's and the two intermediate wells downgradient of the hydraulic barrier (10624 and GM-79I) had either no detections or trace detections of VOC's and no SCG exceedences.

5.1.2 Deep Zone

In general, the water quality data from the deep wells sampled during the First Quarter 2004 support the interpretation of the hydraulic data 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. A detailed discussion of the water quality data for the deep zone follows.

5.1.2.1 Upgradient

One of the two upgradient deep monitoring wells (GM-13D which is located approximately 2,850 feet upgradient of the ONCT remedial wells) exhibited SCG exceedences, while well HN-29D exhibited no exceedences (Table 8).

5.1.2.2 NGC Site Southern Boundary

Of the five deep wells located at the NGC site southern property boundary (Tables 5 and 8), only well GM-15D exhibited SCG exceedences; wells GM-39D, GM-73D, and GM-74D are located on-site and near Remedial Wells ONCT-3, ONCT-1, and ONCT-2, respectively (Figure 1). Wells GM-39D and GM-73D each had an SCG exceedence while GM-74D did not. Based on evaluation of the hydraulic data that is depicted on Figure 4, 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.

5.1.2.3 Downgradient

Of the six deep wells located downgradient of the hydraulic barrier, two wells (N-10627 and GM-37D) exhibited no SCGs exceedences. The remaining wells exhibited SCGs exceedences and TVOC concentrations ranging from 16.1 ug/L to 819 ug/L (Table 8).

5.1.3 Deep2 Zone

Groundwater monitoring data from the D2 zone are summarized in Tables 5 and 9. Table 9 also includes groundwater samples collected from the OU2 remedial wells, Well GP-3, and the on-site remedial treatment systems.

In general, the water quality data from the D2 wells sampled during the First Quarter 2004 support the interpretation of the hydraulic data 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 deep2 zone. A detailed discussion of the water quality data for the deep2 zone follows.

5.1.3.1 OU2 Remedial Wells, Well GP-3, and Adjacent Monitoring Wells.

In the area of the OU2 remedial wells and Well GP-3, TVOC concentrations detected in wells near the NGC site southeastern boundary (at and east of Well ONCT-2) were comparatively lower than TVOC concentration detected in wells near the NGC site southwestern boundary with current TVOC concentrations detected in the "southeastern" wells ranged from 11 ug/L (Well GM-15D2) to 188 ug/L (Well ONCT-2) while the TVOC concentrations detected in the "southwestern" wells ranged from 99 ug/L (Well GM-33D2) to 4,440.7 ug/L (Well GP-3). All monitoring and remedial wells in the NGC site southern boundary area exhibited one or more exceedences of SCGs (Tables 5 and 9). However, based on hydraulic data depicted on Figure 4, the D2 monitoring wells are within the capture zone of the nearby 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.

5.1.3.2 Downgradient

TVOC concentrations in the eight off-site D2 wells ranged from non-detect (Well GM-36D2) to 1,106 ug/L (Well GM-38D2), with six of the eight wells having one or more exceedences of an SCG; Wells GM-36D2 and GM-71D2 did not exhibit SCG exceedences. As required by the OU2 ROD, a groundwater pump and treat system is currently being developed/installed by the U.S. Navy to reduce elevated TVOC concentrations in the GM-38 Area.

5.2 Outpost Monitoring

The results of the First Quarter 2004 outpost well monitoring round(s) are provided in Table 10. VOCs were not detected in Outpost Wells OW1-2, OW1-3, OW3-1, OW3-2, OW4-1, and OW4-2. Based on the detection of site-related VOCs in Outpost Wells OW1-1, and OW2-2, ARCADIS conducted re-sampling of these wells and issued separate data reports (issued to NYSDEC, NYSDOH, the Department of the Navy, and the potentially affected water district [ARCADIS G&M, Inc. 2004a; 2004b]) that discuss the results obtained. The complete description of the procedures to collect groundwater samples from outpost wells, evaluate and document the analytical results is provided in the PWSCP (ARCADIS 2003a).

5.3 Semi-Volatile Organic Compounds

Well GM-14, located downgradient of the NGC Plant 1 Fuel Depot, is monitored on a quarterly basis for SVOCs. As shown on Table 11, SVOCs were not detected in Well GM-14 or the associated blank sample during the subject period.

5.4 Vinyl Chloride Monomer

VCM concentrations in groundwater samples collected during the subject period are provided in Tables 6 through 9. VCM continues to be present in Industrial Well GP-3 (at a concentration of 110 ug/L this round) but was not detected in Remedial Well GP-1, the ONCT remedial wells, or other monitoring wells sampled this round. Additional monitoring of the extent of the VCM subplume and evaluation of remedial options is currently being performed by Oxy.

5.5 Cadmium and Chromium

The results of the quarterly monitoring of wells analyzed for cadmium and chromium are provided in Table 12. The data indicate that SCG exceedences continue to be limited to on-site wells located near former NGC Plants 1 and 2 (MW-3R, MW-26F, MW-6 and MW-15S). Additionally, Well MW-3R is the only well exhibiting Cd concentrations exceeding the SCG. The results this period generally show little difference between the filtered and unfiltered samples, indicating that the metals analyzed for exist predominantly in the dissolved phase.

5.6 Tentatively Identified Compounds

The results of the laboratory qualitative assessment of Tentatively Identified Compound (TIC) concentrations in the samples collected during the subject period, is provided in Table 13.

5.7 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 6 through 13.

6. Summary and Conclusions

The findings of the OM&M activities performed during the First Quarter 2004 are summarized below. ARCADIS also developed the following conclusions based on ongoing evaluation of the data:

1. The remedial system pumpage data indicate that the OU2 remedial wells pumped and treated approximately 96 percent of the design volume of groundwater.

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

3. Approximately 3,900 lbs of VOCs were removed from the aquifer and treated by the on-site portion of the OU2 groundwater remedy and Well GP-3.

4. The treatment efficiencies of both groundwater remedial systems remain above 99 percent.

5. The hydraulic barrier produced by shallow zone recharge and D2 zone pumping has been maintained and is effective in meeting the OU2 remedial objective of preventing the off-site migration of VOCs.

6. The majority of wells located along the site southern perimeter immediately downgradient of the NGC hydraulic barrier show trace or non-detectable concentrations of VOCs. Wells in on-site areas and off-site toward the distal end of the VOC plume in areas that are not actively remediated will require considerably more time before a trend in VOC concentrations associated with the long-term operation of the on-site portion of the OU2 Groundwater Remedy is revealed.

7. Site-related VOCs were detected in Outpost Wells OW1-1, OW2-1, and OW2-2. The remaining outpost wells have exhibited no detectable levels of VOCs.

8. VCM continues to be detected in Well GP-3 but was not detected in the other remedial wells.

9. Cd/Cr SCG exceedences remain limited to areas near former NGC Plants 1 and 2.

7. Recommendation

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

8. References

ARCADIS G&M, Inc. 2004a. Interim Data Report for Outpost Well OW1-1, Northrop Grumman Corporation and Naval Weapons Industrial Reserve Plant, Bethpage, New York. (NYSDEC Site #1-30-003A & B). May 26, 2004.

ARCADIS G&M, Inc. 2004b. Interim Data Report for Outpost Well OW2-2, Northrop Grumman Corporation and Naval Weapons Industrial Reserve Plant, Bethpage, New York. (NYSDEC Site #1-30-003A & B). July 19, 2004.

ARCADIS G&M, Inc. 2003a. Public Water Supply Contingency Plan, Naval Facilities Engineering Command. July 22, 2003.

ARCADIS G&M, Inc. 2003b. 2002 Annual Groundwater Monitoring Report, Northrop Grumman Corporation, Bethpage, New York. August 14, 2003.

ARCADIS Geraghty & Miller, Inc. 2001. Operable Unit 2 Groundwater Monitoring Plan. Northrop Grumman Corporation, Bethpage, New York. May 11, 2001.

ARCADIS Geraghty & Miller, Inc. 2000. Groundwater Feasibility Study, Grumman Aerospace Corporation-Bethpage, NY Site #130003A and the Naval Weapons Industrial Reserve Plant Site #130003B.

New York State Department of Environmental Conservation (NYSDEC). 1998. Division of Water Technical and Operation Guidance Series (TOGS 1.1.1). Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. Promulgated October 22, 1993. Re-issued June 1998.

New York State Department of Environmental Conservation (NYSDEC). 2001. Record of Decision Operable Unit 2 Groundwater Northrop Grumman and Naval Weapons Industrial Reserve Plant Sites, Nassau County Site Numbers 1-30-003A & B

U.S. Environmental Protection Agency (USEPA). 1999. Contract Laboratory Program National Functional Guidelines for Organic Data Review. October 1999.

Wolfert, Michael. 2004. Notes by Michael F. Wolfert of ARCADIS, during meeting between ARCADIS, Northrop Grumman Corporation, Holzmacher, McLendon, and Merrill, Town of Oyster Bay, Nassau County Legislature E. Mangano, Long Island Power Authority, Hicksville Water District, Cashin Associates, Bethpage Fire District, and Calpine. July 28, 2004.

ARCADIS

Table 1. Summary of Operational Data for the OU2 Remedial Wells and Industrial Well GP-3, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York

Well Identification	Design Pumping Rate [a] (gpm)	Actual Average Pumping Rate [b] For Quarter (gpm)	Design Total Pumpage For Quarter (MG)	Actual Total Pumpage [b] For Quarter (MG)	Percent of Design Pumpage For Quarter	TVOC Concentration [c] For Quarter ug/L	Calculated TVOC Mass Removed [d,f] For Quarter (lbs)
OU2 Wells							
GP-1	1,075	1,070	144.0	135.4	94%	649.0	732
ONCT-1	1,000	1,005	133.9	132.4	99%	794.1	875
ONCT-2	600	632	80.4	78.2	97%	188.0	122
ONCT-3	700	673	93.7	87.7	94%	79.6	58
Industrial Well							
GP-3	--	461	--	58.3	--	4,440.7	2,156
OU2 WELLS ROUNDED TOTALS: (f)	**3,375**	**3,380**	**452**	**434**	**96%**	**--**	**3,943**

First Quarter GP-1 System Air Stripping Efficiency [g] :	99.97%
First Quarter ONCT System Air Stripping Efficiency [g] :	99.41%

See Footnotes on next page.

Table 1. Summary of Operational Data for the OU2 Remedial Wells and Industrial Well GP-3, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York

(a) - Based on computer modeling.

(b) - Actual Average Pumping Rates were calculated based on Actual Total Pumpage and hours of operation from December 30, 2003 to March 31, 2004 (93 Days) (Northrop Grumman records).
- OU2 wells ONCT-1 (98%), ONCT-2 (92%), ONCT-3 (97%), and GP-1 (94%) were operational at the percentage noted during the 93 day operation period from December 30, 2003 to March 31, 2004 and Industrial Well GP-3 was 94 percent operational during this time. The Actual Average Pumping Rates are for when the wells are pumping.
-Total Pumpage and Actual Average Pumping Rate are accurate to +/-15% due to limitations in flow metering. Calculated Actual Average Pumping Rates are best approximations and may not exactly calculate from the measured Actual Total Pumpage in all instances, due to rounding.

(c) - The TVOC concentration for each well was calculated based on First Quarter 2004 groundwater monitoring data (Table 9).

(d) - TVOC mass removed during the First Quarter 2004 was determined from following formula:

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

(f) Total TVOC mass removed includes the OU2 wells and Well GP-3.

(g) Air Stripper Efficiency in percent calculated from data in Table 9 using the following formula:

100 - (Effluent Concentration in ug/L / Influent Concentration in ug/L)*100

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

--	Not Available or Not Applicable
TVOC	Total Volatile Organic Compounds
g/ug	grams per microgram
gpm	gallons per minute
L/gal	Liters per gallon
lb/g	pounds per gram
lbs	pounds
MG	Million Gallons
ug/L	micrograms per liter
OU2	Operable Unit 2

ARCADIS

Table 2. OU2 Remedial Well Performance Data, Baseline and First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

	Baseline		First Quarter 2004						
Well Identification	Adjusted Static Depth to Water[1] (ft bmp)	Specific Capacity (gpm/ft)	Date of Pumping and Water-Level Measurements	Pumping Depth to Water (ft bmp)	Correction Factor [2] (ft)	Adjusted Static Depth to Water (ft bmp)	Drawdown (ft)	Pumping Rate (gpm)	Specific Capacity (gpm/ft)
ONCT-1	41.20	38.83	4/6/2004	68.18	3.40	44.60	23.58	1,040	44.1
ONCT-2	47.23	32.79	4/6/2004	68.36	3.40	50.63	17.73	766	43.2
ONCT-3	46.21	34.65	4/6/2004	69.11	3.40	49.61	19.50	743	38.1
GP-1	55.77	28.59	4/6/2004	92.00	0.28	56.05	35.95	1,050	29.2

(1) Variations in the static depth to water in Well GM-4D, located approximately 5 miles east of the Northrop Grumman site, were used to adjust the original baseline statics to adjusted values that were concurrent time wise to the date of the pumping water levels measured to determine baseline specific capacities.

(2) The correction factors developed from review of the Well GM-4D data were used to adjust the adjusted baseline static depth to water to further adjusted values that are concurrent time wise to this quarter 's pumping water level dates.

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

ARCADIS

Table 3. Water-Level Measurement Data, April 6, 2004, 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	59.45	64.85
N-9921	94.23	35.02	59.21
N-10597	109.85	44.70	65.15
N-10600	102.41	42.13	60.28
N-10631	103.47	41.78	61.69
N-10633	103.80	41.07	62.73
N-10634	101.20	42.17	59.03
N-10821	91.58	36.68	54.90
GM-15S	109.44	47.22	62.22
GM-16SR	115.86	51.20	64.66
GM-17SR	115.79	50.61	65.18
GM-18S [4]	107.60	40.52	67.08
GM-19S [4]	109.86	44.94	64.92
GM-21S	105.81	34.74	71.07
GM-78S	104.94	44.21	60.73
GM-79S (N-10628)	100.88	42.17	58.71
HN-40S	116.35	52.00	64.35
HN-42S	120.32	53.85	66.47
MW-3R	101.45	38.14	63.31
Intermediate Wells			
N-10624	93.61	34.57	59.04
GM-15I	109.25	47.04	62.21
GM-16I	115.81	51.23	64.58
GM-17I	115.83	50.82	65.01
GM-18I	109.03	45.83	63.20
GM-19I [4]	109.86	45.36	64.50
GM-20I	103.88	39.04	64.84
GM-21I	105.72	38.71	67.01
GM-74I	107.42	40.68	66.74
GM-78I	105.06	44.52	60.54
GM-79I	100.88	42.74	58.14
HN-24I	125.80	50.29	71.51
HN-29I	116.42	50.44	66.17
HN-40I	115.91	51.86	64.05
HN-42I	119.61	54.55	65.06

See notes on last page

Table 3. Water-Level Measurement Data, April 6, 2004, 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	35.04	58.66
GM-13D	113.97	49.55	64.42
GM-15D	109.84	49.54	60.30
GM-17D	115.68	53.16	62.52
GM-18D	108.88	48.43	60.45
GM-20D	103.92	40.80	63.12
GM-21D	105.66	45.32	60.34
GM-34D [2]	71.19	16.76	54.43
GM-36D	91.63	37.12	54.51
GM-37D	97.26	41.02	56.24
GM-38D	91.75	39.63	52.12
GM-39D$_A$	102.23	41.65	60.58
GM-39D$_B$ [3]	102.08	44.63	57.45
GM-73D	104.87	46.72	58.15
GM-74D	107.43	47.46	59.97
GM-79D	101.25	43.76	57.49
HN-29D	115.11	50.44	64.67
Deep2 Wells			
GM-15D2	109.78	52.22	57.56
GM-33D2	106.85	52.44	54.41
GM-34D2 [2]	71.19	18.18	53.01
GM-35D2	96.28	NM [5]	NA
GM-36D2	91.60	38.86	52.74
GM-37D2	97.17	41.50	55.67
GM-38D2	91.56	41.14	50.42
GM-70D2	99.58	43.28	56.30
GM-71D2	98.45	43.38	55.07
GM-73D2	104.62	48.89	55.73
GM-74D2	107.36	54.24	53.12
GM-75D2	93.63	38.01	55.62
GP-1 [1]	116.78	92.00	24.78
ONCT-1	104.10	68.18	35.92
ONCT-2	110.00	68.36	41.64
ONCT-3	108.70	69.11	39.59

(1) Water-levels were 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 feet.

(2) Depth to water measurements for GM-34D and GM-34D2 were collected on 4/7/2004.

(3) Well GM-39D$_B$ set in basal portion of the deep zone.

(4) Apparent anomalous measurement based on water-level mapping.

(5) Well GM-35D2 was not accessible this round.

ft msl feet relative to mean sea level

ft bmp feet below measuring point

NM Not Measured

NA Not Available

Table 4. Comparison of April 6, 2004 Vertical Hydraulic Gradients to Model Predicted Gradients, Northrop Grumman Corporation, Bethpage, New York.

Well Pair ID	Well Screen Midpoint Elevation (ft msl)	Water-Level Elevation (ft msl)	Vertical Gradient [(z)] (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	62.22			
GM-15I	9.29	62.21	0.40	4.20	-3.80
GM-16SR	66.77	64.66			
GM-16I	-24.19	64.58	0.88	1.11	-0.23
GM-17SR	50.79	65.18			
GM-17I	5.83	65.01	3.78	4.50	-0.72
GM-21S	40.81	71.07			
GM-21I	-29.28	67.01	57.93	18.44	39.48
GM-78S	39.94	60.73			
GM-78I	5.56	60.54	5.53	8.73	-3.20
GM-79S	35.88	58.71			
GM-79I	-73.91	58.14	5.19	0.91	4.28
Intermediate-Deep Wells					
GM-15I	9.29	62.21			
GM-15D	-227.34	60.30	8.07	6.52	1.55
GM-17I	5.83	65.01			
GM-17D	-172.32	62.52	13.98	7.86	6.11
GM-18I	9.03	63.20			
GM-18D	-186.12	60.45	14.09	7.74	6.35
GM-20I	3.88	64.84			
GM-20D	-117.08	63.12	14.22	18.22	-4.00
GM-21I	-29.28	67.01			
GM-21D	-177.34	60.34	45.05	43.97	1.08
GM-74I	8.42	66.74			
GM-74D	-192.57	59.97	33.68	20.17	13.51
GM-79I	-73.91	58.14			
GM-79D	-183.75	57.49	5.92	15.48	-9.56

See notes on last page

Table 4. Comparison of April 6, 2004 Vertical Hydraulic Gradients to Model Predicted Gradients, 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	60.30			
GM-15D2	-436.41	57.56	13.11	14.19	-1.08
GM-18D	-186.12	60.45			
GM-33D2	-403.15	54.41	27.83	12.30	15.53
GM-36D	-117.37	54.51			
GM-36D2	-443.40	52.74	5.43	2.75	2.68
GM-37D	-154.74	56.24			
GM-37D2	-282.83	55.67	4.45	3.88	0.57
GM-38D	-238.25	52.12			
GM-38D2	-393.44	50.42	10.95	6.08	4.87
$GM\text{-}39D_A$ [1]	-169.77	60.58			
$GM\text{-}39D_B$ [1]	-312.92	57.45	21.87	13.46	8.41
GM-73D	-301.13	58.15			
GM-73D2	-437.38	55.73	17.76	18.78	-1.02
GM-74D	-192.57	59.97			
GM-74D2	-444.64	53.12	27.17	28.26	-1.09
N-10627	-198.80	58.66			
GM-75D2	-421.37	55.62	13.66	2.25	11.41

Notes:

(1) Wells $GM\text{-}39_A$ and $GM\text{-}39_B$ 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.

Table 5. Summary of Total Volatile Organic Compound and Cadmium/Chromium Concentrations and Comparison to SCGs for Select Site Boundary Monitoring Wells, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York. (1) (2)

Shallow Zone						
Well Identification:	N-10631	GM-15S	GM-17SR	GM-18S	GM-21S	GM-78S
First Quarter TVOC Concentration (ug/L):	1	5	5.5	11.8	<5	<5
No. of First Quarter VOC SCG Exceedences:	0	0	0	0	0	0
First Quarter Total Cd Concentration (ug/L):	3.7	--	<1.1	<1.1	NS	<1.1
No. of First Quarter Total Cd SCG Exceedences:	0	--	0	0	--	0
First Quarter Total Cr Concentration (ug/L):	38.9	366	<1.3	4	NS	2.9
No. of First Quarter Total Cr SCG Exceedences:	0	1	0	0	--	0

Intermediate Zone						
Well Identification:	GM-15I	GM-17I	GM-18I	GM-20I	GM-21I	GM-78I
First Quarter TVOC Concentration (ug/L):	19	<5	4.8	1.2	2	<5
No. First Quarter VOC SCG Exceedences:	1	0	0	0	0	0
First Quarter Total Cd Concentration (ug/L):	NS	NS	NS	NS	NS	<1.1
No. of First Quarter Total Cd SCG Exceedences:	--	--	--	--	--	0
First Quarter Total Cr Concentration (ug/L):	NS	NS	NS	NS	NS	2.3
No. of First Quarter Total Cr SCG Exceedences:	--	--	--	--	--	0

Deep Zone					
Well Identification:	GM-15D	GM-17D	GM-18D	GM-20D	GM-21D
First Quarter TVOC Concentration (ug/L):	26	0	5	4.4	2.3
No. First Quarter VOC SCG Exceedences:	3	0	0	0	0

Deep2 Zone	
Well Identification:	GM-15D2
First Quarter TVOC Concentration (ug/L):	11
No. First Quarter VOC SCG Exceedences:	1

(1) Wells are shown on Figure 1. VOC analytical results from shallow, intermediate, deep, and deep2 wells are provided in Tables 6 through 9, respectively; Cr and Cd analytical results for shallow and intermediate wells are provided in Table 12.

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

NS Not Sampled
-- Not Applicable
VOC Volatile Organic Compound
Cd Cadmium
Cr Chromium
TVOC Total Volatile Organic Compound

Table 6. Concentrations of Volatile Organic Compounds Detected in Shallow Wells, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values(1)	WELL:	10631	10634	FW-01	GM-14	GM-15S
		SAMPLE ID:	N10631	N-10634	FW-01	GM-14	GM-15S
		DATE:	03/30/2004	03/19/2004	03/18/2004	03/17/2004	03/17/2004
Chloromethane	5		<5	<5	<5	<10	<5
Bromomethane	5		<5	<5	<5	<10	<5
Vinyl Chloride	2		<2	<2	<2	<10	<2
Chloroethane	5		<5	<5	<5	<10	<5
Methylene chloride	5		<5	<5	<5	<5	<5
Acetone	50		<10	<10	<10	<10	<10
Carbon disulfide	50		<5	<5	<5	<10	<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		**1 J**	<5	**1 J**	<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	<5	<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	**4 J**	<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	**1 J**	<5
Styrene	5		<5	<5	<5	<5	<5
Xylene (total)	5		<5	<5	<5	<5	<5
Vinyl Acetate	NE		<5	<5	<5	<10	<5
Freon-113 *	5		<5	<5	<5	--	<5
Total VOCs			**1**	0	**5**	**1**	**5**

(1) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller 2000); 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.
-- Not analyzed
[ ] Value exceeds associated SCG value.
NE No SCG established
Bold value indicates a detection.

FW-01
FW-01
03/18/2004

Boxed sample designation et al. denotes a well that is located hydraulically upgradient of the on-site portion of the OU2 Groundwater Remedy (Figure 1). Northrop Grumman site boundary wells are identified in Table 5.

Table 6. Concentrations of Volatile Organic Compounds Detected in Shallow Wells, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values(1)	WELL: / SAMPLE ID: / DATE:	GM-16SR GM 16SR 03/29/2004	GM-17SR GM 17SR 03/29/2004	GM-18S GM 18S 03/30/2004	GM-21S GM-21S 03/23/2004	GM-23S GM-23S 04/06/2004
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	**4 J**	**3 J**	<10	<10
Carbon disulfide	50		<5	**1 J**	<5	<5	<5
1,1-Dichloroethene	5		<5	<5	<5	<5	<5
1,1-Dichloroethane	5		<5	<5	**0.8 J**	<5	<5
cis-1,2-Dichloroethene	5		<5	<5	**3 J**	<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		**2 J**	<5	**5 J**	<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	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	<5	<5	<5
1,1,2,2-Tetrachloroethane	5		<5	**0.5 J**	<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			**2**	**5.5**	**11.8**	0	0

(1) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller 2000); 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.

-- Not analyzed

Value exceeds associated SCG value.

NE No SCG established

Bold value indicates a detection.

FW-01 / FW-01 / 03/18/2004 Boxed sample designation et al. denotes a well that is located hydraulically upgradient of the on-site portion of the OU2 Groundwater Remedy (Figure 1). Northrop Grumman site boundary wells are identified in Table 5.

Table 6. Concentrations of Volatile Organic Compounds Detected in Shallow Wells, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values(1)	WELL: / SAMPLE ID: / DATE:	GM-32S GM-32S 04/07/2004	GM-78S GM-78S 03/19/2004	HN-40S HN-40S 03/16/2004	HN-42S HN-42S 03/16/2004
Chloromethane	5		<5	<5	<5	<5
Bromomethane	5		<5	<5	<5	<5
Vinyl Chloride	2		<2	<2	<2	<2
Chloroethane	5		<5	<5	<5	<5
Methylene chloride	5		<5	<5	<5	<5
Acetone	50		<10	<10	<10	<10
Carbon disulfide	50		<5	<5	<5	<5
1,1-Dichloroethene	5		<5	<5	<5	<5
1,1-Dichloroethane	5		<5	<5	<5	<5
cis-1,2-Dichloroethene	5		**2 J**	<5	<5	<5
trans-1,2-Dichloroethene	5		<5	<5	<5	<5
Chloroform	7		<5	<5	<5	<5
1,2-Dichloroethane	5		<5	<5	<5	<5
2-Butanone	50		<10	<10	<10	<10
1,1,1-Trichloroethane	5		<5	<5	<5	<5
Carbon tetrachloride	5		<5	<5	<5	<5
Bromodichloromethane	50		<5	<5	<5	<5
1,2-Dichloropropane	5		<5	<5	<5	<5
cis-1,3-Dichloropropene	5		<5	<5	<5	<5
Trichloroethene	5		**63**	<5	<5	<5
Dibromochloromethane	5		<5	<5	<5	<5
1,1,2-Trichloroethane	5		<5	<5	<5	<5
Benzene	0.7		<0.7	<0.7	<0.7	<0.7
trans-1,3-Dichloropropene	5		<5	<5	<5	<5
Bromoform	50		<5	<5	<5	<5
4-Methyl-2-pentanone	50		<10	<10	<10	<10
2-Hexanone	50		<10	<10	<10	<10
Tetrachloroethene	5		**0.6 J**	<5	<5	<5
1,1,2,2-Tetrachloroethane	5		<5	<5	<5	<5
Toluene	5		<5	<5	<5	<5
Chlorobenzene	5		<5	<5	<5	<5
Ethylbenzene	5		<5	<5	<5	<5
Styrene	5		<5	<5	<5	<5
Xylene (total)	5		<5	<5	<5	<5
Vinyl Acetate	NE		<5	<5	<5	<5
Freon-113 *	5		<5	<5	<5	<5
Total VOCs			**65.6**	0	0	0

(1) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller 2000); 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.

-- Not analyzed

Value exceeds associated SCG value.

NE No SCG established

Bold value indicates a detection.

FW-01 / FW-01 / 03/18/2004 Boxed sample designation et al. denotes a well that is located hydraulically upgradient of the on-site portion of the OU2 Groundwater Remedy (Figure 1). Northrop Grumman site boundary wells are identified in Table 5.

ARCADIS

Table 7. Concentrations of Volatile Organic Compounds Detected in Intermediate Wells, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values(1)	WELL: SAMPLE ID: DATE:	10624 N10624 03/31/2004	GM-15I GM-15I 04/05/2004	GM-16I GM-16I 04/02/2004	GM-17I GM-17I 04/06/2004	GM-18I GM 18I 03/30/2004
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	**6 J**	<10	<10	<10
Carbon disulfide	50		<5	<5	<5	<5	**0.4 J**
1,1-Dichloroethene	5		<5	<5	**2 J**	<5	<5
1,1-Dichloroethane	5		<5	<5	**0.9 J**	<5	<5
cis-1,2-Dichloroethene	5		<5	**1 J**	**4 J**	<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	**1 J**	<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		**2 J**	12	26	<5	**4 J**
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	7	<5	**0.8 J**
1,1,2,2-Tetrachloroethane	5		<5	<5	<5	<5	<5
Toluene	5		**1 J**	<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	**0.7 J**	<5	<5
Total VOCs			**3**	**19**	**41.6**	0	**5.2**

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

Bold value indicates a detection.

GM-16I
GM-16I
04/02/2004

Boxed sample designation et al. denotes a well that is located hydraulically upgradient of the on-site portion of the OU2 Groundwater Remedy (Figure 1). Northrop Grumman site boundary wells are identified in Table 5.

Table 7. Concentrations of Volatile Organic Compounds Detected in Intermediate Wells, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values(1)	WELL: / SAMPLE ID: / DATE:	GM-20I GM 20I 03/24/2004	GM-21I GM 21I 03/24/2004	GM-23I GM-23I 04/06/2004	GM-74I GM-74I 03/22/2004	GM-78I GM-78I 03/19/2004
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		**0.6 J**	**2 J**	<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		**0.6 J**	<5	**0.6 J**	<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	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	**1 J**	<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	**1 J**	<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			**1.2**	**2**	**1.6**	**1**	0

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

Bold value indicates a detection.

GM-16I
GM-16I
04/02/2004

Boxed sample designation et al. denotes a well that is located hydraulically upgradient of the on-site portion of the OU2 Groundwater Remedy (Figure 1). Northrop Grumman site boundary wells are identified in Table 5.

Table 7. Concentrations of Volatile Organic Compounds Detected in Intermediate Wells, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values(1)	WELL: / SAMPLE ID: / DATE:	GM-79I GM-79I 04/06/2004	HN-24I HN-24I 03/18/2004	HN-24I REP031804 03/18/2004	HN-29I HN-29I 03/18/2004	HN-40I HN-40I 3/16/200
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	**4 J**	**4**	<5	<5
1,1-Dichloroethane	5		<5	<5	<5	<5	<5
cis-1,2-Dichloroethene	5		<5	<5	<5	<5	**0.9**
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	**4 J**
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	**62**	**61**	**1 J**	**34**
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	**3**	**3**	**0.8 J**	**9 J**
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	**33**	**30**	<5	<5
Total VOCs			0	**102**	**98**	**1.8**	**47.9**

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

Bold value indicates a detection.

GM-16I
GM-16I
04/02/2004

Boxed sample designation et al. denotes a well that is located hydraulically upgradient of the on-site portion of the OU2 Groundwater Remedy (Figure 1). Northrop Grumman site boundary wells are identified in Table 5.

Table 7. Concentrations of Volatile Organic Compounds Detected in Intermediate Wells, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values(1)	WELL: / SAMPLE ID: / DATE:	HN-42I / HN-42I / 03/16/2004
Chloromethane	5		<5
Bromomethane	5		<5
Vinyl Chloride	2		<2
Chloroethane	5		<5
Methylene chloride	5		<5
Acetone	50		<10
Carbon disulfide	50		<5
1,1-Dichloroethene	5		<5
1,1-Dichloroethane	5		<5
cis-1,2-Dichloroethene	5		<5
trans-1,2-Dichloroethene	5		<5
Chloroform	7		<5
1,2-Dichloroethane	5		<5
2-Butanone	50		<10
1,1,1-Trichloroethane	5		<5
Carbon tetrachloride	5		<5
Bromodichloromethane	50		<5
1,2-Dichloropropane	5		<5
cis-1,3-Dichloropropene	5		<5
Trichloroethene	5		<5
Dibromochloromethane	5		<5
1,1,2-Trichloroethane	5		<5
Benzene	0.7		<0.7
trans-1,3-Dichloropropene	5		<5
Bromoform	50		<5
4-Methyl-2-pentanone	50		<10
2-Hexanone	50		<10
Tetrachloroethene	5		<5
1,1,2,2-Tetrachloroethane	5		<5
Toluene	5		<5
Chlorobenzene	5		<5
Ethylbenzene	5		<5
Styrene	5		<5
Xylene (total)	5		<5
Vinyl Acetate	NE		<5
Freon-113 *	5		<5
Total VOCs			0

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

Bold value indicates a detection.

GM-16I
GM-16I
04/02/2004

Boxed sample designation et al. denotes a well that is located hydraulically upgradient of the on-site portion of the OU2 Groundwater Remedy (Figure 1). Northrop Grumman site boundary wells are identified in Table 5.

ARCADIS

Table 8. Concentrations of Volatile Organic Compounds Detected in Deep Wells, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values(1)	WELL: / SAMPLE ID: / DATE:	10627 N10627 03/31/2004	GM-13D GM-13D 04/05/2004	GM-13D REP040504 04/05/2004	GM-15D GM-15D 03/17/2004	GM-17D GM-17D 03/31/2004
Chloromethane	5		<5	<25	<25	<5	<5
Bromomethane	5		<5	<25	<25	<5	<5
Vinyl Chloride	2		<2	<10	<10	<2	<2
Chloroethane	5		<5	<25	<25	<5	<5
Methylene chloride	5		<5	<25	<25	<5	<5
Acetone	50		**4 J**	<50	<50	<10	<10
Carbon disulfide	50		**0.7 J**	<25	<25	<5	<5
1,1-Dichloroethene	5		<5	**93**	**96**	**4 J**	<5
1,1-Dichloroethane	5		<5	**50**	**49**	**6**	<5
cis-1,2-Dichloroethene	5		<5	**170**	**170**	<5	<5
trans-1,2-Dichloroethene	5		<5	<25	<25	<5	<5
Chloroform	7		<5	<25	<25	<5	<5
1,2-Dichloroethane	5		<5	<25	<25	<5	<5
2-Butanone	50		<10	<50	<50	<10	<10
1,1,1-Trichloroethane	5		<5	**86**	**90**	<5	<5
Carbon tetrachloride	5		<5	<25	<25	<5	<5
Bromodichloromethane	50		<5	<25	<25	<5	<5
1,2-Dichloropropane	5		<5	<25	<25	<5	<5
cis-1,3-Dichloropropene	5		<5	<25	<25	<5	<5
Trichloroethene	5		**1 J**	**230**	**240**	**8**	<5
Dibromochloromethane	5		<5	<25	<25	<5	<5
1,1,2-Trichloroethane	5		<5	<25	<25	<5	<5
Benzene	0.7		<0.7	**<4**	<4	<0.7	<0.7
trans-1,3-Dichloropropene	5		<5	<25	<25	<5	<5
Bromoform	50		<5	<25	<25	<5	<5
4-Methyl-2-pentanone	50		<10	<50	<50	<10	<10
2-Hexanone	50		<10	<50	<50	<10	<10
Tetrachloroethene	5		<5	**640**	**660**	**8**	<5
1,1,2,2-Tetrachloroethane	5		<5	<25	<25	<5	<5
Toluene	5		<5	<25	<25	<5	<5
Chlorobenzene	5		<5	<25	<25	<5	<5
Ethylbenzene	5		<5	<25	<25	<5	<5
Styrene	5		<5	<25	<25	<5	<5
Xylene (total)	5		<5	<25	<25	<5	<5
Vinyl Acetate	NE		<5	<25	<25	<5	<5
Freon-113 *	5		<5	**17 J**	**17 J**	<5	<5
Total VOCs			**1.7**	**1,286**	**1,322**	**26**	0

(1) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller 2000); 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.
REP Replicate sample
[ ] Value exceeds associated SCG value.
NE No SCG established
Bold value indicates a detection.

GM-13D
GM-13D
04/02/2004

Boxed sample designation et al. denotes a well that is located hydraulically upgradient of the on-site portion of the *OU2 Groundwater Remedy* (Figure 1). Northrop Grumman site boundary wells are identified in Table 5.

Table 8. Concentrations of Volatile Organic Compounds Detected in Deep Wells, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values(1)	WELL: / SAMPLE ID: / DATE:	GM-18D / GM-18D / 03/23/2004	GM-20D / GM 20D / 03/24/2004	GM-21D / GM 21D / 03/24/2004	GM-34D / GM-34D / 04/07/2004	GM-36D / GM 36D / 03/30/2004
Chloromethane	5		<5	<5	<5	<20	<5
Bromomethane	5		<5	<5	<5	<20	<5
Vinyl Chloride	2		<2	<2	<2	<8	<2
Chloroethane	5		<5	<5	<5	<20	<5
Methylene chloride	5		<5	<5	<5	<20	<5
Acetone	50		<10	<10	<10	<40	<10
Carbon disulfide	50		**2 J**	**4 J**	<5	<20	**0.7 J**
1,1-Dichloroethene	5		<5	<5	<5	**5 J**	<5
1,1-Dichloroethane	5		<5	<5	<5	<20	<5
cis-1,2-Dichloroethene	5		<5	<5	<5	**8 J**	<5
trans-1,2-Dichloroethene	5		<5	<5	<5	<20	<5
Chloroform	7		<5	<5	<5	<20	<5
1,2-Dichloroethane	5		<5	<5	<5	<20	<5
2-Butanone	50		<10	<10	<10	<40	<10
1,1,1-Trichloroethane	5		<5	<5	<5	<20	<5
Carbon tetrachloride	5		<5	<5	<5	<20	<5
Bromodichloromethane	50		<5	<5	<5	<20	<5
1,2-Dichloropropane	5		<5	<5	<5	<20	<5
cis-1,3-Dichloropropene	5		<5	<5	<5	<20	<5
Trichloroethene	5		**3 J**	**0.4 J**	**2 J**	**440**	**14**
Dibromochloromethane	5		<5	<5	<5	<20	<5
1,1,2-Trichloroethane	5		<5	<5	<5	<20	<5
Benzene	0.7		<0.7	<0.7	<0.7	<3	<0.7
trans-1,3-Dichloropropene	5		<5	<5	<5	<20	<5
Bromoform	50		<5	<5	<5	<20	<5
4-Methyl-2-pentanone	50		<10	<10	<10	<40	<10
2-Hexanone	50		<10	<10	<10	<40	<10
Tetrachloroethene	5		<5	<5	**0.3 J**	**8 J**	**0.8 J**
1,1,2,2-Tetrachloroethane	5		<5	<5	<5	<20	<5
Toluene	5		<5	<5	<5	<20	<5
Chlorobenzene	5		<5	<5	<5	<20	<5
Ethylbenzene	5		<5	<5	<5	<20	<5
Styrene	5		<5	<5	<5	<20	<5
Xylene (total)	5		<5	<5	<5	<20	<5
Vinyl Acetate	NE		<5	<5	<5	<20	<5
Freon-113 *	5		<5	<5	<5	**37**	**0.6 J**
Total VOCs			**5**	**4.4**	**2.3**	**498**	**16.1**

(1) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller 2000); 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.
REP Replicate sample.
[ ] Value exceeds associated SCG value.
NE No SCG established
Bold value indicates a detection.

GM-13D
GM-13D
04/02/2004

Boxed sample designation et al. denotes a well that is located hydraulically upgradient of the on-site portion of the *OU2 Groundwater* Remedy (Figure 1). Northrop Grumman site boundary wells are identified in Table 5.

Table 8. Concentrations of Volatile Organic Compounds Detected in Deep Wells, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values(1)	WELL: / SAMPLE ID: / DATE:	GM-37D / GM-37D / 03/31/2004	GM-38D / GM-38D / 03/31/2004	GM-39D / GM-39D / 03/23/2004	GM-73D / GM-73D / 03/22/2004	GM-74D / GM-74D / 03/22/2004
Chloromethane	5		<5	<25	<5	<10	<5
Bromomethane	5		<5	<25	<5	<10	<5
Vinyl Chloride	2		<2	<10	<2	<4	<2
Chloroethane	5		<5	<25	<5	<10	<5
Methylene chloride	5		<5	<25	<5	<10	<5
Acetone	50		<10	<50	<10	<20	<10
Carbon disulfide	50		<5	<25	**7**	<10	<5
1,1-Dichloroethene	5		**1 J**	**5 J**	<5	<10	<5
1,1-Dichloroethane	5		**2 J**	<25	<5	<10	<5
cis-1,2-Dichloroethene	5		<5	<25	<5	<10	<5
trans-1,2-Dichloroethene	5		<5	<25	<5	<10	<5
Chloroform	7		**0.9 J**	<25	<5	<10	<5
1,2-Dichloroethane	5		<5	<25	<5	<10	<5
2-Butanone	50		<10	<50	<10	<20	<10
1,1,1-Trichloroethane	5		**2 J**	**4 J**	<5	<10	<5
Carbon tetrachloride	5		<5	<25	<5	<10	<5
Bromodichloromethane	50		<5	<25	<5	<10	<5
1,2-Dichloropropane	5		<5	<25	<5	<10	<5
cis-1,3-Dichloropropene	5		<5	<25	<5	<10	<5
Trichloroethene	5		<5	**810**	**42**	**250**	**4 J**
Dibromochloromethane	5		<5	<25	<5	<10	<5
1,1,2-Trichloroethane	5		<5	<25	<5	<10	<5
Benzene	0.7		<0.7	<4	<0.7	<1	<0.7
trans-1,3-Dichloropropene	5		<5	<25	<5	<10	<5
Bromoform	50		<5	<25	<5	<10	<5
4-Methyl-2-pentanone	50		<10	<50	<10	<20	<10
2-Hexanone	50		<10	<50	<10	<20	<10
Tetrachloroethene	5		**0.8 J**	<25	<5	<10	<5
1,1,2,2-Tetrachloroethane	5		<5	<25	<5	<10	<5
Toluene	5		<5	<25	<5	<10	<5
Chlorobenzene	5		<5	<25	<5	<10	<5
Ethylbenzene	5		<5	<25	<5	<10	<5
Styrene	5		<5	<25	<5	<10	<5
Xylene (total)	5		<5	<25	<5	<10	<5
Vinyl Acetate	NE		<5	<25	<5	<10	<5
Freon-113 *	5		<5	<25	<5	<10	<5
Total VOCs			**6.7**	**819**	**49**	**250**	**4**

(1) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller 2000); 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.
REP Replicate sample.
[ ] Value exceeds associated SCG value.
NE No SCG established
Bold value indicates a detection.

GM-13D
GM-13D
04/02/2004

Boxed sample designation et al. denotes a well that is located hydraulically upgradient of the on-site portion of the OU2 Groundwater Remedy (Figure 1). Northrop Grumman site boundary wells are identified in Table 5.

Table 8. Concentrations of Volatile Organic Compounds Detected in Deep Wells, First Quarter of 2004, 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 04/06/2004	HN-29D HN-29D 03/18/2004
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		**0.9 J**	<5
1,1-Dichloroethane	5		<5	<5
cis-1,2-Dichloroethene	5		**0.7 J**	<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		**0.7 J**	<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		**76**	**0.6 J**
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		**1 J**	<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		**2 J**	<5
Total VOCs			**81.3**	**0.6**

(1) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller 2000); 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.
REP Replicate sample.
[ ] Value exceeds associated SCG value.
NE No SCG established
Bold value indicates a detection.

GM-13D
GM-13D
04/02/2004

Boxed sample designation et al. denotes a well that is located hydraulically upgradient of the on-site portion of the OU2 Groundwater Remedy (Figure 1). Northrop Grumman site boundary wells are identified in Table 5.

ARCADIS

Table 9. Concentrations of Volatile Organic Compounds Detected in Deep2 Wells and OU2 Groundwater Remedial Treatment Systems, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT: (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[1]	WELL: / SAMPLE ID: / DATE:	GM-15D2 GM-15D2 03/17/2004	GM-33D2 GM 33D2 03/30/2004	GM-34D2 GM-34D2 04/07/2004	GM-35D2 GM-35D2 04/02/2004	GM-36D2 GM 36D2 03/30/2004
Chloromethane	5		<5	<5	<5	<20	<5
Bromomethane	5		<5	<5	<5	<20	<5
Vinyl Chloride	2		<2	<2	<2	<8	<2
Chloroethane	5		<5	<5	<5	<20	<5
Methylene chloride	5		<5	<5	<5	<20	<5
Acetone	50		<10	<10	**4 J**	<40	<10
Carbon disulfide	50		<5	<5	<5	**5 J**	<5
1,1-Dichloroethene	5		<5	<5	**4 J**	<20	<5
1,1-Dichloroethane	5		<5	<5	<5	<20	<5
cis-1,2-Dichloroethene	5		<5	**1 J**	**6**	**3 J**	<5
trans-1,2-Dichloroethene	5		<5	<5	<5	<20	<5
Chloroform	7		<5	<5	<5	<20	<5
1,2-Dichloroethane	5		<5	<5	<5	<20	<5
2-Butanone	50		<10	<10	<10	<40	<10
1,1,1-Trichloroethane	5		<5	<5	**0.5 J**	<20	<5
Carbon tetrachloride	5		<5	<5	<5	<20	<5
Bromodichloromethane	50		<5	<5	<5	<20	<5
1,2-Dichloropropane	5		<5	<5	<5	<20	<5
cis-1,3-Dichloropropene	5		<5	<5	<5	<20	<5
Trichloroethene	5		**6**	**84**	**150**	**360**	<5
Dibromochloromethane	5		<5	<5	<5	<20	<5
1,1,2-Trichloroethane	5		<5	<5	<5	<20	<5
Benzene	0.7		<0.7	<0.7	<0.7	<3	<0.7
trans-1,3-Dichloropropene	5		<5	<5	<5	<20	<5
Bromoform	50		<5	<5	<5	<20	<5
4-Methyl-2-pentanone	50		<10	<10	<10	<40	<10
2-Hexanone	50		<10	<10	<10	<40	<10
Tetrachloroethene	5		**5**	**8**	**10**	**6 J**	<5
1,1,2,2-Tetrachloroethane	5		<5	<5	<5	<20	<5
Toluene	5		<5	<5	<5	<20	<5
Chlorobenzene	5		<5	<5	<5	<20	<5
Ethylbenzene	5		<5	<5	<5	<20	<5
Styrene	5		<5	<5	<5	<20	<5
Xylene (total)	5		<5	<5	<5	<20	<5
Vinyl Acetate	NE		<5	<5	<5	<20	<5
Freon-113 *	5		<5	**6**	**9**	**10 J**	<5
Total VOCs			**11**	**99**	**183.5**	**384**	0

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

VOCs Volatile organic compounds

ug/L Micrograms per liter

J Estimated value

D Constituent identified at a secondary dilution.

NYSDEC New York State Department of Environmental Conservation

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

REP Replicate sample

Value exceeds associated SCG value.

NE No SCG established

Bold value indicates a detection.

Table 9. Concentrations of Volatile Organic Compounds Detected in Deep2 Wells and OU2 Groundwater Remedial Treatment Systems, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT: (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[1]	WELL: SAMPLE ID: DATE:	GM-37D2 GM-37D2 04/01/2004	GM-38D2 GM-38D2 04/01/2004	GM-38D2 REP040104 04/01/2004	GM-39D2 GM-39D2 03/23/2004	GM-70D2 GM 70D2 03/29/2004
Chloromethane	5		<5	<50	<50	<5	<5
Bromomethane	5		<5	<50	<50	<5	<5
Vinyl Chloride	2		<2	<20	<20	<2	<2
Chloroethane	5		<5	<50	<50	<5	<5
Methylene chloride	5		<5	<50	<50	<5	<5
Acetone	50		<10	<100	<100	<10	**6 J**
Carbon disulfide	50		<5	<50	<50	**0.7 J**	**0.8 J**
1,1-Dichloroethene	5		**2 J**	<50	<50	<5	**0.7 J**
1,1-Dichloroethane	5		7	<50	<50	<5	<5
cis-1,2-Dichloroethene	5		<5	**6 J**	**5 J**	<5	**2 J**
trans-1,2-Dichloroethene	5		<5	<50	<50	<5	<5
Chloroform	7		**0.6 J**	<50	<50	<5	<5
1,2-Dichloroethane	5		<5	<50	<50	<5	<5
2-Butanone	50		<10	<100	<100	<10	<10
1,1,1-Trichloroethane	5		**3 J**	<50	<50	<5	<5
Carbon tetrachloride	5		<5	<50	<50	<5	<5
Bromodichloromethane	50		<5	<50	<50	<5	<5
1,2-Dichloropropane	5		<5	<50	<50	<5	<5
cis-1,3-Dichloropropene	5		<5	<50	<50	<5	<5
Trichloroethene	5		**2 J**	1,100	1,100	75	140
Dibromochloromethane	5		<5	<50	<50	<5	<5
1,1,2-Trichloroethane	5		<5	<50	<50	<5	<5
Benzene	0.7		<0.7	<7	<7	<0.7	<0.7
trans-1,3-Dichloropropene	5		<5	<50	<50	<5	<5
Bromoform	50		<5	<50	<50	<5	<5
4-Methyl-2-pentanone	50		<10	<100	<100	<10	<10
2-Hexanone	50		<10	<100	<100	<10	<10
Tetrachloroethene	5		<5	<50	<50	<5	9
1,1,2,2-Tetrachloroethane	5		<5	<50	<50	<5	<5
Toluene	5		<5	<50	<50	<5	<5
Chlorobenzene	5		<5	<50	<50	<5	<5
Ethylbenzene	5		<5	<50	<50	<5	<5
Styrene	5		<5	<50	<50	<5	<5
Xylene (total)	5		<5	<50	<50	<5	<5
Vinyl Acetate	NE		<5	<50	<50	<5	<5
Freon-113 *	5		<5	<50	<50	<5	**3 J**
Total VOCs			**14.6**	**1,106**	**1,105**	**75.7**	**161.5**

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

VOCs Volatile organic compounds

ug/L Micrograms per liter

J Estimated value

D Constituent identified at a secondary dilution.

NYSDEC New York State Department of Environmental Conservation

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

REP Replicate sample

Value exceeds associated SCG value.

NE No SCG established

Bold value indicates a detection.

Table 9. Concentrations of Volatile Organic Compounds Detected in Deep2 Wells and OU2 Groundwater Remedial Treatment Systems, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT: (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[1]	WELL: SAMPLE ID: DATE:	GM-71D2 GM-71D2 5/7/2004	GM-73D2 GM-73D2 03/22/2004	GM-73D2 REP032204 03/22/2004	GM-74D2 GM-74D2 03/22/2004	GM-75D2 GM 75D2 03/30/2004
Chloromethane	5		<5	<50	<50	<5	<5
Bromomethane	5		<5	<50	<50	<5	<5
Vinyl Chloride	2		<2	<20	<20	<2	<2
Chloroethane	5		<5	<50	**7 J**	<5	<5
Methylene chloride	5		<5	<50	<50	<5	<5
Acetone	50		<10	<100	<100	**9 J**	<10
Carbon disulfide	50		<5	**17 J**	**38 J**	**2 J**	<5
1,1-Dichloroethene	5		**2 J**	<50	<50	<5	**20**
1,1-Dichloroethane	5		**5**	<50	<50	<5	**3 J**
cis-1,2-Dichloroethene	5		<5	<50	<50	<5	**2 J**
trans-1,2-Dichloroethene	5		<5	<50	<50	<5	<5
Chloroform	7		**1 J**	<50	<50	<5	<5
1,2-Dichloroethane	5		<5	<50	<50	<5	<5
2-Butanone	50		<10	<100	<100	<10	<10
1,1,1-Trichloroethane	5		<5	<50	<50	<5	**6**
Carbon tetrachloride	5		<5	<50	<50	<5	<5
Bromodichloromethane	50		<5	<50	<50	<5	<5
1,2-Dichloropropane	5		<5	<50	<50	<5	<5
cis-1,3-Dichloropropene	5		<5	<50	<50	<5	<5
Trichloroethene	5		**4**	**720**	**750**	**8**	**890 D**
Dibromochloromethane	5		<5	<50	<50	<5	<5
1,1,2-Trichloroethane	5		<5	<50	<50	<5	**1 J**
Benzene	0.7		<0.7	<7	<7	<0.7	<0.7
trans-1,3-Dichloropropene	5		<5	<50	<50	<5	<5
Bromoform	50		<5	<50	<50	<5	<5
4-Methyl-2-pentanone	50		<10	<100	<100	<10	<10
2-Hexanone	50		<10	<100	<100	<10	<10
Tetrachloroethene	5		<5	<50	<50	**7**	**8**
1,1,2,2-Tetrachloroethane	5		<5	<50	<50	<5	<5
Toluene	5		<5	<50	<50	<5	<5
Chlorobenzene	5		<5	<50	<50	<5	<5
Ethylbenzene	5		<5	<50	<50	<5	<5
Styrene	5		<5	<50	<50	<5	<5
Xylene (total)	5		<5	**10 J**	<50	<5	<5
Vinyl Acetate	NE		<5	<50	<50	<5	<5
Freon-113 *	5		<5	<50	**6 J**	**0.8 J**	**5**
Total VOCs			**12**	**747**	**801**	**26.8**	**935**

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

VOCs Volatile organic compounds

ug/L Micrograms per liter

J Estimated value

D Constituent identified at a secondary dilution.

NYSDEC New York State Department of Environmental Conservation

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

REP Replicate sample

Value exceeds associated SCG value.

NE No SCG established

Bold value indicates a detection.

Table 9. Concentrations of Volatile Organic Compounds Detected in Deep2 Wells and OU2 Groundwater Remedial Treatment Systems, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT: (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[1]	WELL: SAMPLE ID: DATE:	GP-1 GP-1 04/07/2004	GP-3 GP-3 04/07/2004	EFFL GP-1/3EFF 04/07/2004	ONCT-1 ONCT-1 04/07/2004	ONCT-2 ONCT-2 04/07/2004
Chloromethane	5		<5	<5	<5	<5	<5
Bromomethane	5		<5	<5	<5	<5	<5
Vinyl Chloride	2		<2	110	<2	<2	<2
Chloroethane	5		<5	**2 J**	<5	<5	<5
Methylene chloride	5		<5	**0.6 J**	<5	<5	<5
Acetone	50		<10	<10	<10	**4 J**	<10
Carbon disulfide	50		<5	<5	<5	**0.8 J**	<5
1,1-Dichloroethene	5		6	21	<5	**3 J**	**4 J**
1,1-Dichloroethane	5		**2 J**	**4 J**	<5	**0.7 J**	**2 J**
cis-1,2-Dichloroethene	5		9	11	<5	**3 J**	**1 J**
trans-1,2-Dichloroethene	5		<5	<5	<5	<5	<5
Chloroform	7		<5	**0.6 J**	<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		**2 J**	**5 J**	<5	**0.6 J**	**2 J**
Carbon tetrachloride	5		<5	**0.5 J**	<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		500 D	4,200 D	**0.6 J**	760 D	170
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		120	61	<5	14	8
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		10	25	<5	8	**1 J**
Total VOCs			**649**	**4,440.7**	**0.6**	**794.1**	**188**

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

VOCs Volatile organic compounds

ug/L Micrograms per liter

J Estimated value

D Constituent identified at a secondary dilution.

NYSDEC New York State Department of Environmental Conservation

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

REP Replicate sample

Value exceeds associated SCG value.

NE No SCG established

Bold value indicates a detection.

Table 9. Concentrations of Volatile Organic Compounds Detected in Deep2 Wells and OU2 Groundwater Remedial Treatment Systems, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT: (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values[1]	WELL: SAMPLE ID: DATE:	ONCT-3 ONCT-3 04/07/2004	EFFL ONCT EFF 04/07/2004
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		**0.9 J**	<5
1,1-Dichloroethane	5		**1 J**	<5
cis-1,2-Dichloroethene	5		**15**	<5
trans-1,2-Dichloroethene	5		<5	<5
Chloroform	7		**1 J**	<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		**52**	<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		**9**	<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		**0.7 J**	<5
Total VOCs			**79.6**	0

(1) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller 2000); most stringent value listed.
VOCs Volatile organic compounds
ug/L Micrograms per liter
J Estimated value
D Constituent identified at a secondary dilution.
NYSDEC New York State Department of Environmental Conservation
* Freon 113 also known as 1,1,1-Trichloro-2,2,2-trifluoroethane.
REP Replicate sample
[ ] Value exceeds associated SCG value.
NE No SCG established
Bold value indicates a detection.

Table 10. Concentrations of Site-Related Volatile Organic Compounds Detected in Outpost Wells, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York. (1)

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values(2)	WELL:	OW 1-1	OW 1-1	OW 1-1	OW 1-2	OW 1-3	OW 2-1	OW 2-2	OW 2-2	OW 2-2
		SAMPLE ID:	OW 1-1	OWI-1	OW1-1	OW1-2	OWI-3	OW2-1	OW2-2	OW-2-2	OW-2-2
		DATE:	04/23/2004	04/30/2004	05/06/2004	04/26/2004	04/30/2004	04/26/2004	05/03/2004	05/27/2004	6/4/2004
Chlorobenzene	5		<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethene	5		**8.4**	**7.2**	**6.1**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethane	5		**3.8**	**4.0**	**3.4**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
trans-1,2-Dichloroethene	5		<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,2-Dichloroethene	5		<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloroform	7		<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane	5		<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1-Trichloroethane	5		**13**	**15**	**12**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon tetrachloride	5		<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethene	5		**3.8**	**4.0**	**3.2**	<0.50	<0.50	**0.51**	**0.82**	<0.50	<0.50
1,1,2,2-Tetrachloroethane	5		<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethene	5		<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Freon-113 *	5		<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	5		<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Total Site-Related VOCs:			**29.00**	**30.20**	**24.70**	0.00	0.00	**0.51**	**0.82**	0.00	0.00

Footnotes:

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

(2) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the OU2 Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000); most stringent value listed.

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 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.
Value exceeds associated SCG value.
Bold value indicates a detection.

Table 10. Concentrations of Site-Related Volatile Organic Compounds Detected in Outpost Wells, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York. (1)

CONSTITUENT (Units in ug/L)	NYSDEC Standards Criteria and Guidance Values(2)	WELL:	OW 3-1	OW 3-2	OW 4-1	OW 4-1	OW 4-2
		SAMPLE ID:	OW3-1	OW3-2	OW4-1	REP050604	OW-4-2
		DATE:	05/03/2004	05/04/2004	05/06/2004	05/06/2004	05/05/2004
Chlorobenzene	5		<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethene	5		<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethane	5		<0.50	<0.50	<0.50	<0.50	<0.50
trans-1,2-Dichloroethene	5		<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,2-Dichloroethene	5		<0.50	<0.50	<0.50	<0.50	<0.50
Chloroform	7		<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane	5		<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1-Trichloroethane	5		<0.50	<0.50	<0.50	<0.50	<0.50
Carbon tetrachloride	5		<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethene	5		<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane	5		<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethene	5		<0.50	<0.50	<0.50	<0.50	<0.50
Freon-113 *	5		<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	5		<0.50	<0.50	<0.50	<0.50	<0.50
Total Site-Related VOCs:			0.00	0.00	0.00	0.00	0.00

Footnotes:

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

(2) Standards, Criteria, and Guidance (SCG) values based on documents referenced in the OU2 Feasibility Study Report (ARCADIS Geraghty & Miller, Inc. 2000); most stringent value listed.

General Notes:

- Results 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 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.
[ ] Value exceeds associated SCG value.
Bold value indicates a detection.

ARCADIS

Table 11. Concentrations of Semi-Volatile Organic Compounds in Groundwater and Blank Samples, First Quarter of 2004, Northrop Grumman Corporation, Bethpge, New York.

CONSTITUENT (ug/L)	SITE: / SAMPLE ID: / DATE:	GM-14 GM-14 03/17/2004	WATER EQ. BLANK FB031704 03/17/2004
1,3-Dichlorobenzene		<10	<11
1,4-Dichlorobenzene		<10	<11
1,2-Dichlorobenzene		<10	<11
1,2,4-Trichlorobenzene		<10	<11
Hexachlorobutadiene		<10	<11
Phenol		<10	<11
Bis(2-chloroethyl)ether		<10	<11
2-Chlorophenol		<10	<11
2-Methylphenol		<10	<11
Bis(2-chloro-1-methylethyl) ether		<10	<11
4-Methylphenol		<10	<11
N-Nitroso-di-n-propylamine		<10	<11
Hexachloroethane		<10	<11
Nitrobenzene		<10	<11
Isophorone		<10	<11
2-Nitrophenol		<10	<11
2,4-Dimethylphenol		<10	<11
Bis(2-chloroethoxy)methane		<10	<11
2,4-Dichlorophenol		<10	<11
Naphthalene		<10	<11
4-Chloroaniline		<10	<11
4-Chloro-3-methylphenol		<10	<11
2-Methylnaphthalene		<10	<11
Hexachlorocyclopentadiene		<10	<11
2,4,6-Trichlorophenol		<10	<11
2,4,5-Trichlorophenol		<50	<54
2-Chloronaphthalene		<10	<11
2-Nitroaniline		<50	<54
Dimethylphthalate		<10	<11
Acenaphthylene		<10	<11
2,6-Dinitrotoluene		<10	<11
3-Nitroaniline		<50	<54
Acenaphthene		<10	<11
2,4-Dinitrophenol		<50	<54
4-Nitrophenol		<50	<54
Dibenzofuran		<10	<11
2,4-Dinitrotoluene		<10	<11
Diethylphthalate		<10	<11
4-Chlorophenyl phenylether		<10	<11
Fluorene		<10	<11
4-Nitroaniline		<50	<54
4,6-Dinitro-2-methylphenol		<50	<54
N-Nitrosodiphenylamine (1)		<10	<11
4-Bromophenyl phenylether		<10	<11
Hexachlorobenzene		<10	<11
Pentachlorophenol		<50	<54

Footnotes on last page.

Table 11. Concentrations of Semi-Volatile Organic Compounds in Groundwater and Blank Samples, First Quarter of 2004, Northrop Grumman Corporation, Bethpge, New York.

CONSTITUENT (ug/L)	SITE: / SAMPLE ID: / DATE:	GM-14 / GM-14 / 03/17/2004	WATER EQ. BLANK / FB031704 / 03/17/2004
Phenanthrene		<10	<11
Anthracene		<10	<11
Carbazole		<10	<11
Di-n-butylphthalate		<10	<11
Fluoranthene		<10	<11
Pyrene		<10	<11
Butylbenzylphthalate		<10	<11
3,3'-Dichlorobenzidine		<20	<22
Benzo(a)anthracene		<10	<11
Chrysene		<10	<11
Bis(2-ethylhexyl)phthalate (BEHP)		<10	<11
Di-n-octylphthalate		<10	<11
Benzo(b)fluoranthene		<10	<11
Benzo(k)fluoranthene		<10	<11
Benzo(a)pyrene		<10	<11
Indeno(1,2,3-cd)pyrene		<10	<11
Dibenz(a,h)anthracene		<10	<11
Benzo(g,h,i)perylene		<10	<11
Benzoic acid		<50	<54
Benzyl alcohol		<10	<11
Sum of Constituents		**0**	**0**

ug/L Micrograms per Liter
EQ. Equipment

ARCADIS

Table 12. Concentrations of Total and Dissolved Cadmium and Chromium Detected in Groundwater and Blank Samples, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.(1)

CONSTITUENT (ug/L)	NYSDEC SCGs (2)	SITE: / SAMPLE ID: / DATE:	10631 N10631 03/30/2004	GM-15S GM-15S 03/17/2004	GM-16SR GM 16SR 03/29/2004	GM-17SR GM 17SR 03/29/2004	GM-18S GM 18S 03/30/2004	GM-32S GM-32S 04/07/2004	GM-78I GM-78I 03/19/2004	GM-78S GM-78S 03/19/2004	MW-01GF MW-1GF 04/05/2004
Cadmium	5		**3.7 B**	--	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
Cadmium (Dissolved)	5		**2.4 B**	--	<1.1	<1.1	<1.1	<1.1	--	--	<1.1
Chromium	50		**38.9**	**366**	<1.3	<1.3	**4 B**	**48.8**	**2.3 B**	**2.9 B**	**2.4 B**
Chromium (Dissolved)	50		**20.8**	--	<1.3	<1.3	<1.3	**47.2**	--	--	<1.3

(1) Monitoring Well MW-5 was not sampled this round due to construction activity in the area.
(2) Standards, Criteria, and Guidance values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller 2000); most stringent value listed.

ug/L Micrograms per liter
B Detected between the IDL and CRDL
IDL Instrument detection limit
CRDL Contract-required detection limit
NYSDEC New York State Department of Environmental Conservation
EQ Equipment
Value exceeds associated SCG value.
Bold Constituent detected above IDL.
-- Not analyzed

ARCADIS

Table 12. Concentrations of Total and Dissolved Cadmium and Chromium Detected in Groundwater and Blank Samples, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York[1]

CONSTITUENT (ug/l)	NYSDEC SCGs[2]	SITE: / SAMPLE ID: / DATE:	MW-02GF MW-2GF 04/05/2004	MW-03R MW-3R 03/19/2004	MW-04 PT1MW-04 03/17/2004	MW-06 PT1MW-06 03/17/2004	WATER EQ. BLANK FB031704 03/17/2004	WATER EQ. BLANK FB031904 03/19/2004	WATER EQ. BLANK FB032904 03/29/2004
Cadmium	5		<1.1	**38.5**	--	--	--	<1.1	<1.1
Cadmium (Dissolved)	5		<1.1	**36.7**	--	--	--	--	--
Chromium	50		**249**	**70.1**	<1.3	**247**	**1.7**	<1.3	<1.3
Chromium (Dissolved)	50		**245**	**68.7**	--	--	--	--	--

(1) Monitoring Well MW-5 was not sampled this round due to construction activity in the area.
(2) Standards, Criteria, and Guidance values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller 2000); most stringent value listed.

ug/L Micrograms per liter
B Detected between the IDL and CRDL
IDL Instrument detection limit
CRDL Contract-required detection limit
NYSDEC New York State Department of Environmental Conservation
EQ Equipment
Value exceeds associated SCG value.
Bold Constituent detected above IDL.
-- Not analyzed

ARCADIS

Table 12. Concentrations of Total and Dissolved Cadmium and Chromium Detected in Groundwater and Blank Samples, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York[1]

CONSTITUENT (ug/l)	NYSDEC SCGs[2]	SITE: / SAMPLE ID: / DATE:	WATER EQ. BLANK FB033004 03/30/2004	WATER EQ. BLANK FB040504 04/05/2004	WATER EQ. BLANK FB040704 04/07/2004
Cadmium	5		<1.1	<1.1	<1.1
Cadmium (Dissolved)	5		--	--	--
Chromium	50		<1.3	<1.3	<1.3
Chromium (Dissolved)	50		--	--	--

(1)	Monitoring Well MW-5 was not sampled this round due to construction activity in the area.
(2)	Standards, Criteria, and Guidance values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller 2000); most stringent value listed.
ug/L	Micrograms per liter
B	Detected between the IDL and CRDL
IDL	Instrument detection limit
CRDL	Contract-required detection limit
NYSDEC	New York State Department of Environmental Conservation
EQ	Equipment
	Value exceeds associated SCG value.
Bold	Constituent detected above IDL.
--	Not analyzed

Table 13. Concentrations of Tentatively Identified Compounds (TICs) Detected in Groundwater Samples, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

WELL/BLANK SAMPLE IDENTIFICATION	SAMPLE ID	DATE	Tentatively Identified Compounds (Units in ug/L)			
			Unknown Siloxane	Freon 123a	MTBE	Unknown
MW-52S	52S	03/25/04	--	17 NJ	--	--
GM-15D	GM-15D	03/17/04	--	--	--	3 J
GM-73D2	GM-73D2	03/22/04	500 J	--	--	--
GM-73D2	REP032204	03/22/04	57J	--	--	--
HN-40S	HN-40S	03/16/04	--	--	18 NJ	--
HN-24I	HN-24I	03/18/04	--	--	--	3 J

TICs are identified based on review of mass spectrometry results via a comprehensive library search of all organic compounds.

ug/L Micrograms per liter

-- Not Detected

N Presumtive evidence of this constituent. Calibrations were not run for this constituent; therefore, the results should be used for qualitative purposes only.

J Estimated value

Table 14. Concentrations of Volatile Organic Compounds Detected in Blank Samples, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	SAMPLE TYPE: / SAMPLE ID: / DATE:	TRIP BLANK TB031604 03/16/2004	TRIP BLANK TB031704 03/17/2004	TRIP BLANK TB031804 03/18/2004	TRIP BLANK TB031904 03/19/2004	TRIP BLANK TB032204 03/22/2004
Chloromethane		<5	<5	<5	<5	<5
Bromomethane		<5	<5	<5	<5	<5
Vinyl Chloride		<2	<2	<2	<2	<2
Chloroethane		<5	<5	<5	<5	<5
Methylene chloride		**1**	**1**	<5	<5	<5
Acetone		<10	<10	<10	<10	<10
Carbon disulfide		<5	<5	<5	<5	<5
1,1-Dichloroethene		<5	<5	<5	<5	<5
1,1-Dichloroethane		<5	<5	<5	<5	<5
cis-1,2-Dichloroethene		<5	<5	<5	<5	<5
trans-1,2-Dichloroethene		<5	<5	<5	<5	<5
Chloroform		<5	<5	<5	<5	<5
1,2-Dichloroethane		<5	<5	<5	<5	<5
2-Butanone		<10	<10	<10	<10	<10
1,1,1-Trichloroethane		<5	<5	<5	<5	<5
Carbon tetrachloride		<5	<5	<5	<5	<5
Bromodichloromethane		<5	<5	<5	<5	<5
1,2-Dichloropropane		<5	<5	<5	<5	<5
cis-1,3-Dichloropropene		<5	<5	<5	<5	<5
Trichloroethene		<5	<5	<5	<5	<5
Dibromochloromethane		<5	<5	<5	<5	<5
1,1,2-Trichloroethane		<5	<5	<5	<5	<5
Benzene		<0.7	<0.7	<0.7	<0.7	<0.7
trans-1,3-Dichloropropene		<5	<5	<5	<5	<5
Bromoform		<5	<5	<5	<5	<5
4-Methyl-2-pentanone		<10	<10	<10	<10	<10
2-Hexanone		<10	<10	<10	<10	<10
Tetrachloroethene		<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane		<5	<5	<5	<5	<5
Toluene		<5	<5	<5	<5	<5
Chlorobenzene		<5	<5	<5	<5	<5
Ethylbenzene		<5	<5	<5	<5	<5
Styrene		<5	<5	<5	<5	<5
Xylene (total)		<5	<5	<5	<5	<5
Vinyl Acetate		<5	<5	<5	<5	<5
Freon-113 *		<5	<5	<5	<5	<5
Total VOCs		**1**	**1**	0	0	0

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, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	SAMPLE TYPE: / SAMPLE ID: / DATE:	TRIP BLANK TB032304 03/23/2004	TRIP BLANK TB032404 03/24/2004	TRIP BLANK TB032504 03/25/2004	TRIP BLANK TB032904 03/29/2004	TRIP BLANK TB033004 03/30/2004
Chloromethane		<5	<5	<5	<5	<5
Bromomethane		<5	<5	<5	<5	<5
Vinyl Chloride		<2	<2	<2	<2	<2
Chloroethane		<5	<5	<5	<5	<5
Methylene chloride		<5	**0.9 J B**	**0.9 J B**	**0.5 J B**	**0.5 J B**
Acetone		<10	**6 J B**	**8 J B**	<10	**4 J**
Carbon disulfide		**1 J**	<5	<5	<5	<5
1,1-Dichloroethene		<5	<5	<5	<5	<5
1,1-Dichloroethane		<5	<5	<5	<5	<5
cis-1,2-Dichloroethene		<5	<5	<5	<5	<5
trans-1,2-Dichloroethene		<5	<5	<5	<5	<5
Chloroform		<5	<5	<5	<5	<5
1,2-Dichloroethane		<5	<5	<5	<5	<5
2-Butanone		<10	<10	<10	<10	<10
1,1,1-Trichloroethane		<5	<5	<5	<5	<5
Carbon tetrachloride		<5	<5	<5	<5	<5
Bromodichloromethane		<5	<5	<5	<5	<5
1,2-Dichloropropane		<5	<5	<5	<5	<5
cis-1,3-Dichloropropene		<5	<5	<5	<5	<5
Trichloroethene		**1 J**	<5	<5	<5	<5
Dibromochloromethane		<5	<5	<5	<5	<5
1,1,2-Trichloroethane		<5	<5	<5	<5	<5
Benzene		<0.7	<0.7	<0.7	<0.7	<0.7
trans-1,3-Dichloropropene		<5	<5	<5	<5	<5
Bromoform		<5	<5	<5	<5	<5
4-Methyl-2-pentanone		<10	<10	<10	<10	<10
2-Hexanone		<10	<10	<10	<10	<10
Tetrachloroethene		<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane		<5	<5	<5	<5	<5
Toluene		<5	<5	<5	<5	<5
Chlorobenzene		<5	<5	<5	<5	<5
Ethylbenzene		<5	<5	<5	<5	<5
Styrene		<5	<5	<5	<5	<5
Xylene (total)		<5	<5	<5	<5	<5
Vinyl Acetate		<5	<5	<5	<5	<5
Freon-113 *		<5	<5	<5	<5	<5
Total VOCs		**2**	**6.9**	**8.9**	**0.5**	**4.5**

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, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	SAMPLE TYPE: / SAMPLE ID: / DATE:	TRIP BLANK TB033104 03/31/2004	TRIP BLANK TB040104 04/01/2004	TRIP BLANK TB040204 04/02/2004	TRIP BLANK TB040504 04/05/2004	TRIP BLANK TB040604 04/06/2004
Chloromethane		<5	<5	<5	<5	<5
Bromomethane		<5	<5	<5	<5	<5
Vinyl Chloride		<2	<2	<2	<2	<2
Chloroethane		<5	<5	<5	<5	<5
Methylene chloride		<5	<5	<5	<5	<5
Acetone		<10	<10	<10	<10	<10
Carbon disulfide		<5	<5	<5	<5	<5
1,1-Dichloroethene		<5	<5	<5	<5	<5
1,1-Dichloroethane		<5	<5	<5	<5	<5
cis-1,2-Dichloroethene		<5	<5	<5	<5	<5
trans-1,2-Dichloroethene		<5	<5	<5	<5	<5
Chloroform		<5	<5	<5	<5	<5
1,2-Dichloroethane		<5	<5	<5	<5	<5
2-Butanone		<10	<10	<10	<10	<10
1,1,1-Trichloroethane		<5	<5	<5	<5	<5
Carbon tetrachloride		<5	<5	<5	<5	<5
Bromodichloromethane		<5	<5	<5	<5	<5
1,2-Dichloropropane		<5	<5	<5	<5	<5
cis-1,3-Dichloropropene		<5	<5	<5	<5	<5
Trichloroethene		<5	<5	<5	<5	<5
Dibromochloromethane		<5	<5	<5	<5	<5
1,1,2-Trichloroethane		<5	<5	<5	<5	<5
Benzene		<0.7	<0.7	<0.7	<0.7	<0.7
trans-1,3-Dichloropropene		<5	<5	<5	<5	<5
Bromoform		<5	<5	<5	<5	<5
4-Methyl-2-pentanone		<10	<10	<10	<10	<10
2-Hexanone		<10	<10	<10	<10	<10
Tetrachloroethene		<5	**0.6 J**	<5	<5	**0.5 J**
1,1,2,2-Tetrachloroethane		<5	<5	<5	<5	<5
Toluene		<5	<5	<5	<5	<5
Chlorobenzene		<5	<5	<5	<5	<5
Ethylbenzene		<5	<5	<5	<5	<5
Styrene		<5	<5	<5	<5	<5
Xylene (total)		<5	<5	<5	<5	<5
Vinyl Acetate		<5	<5	<5	<5	<5
Freon-113 *		<5	<5	<5	<5	<5
Total VOCs		0	**0.6**	0	0	**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, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	SAMPLE TYPE: / SAMPLE ID: / DATE:	TRIP BLANK TB040704 04/07/2004	WATER EQ. BLANK FB031604 03/16/2004	WATER EQ. BLANK FB031704 03/17/2004	WATER EQ. BLANK FB031804 03/18/2004	WATER EQ. BLANK FB031904 03/19/2004
Chloromethane		<5	<5	<5	<5	<5
Bromomethane		<5	<5	<5	<5	<5
Vinyl Chloride		<2	<2	<2	<2	<2
Chloroethane		<5	<5	<5	<5	<5
Methylene chloride		<5	**0.9**	**1**	**1**	**2 J**
Acetone		<10	<10	<10	<10	<10
Carbon disulfide		<5	<5	<5	<5	<5
1,1-Dichloroethene		<5	<5	<5	<5	<5
1,1-Dichloroethane		<5	<5	<5	<5	<5
cis-1,2-Dichloroethene		<5	<5	<5	<5	<5
trans-1,2-Dichloroethene		<5	<5	<5	<5	<5
Chloroform		<5	<5	<5	<5	<5
1,2-Dichloroethane		<5	<5	<5	<5	<5
2-Butanone		<10	<10	<10	<10	<10
1,1,1-Trichloroethane		<5	<5	<5	<5	<5
Carbon tetrachloride		<5	<5	<5	<5	<5
Bromodichloromethane		<5	<5	<5	<5	<5
1,2-Dichloropropane		<5	<5	<5	<5	<5
cis-1,3-Dichloropropene		<5	<5	<5	<5	<5
Trichloroethene		<5	<5	<5	<5	<5
Dibromochloromethane		<5	<5	<5	<5	<5
1,1,2-Trichloroethane		<5	<5	<5	<5	<5
Benzene		<0.7	<0.7	<0.7	<0.7	<0.7
trans-1,3-Dichloropropene		<5	<5	<5	<5	<5
Bromoform		<5	<5	<5	<5	<5
4-Methyl-2-pentanone		<10	<10	<10	<10	<10
2-Hexanone		<10	<10	<10	<10	<10
Tetrachloroethene		<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane		<5	<5	<5	<5	<5
Toluene		<5	<5	<5	<5	<5
Chlorobenzene		<5	<5	<5	<5	<5
Ethylbenzene		<5	<5	<5	<5	<5
Styrene		<5	<5	<5	<5	<5
Xylene (total)		<5	<5	<5	<5	<5
Vinyl Acetate		<5	<5	<5	<5	<5
Freon-113 *		<5	<5	<5	<5	<5
Total VOCs		0	**0.9**	**1**	**1**	**2**

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, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	SAMPLE TYPE:	WATER EQ. BLANK	WATER EQ. BLANK	WATER EQ. BLANK	WATER EQ. BLANK
	SAMPLE ID:	FB032204	FB032304	FB032504	FB032904
	DATE:	03/22/2004	03/23/2004	03/25/2004	03/29/2004
Chloromethane		<5	<5	<5	<5
Bromomethane		<5	<5	<5	<5
Vinyl Chloride		<2	<2	<2	<2
Chloroethane		<5	<5	<5	<5
Methylene chloride		**1 J**	**2 J B**	**2 J B**	**1 J B**
Acetone		<10	<10	**5 J B**	<10
Carbon disulfide		<5	<5	1 J	<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		**1**	**2**	**8**	**1**

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, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	SAMPLE TYPE: / SAMPLE ID: / DATE:	WATER EQ. BLANK FB033004 03/30/2004	WATER EQ. BLANK FB033104 03/31/2004	WATER EQ. BLANK FB040504 04/05/2004	WATER EQ. BLANK FB040604 04/06/2004
Chloromethane		<5	<5	<5	<5
Bromomethane		<5	<5	<5	<5
Vinyl Chloride		<2	<2	<2	<2
Chloroethane		<5	<5	<5	<5
Methylene chloride		**1 J B**	**2 J B**	**1 J B**	**1 J B**
Acetone		<10	**4 J**	<10	<10
Carbon disulfide		**1 J**	<5	**0.5 J**	**0.5 J**
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	**0.6 J**
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		**2**	**6**	**1.5**	**2.1**

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, First Quarter of 2004, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	SAMPLE TYPE: WATER EQ. BLANK SAMPLE ID: FB040704 DATE: 04/07/2004
Chloromethane	<5
Bromomethane	<5
Vinyl Chloride	<2
Chloroethane	<5
Methylene chloride	**1 J B**
Acetone	**3 J**
Carbon disulfide	<5
1,1-Dichloroethene	<5
1,1-Dichloroethane	<5
cis-1,2-Dichloroethene	<5
trans-1,2-Dichloroethene	<5
Chloroform	<5
1,2-Dichloroethane	<5
2-Butanone	<10
1,1,1-Trichloroethane	<5
Carbon tetrachloride	<5
Bromodichloromethane	<5
1,2-Dichloropropane	<5
cis-1,3-Dichloropropene	<5
Trichloroethene	<5
Dibromochloromethane	<5
1,1,2-Trichloroethane	<5
Benzene	<0.7
trans-1,3-Dichloropropene	<5
Bromoform	<5
4-Methyl-2-pentanone	<10
2-Hexanone	<10
Tetrachloroethene	<5
1,1,2,2-Tetrachloroethane	<5
Toluene	<5
Chlorobenzene	<5
Ethylbenzene	<5
Styrene	<5
Xylene (total)	<5
Vinyl Acetate	<5
Freon-113 *	<5
Total VOCs	**4**

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.

NWIRP SITE

FORMER RUCO POLYMER SITE

FORMER GRUMMAN AEROSPACE SITE

NORTHROP GRUMMAN FORMER PLANT 2 CADMIUM/CHROMIUM MONITORING AREA

PLANT 5 BASINS

OU2 GROUNDWATER REMEDY TREATMENT SYSTEMS

SOUTH BASINS

NORTHROP GRUMMAN PLANT 1 FUEL DEPOT AREA

BWD SUPPLY WELLS (PLANT 4)

BWD SUPPLY WELLS (PLANT 6)

BWD SUPPLY WELL (PLANT 5)

FARMERS AVENUE

(PLAINVIEW ROAD)

BROADWAY

GRUMMAN ROAD

CENTRAL AVENUE

LONG ISLAND RAILROAD

BLOOMINGDALE ROAD

NORTH WANTAGH AVE.

HICKSVILLE ROAD

STEWART AVENUE

SEAFORD - OYSTER BAY EXPRESSWAY

HEMPSTEAD TURNPIKE

PLANT 111 · PLANT 15 · PLANT 19 · PLANT 17 · PLANT 37 · PLANT 12 · PLANT 3 · PLANT 10 · PLANT 20 · PLANT 5 · PLANT 2 · PLANT 1

MW-52S MW-52I MW-52D · HN-24I HN-24S · FW-02 · FW-01 · HN-42S HN-42I · HN-29I HN-29D · GM-23S GM-23I · GM-13D · HN-40S HN-40I · GM-16SR GM-16I · MW-1GF · GM-32S · GP-3 · GM-17SR GM-17I GM-17D · GP-1 · MW-2GF · GM-18S GM-18I GM-18D · GM-33D2 · ONCT-1 · MW-3R · GM-39DA GM-39DB · GM-73D GM-73D2 · ONCT-2 · GM-74I GM-74D GM-74D2 · ONCT-3 · GM-15S GM-15I GM-15D GM-15D2 · GM-20D · GM-20I · GM-21S GM-21I GM-21D · GM-78S GM-78I · GM-79S GM-79I GM-79D · GM-37D GM-37D2 · GM-71D2 · GM-70D2 · GM-35D2 · N-10821 GM-36D GM-36D2 · GM-34D GM-34D2 · GM-38D GM-38D2 · MW-1 · FFTMW · GM-14 · MW-5 · MW-6 · GM-19S GM-19I · MW-2 · MW-4 · MW-3

10597 · 10600 · 10631 · 9921 · 10624 10627 GM-75D2 · 10634 · 10633 · 3876 8941 · 6915 6916 · 8004

EXPLANATION

- GP-3 ● — INDUSTRIAL WELL OR PUBLIC SUPPLY WELL
- ONCT-1 — OU2 REMEDIAL WELL
- HN-40I ◆ — EXISTING MONITORING WELL/CLUSTER
- PROPERTY BOUNDARY OF THE FORMER RUCO POLYMER SITE
- PROPERTY BOUNDARY OF THE FORMER GRUMMAN AEROSPACE SITE
- PROPERTY OWNED BY NORTHROP GRUMMAN (AS OF JUNE 2001)
- PROPERTY BOUNDARY OF NWIRP SITE
- NWIRP — NAVAL WEAPONS INDUSTRIAL RESERVE PLANT
- BWD — BETHPAGE WATER DISTRICT

0' 1000' 2000'

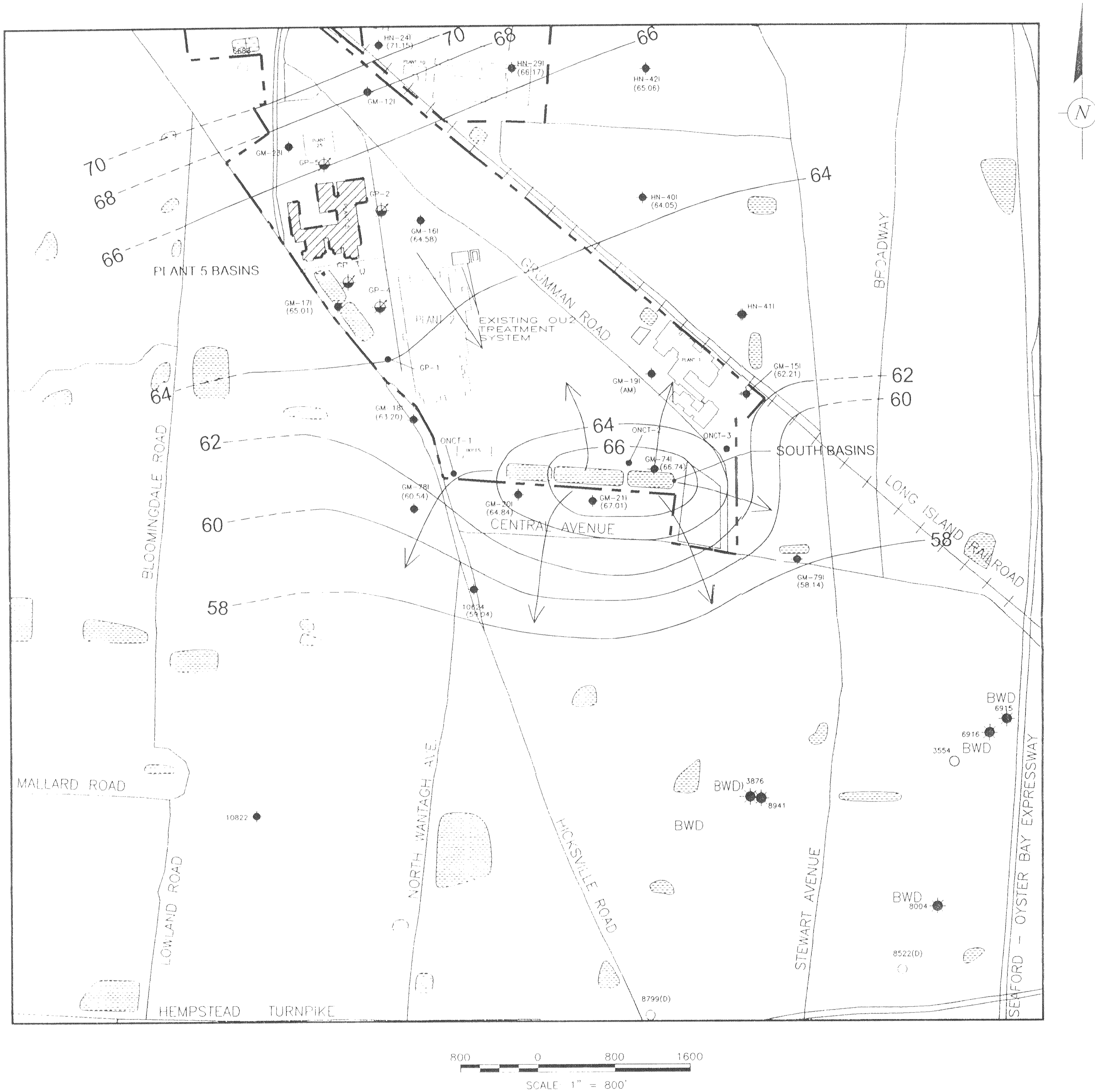
FILE: G:\APROJECT\NORTHROP GRUMMAN\CADD\FROM_PINNACLE\OU2SYS_LOCATION_REV6.DWG, DATE: 11/10/2004 09:05:06AM

ARCADIS
88 Duryea Road
Melville, New York 11747
Tel: 631/249-7600 Fax: 631/249-7610

NORTHROP GRUMMAN CORPORATION
BETHPAGE, NEW YORK

LOCATION OF ON-SITE OU-2 GROUNDWATER REMEDY AND WELLS

DRAWN	DATE	PROJECT MANAGER	DEPARTMENT MANAGER
A.G.	10/19/04	CSG	D. STERN
		LEAD DESIGN PROF.	CHECKED M.E.
		PROJECT NUMBER NY001348.0404	DRAWING NUMBER 1



EXPLANATION

- PROPERTY BOUNDARY OF FORMER GRUMMAN AEROSPACE CORPORATION SITE
- PROPERTY BOUNDARY OF THE U.S. NAVY SITE
- RECHARGE BASIN
- GM-15I (62.21) — 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)
- 6683 — LOCATION AND DESIGNATION OF ADDITIONAL WELL
- GP-3 — LOCATION AND DESIGNATION OF GRUMMAN INDUSTRIAL SUPPLY WELL (SHOWN FOR REFERENCE ONLY)
- ONCT-1 — LOCATION AND DESIGNATION OF ON-SITE OU2 REMEDIAL WELL (SHOWN FOR REFERENCE ONLY)
- HORIZONTAL COMPONENT OF GROUNDWATER FLOW
- 62 — LINE OF EQUAL WATER-LEVEL 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 ANOMOLOUS MEASUREMENT

NOTES:

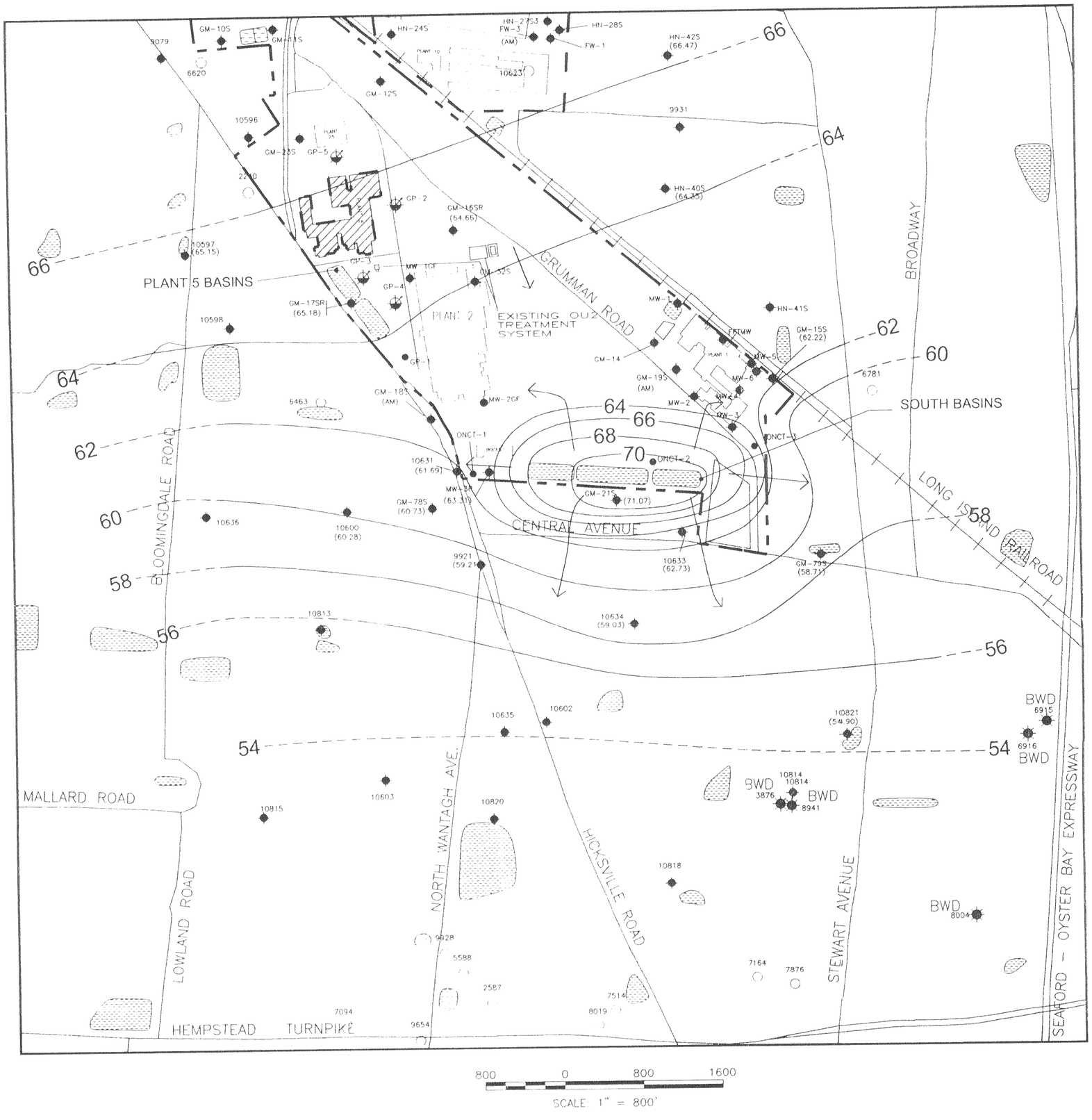
1. THIS FIGURE INCLUDES LOCATIONS OF MONITORING WELLS AND PUBLIC SUPPLY WELLS AS OF SEPTEMBER 25, 2001.
2. OU2 WELLS ONCT-1, ONCT-2, ONCT-3, AND GP-1 ARE SCREENED IN THE D2 ZONE AND INDUSTRIAL SUPPLY WELL GP-3 IS ALSO SCREENED IN THE D2 ZONE.
3. BWD WELL 3876 IS SCREENED IN THE DEEP ZONE.
4. BWD WELLS 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.

REV.	ISSUED DATE	DESCRIPTION

SEAL

ARCADIS
88 Duryea Road
Melville, NY 11747
Tel: 631-249-7600 Fax: 631-249-7610
www.arcadis-us.com

PROJECT TITLE	OPERABLE UNIT 2 NORTHROP GRUMMAN CORPORATION BETHPAGE, NEW YORK
PROJECT MANAGER	CSG
DEPARTMENT MANAGER	MW
LEAD DESIGN PROF.	DESIGNER-GROUP-LEADER
CHECKED BY	ME
TASK/PHASE NUMBER	
DRAWN BY	TP
SHEET TITLE	POTENTIOMETRIC SURFACE ELEVATION AND HORIZONTAL GROUNDWATER FLOW DIRECTIONS IN THE INTERMEDIATE ZONE APRIL 6, 2004
PROJECT NUMBER	NY001348.0404
DRAWING NUMBER	3



EXPLANATION

- PROPERTY BOUNDARY OF FORMER GRUMMAN AEROSPACE CORPORATION SITE
- PROPERTY BOUNDARY OF THE U.S. NAVY SITE
- RECHARGE BASIN
- GM-15S (62.22) — 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)
- 3554 — LOCATION AND DESIGNATION OF ADDITIONAL WELL
- GP-3 — LOCATION AND DESIGNATION OF GRUMMAN INDUSTRIAL SUPPLY WELL (SHOWN FOR REFERENCE ONLY)
- ONCT-1 — LOCATION AND DESIGNATION OF ON-SITE OU2 REMEDIAL WELL (SHOWN FOR REFERENCE ONLY)
- → HORIZONTAL COMPONENT OF GROUNDWATER FLOW
- 60 — LINE OF EQUAL WATER-LEVEL 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 ONCT-1, ONCT-2, ONCT-3, AND GP-1 ARE SCREENED IN THE D2 ZONE AND INDUSTRIAL SUPPLY WELL GP-3 IS ALSO 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.

REV. ISSUED DATE DESCRIPTION

SEAL

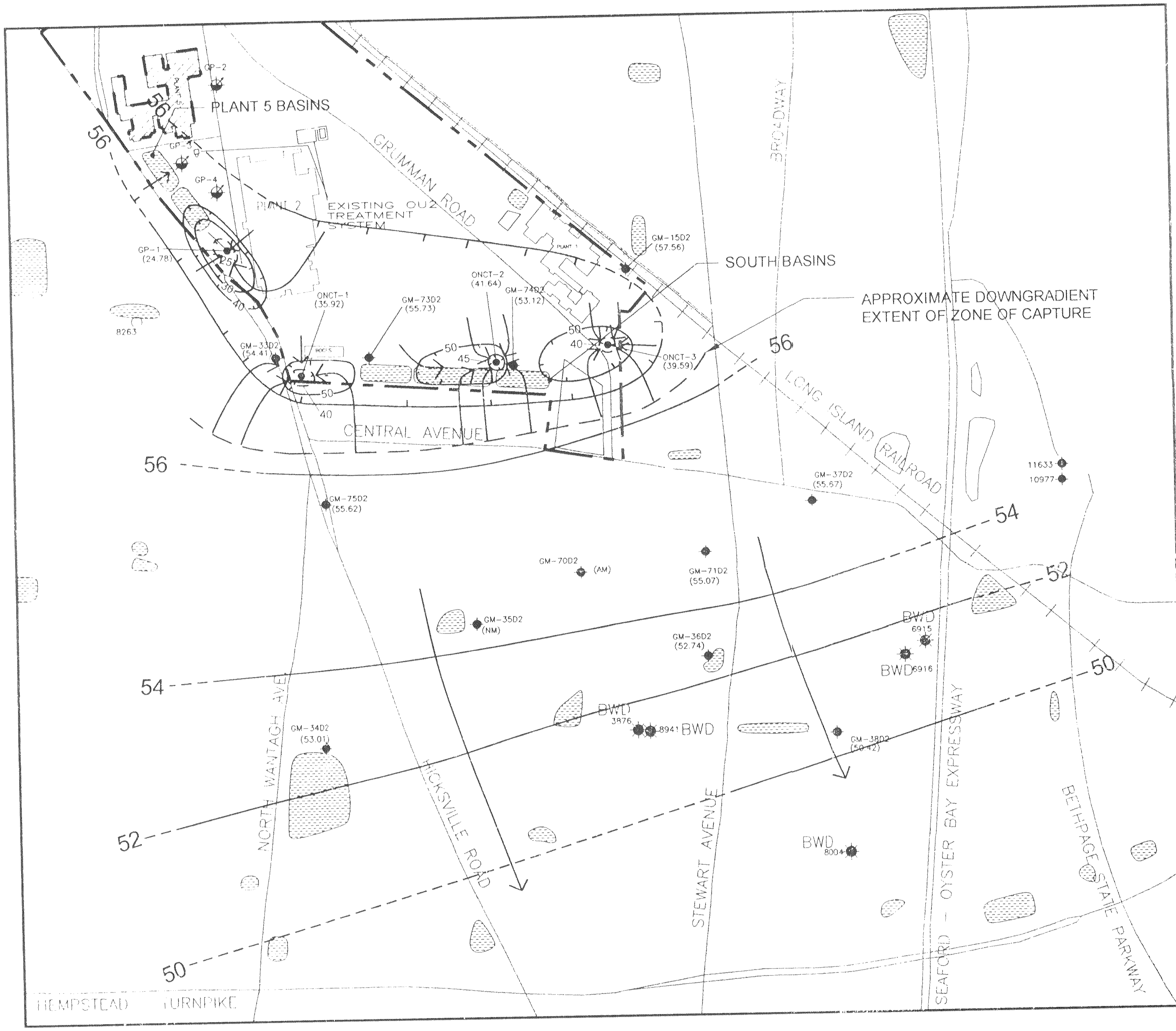
ARCADIS
88 Duryea Road
Melville, NY 11747
Tel: 631-249-7600 Fax: 631-249-7610
www.arcadis-us.com

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

PROJECT MANAGER	DEPARTMENT MANAGER	LEAD DESIGN PROF.	CHECKED BY
CSG	MW		ME

SHEET TITLE
WATER-TABLE CONFIGURATION AND HORIZONTAL GROUNDWATER FLOW DIRECTIONS IN THE SHALLOW ZONE APRIL 6, 2004

TASK/PHASE NUMBER	DRAWN BY
	TP
PROJECT NUMBER	DRAWING NUMBER
NY001348.0404	2



N

EXPLANATION

PROPERTY POUNDARY OF FORMER GRUMMAN AEROSPACE CORPORATION SITE

RECHARGE BASIN

GM-36D2 (52.74) 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

GP-3 LOCATION AND DESIGNATION OF GRUMMAN INDUSTRIAL SUPPLY

ONCT-3 (39.59) 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

52 LINE OF EQUAL WATER-LEVEL ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL (DASHED WHERE APPROXIMATE)

LINE OF EQUAL WATER-LEVEL ELEVATION DENOTING A DECREASE IN POTENTIOMETRIC SURFACE ELEVATION IN FT. MSL.

OU2	OPERABLE UNIT 2
GPM	GALLONS PER MINUTE
BWD	BETHPAGE WATER DISTRICT
USGS	UNITED STATES GEOLOGICAL SURVEY
AM	ANOMALOUS MEASUREMENT
NM	NOT MEASURED

NOTES:

1. THIS FIGURE INCLUDES LOCATIONS OF MONITORING WELLS AND PUBLIC SUPPLY WELLS AS OF SEPTEMBER 25, 2001.
2. OU2 REMEDIAL WELLS GP-1, ONCT-1, ONCT-2, AND ONCT-3 ARE SCREENED IN THE D2 ZONE AND WERE PUMPING AT 1,050 GPM, 1040 GPM, 766 GPM, AND 743 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, HUNTINGTION, AND FREEPORT QUADRANGLES), AND INFORMATION PROVIDED BY NORTHROP GRUMMAN.

REV. ISSUED DATE DESCRIPTION

SEAL

ARCADIS

88 Duryea Road
Melville, NY 11747
Tel: 631-249-7600 Fax: 631-249-7610
www.arcadis-us.com

PROJECT TITLE

OPERABLE UNIT 2
NORTHROP GRUMMAN CORPORATION
BETHPAGE, NEW YORK

PROJECT MANAGER CSG	DEPARTMENT MANAGER MW	LEAD DESIGN PROF.	CHECKED BY ME
SHEET TITLE		TASK/PHASE NUMBER	DRAWN BY TP
		PROJECT NUMBER NY001348.0404	DRAWING NUMBER 4

SHEET TITLE

POTENTIOMETRIC SURFACE ELEVATION AND HORIZONTAL GROUNDWATER FLOW DIRECTIONS IN THE D2 ZONE APRIL 6, 2004

ARCADIS

Appendix A

Water-Level Measurement Logs

ARCADIS GERAGHTY & MILLER

Water Level/Pumping Test Record

Project: NY001348.0013.00002.   Well: ______   Site: ______

Screen Setting: ______   Measuring Point Description: ______   Height Above Ground Surface: ______

Static Water Level: ______   Measured With: ______   Date/Time: 4-6-04

Drawdown ☐   Start of Test: ______   Pumping Well: ______

Recovery ☐   End of Test: ______

Distance From Well Measured To Pumping Well®: ______   Discharge Rate: ______   Orifice: ______

Date & Time	Well Or t (mins)	Held (ft)	Wet (ft)	Depth to Water (ft)	s (ft)	Dew. 1) Corr. (ft)	Art. 2) s' (ft)		Q (gpm)	Mano-meter (in)	Remarks 3)
GP 3				69.11						743 gpm	287,720
GM 15 D				49.54							
GM 15 D2				52.22							
GM 15 S				47.72		needs new sanitary seal					
GM 15 I				47.64							
GM 19 I				45.36							
GM 19 S				44.44		needs lock					
GM 13D				44.55							
ONCT 1				68.18						1,040 gpm	2718,419
MW3R				38.14							
GM 74I				40.68							
GM 74D				47.46							
GM 74D2				54.24		needs lock					
ONCT2				68.360						764 gpm	1992,248
GM73D2				48.89		needs dedicated battery car					
GM73D				46.73							
GM39D2				44.63		needs sanitary seal + lock				LOCKS	
GM 39D				41.65		needs new lock				LOCKS	
GM16I				51.23							
GM 18SR				51.20							
GM 18I				45.83		needs lock					
GM 18D				41.43							
N 10597				44.70							
10600				42.13							
GM78S				44.2							
GM78I				44.52							

1) Dewatering Correction   2) Equivalent Artesian Drawdown   3) pH, Spec. Cond., Temp., Weather, Sand, Turbidity, etc.

ARCADIS GERAGHTY & MILLER

Water Level/Pumping Test Record

Project NY001348013.00002 Well _____ Site _____

Screen Setting _____ Measuring Point Description _____ Height Above Ground Surface _____

Static Water Level _____ Measured With _____ Date/Time 4-6-04

Drawdown ☐ Start of Test _____ Pumping Well _____

Recovery ☐ End of Test _____

Distance From Well Measured To Pumping Well® _____ Discharge Rate _____ Orifice _____

Date & Time	Well Or t (mins)	Held (ft)	Wet (ft)	Depth to Water (ft)	s (ft)	Dew. 1) Corr. (ft)	Art. 2) s' (ft)		Q (gpm)	Mano-meter (in)	Remarks 3)
GM79D				43.78							
GM79S				42.17							
10633				41.07							
GM21S				34.74							
GM21I				38.71							
GM21D				45.32							
GM20I				39.04							
GM20D				40.80							
N10631				41.78							
GM33D				52.44							
GM18S				40.57							
GM17I				50.82							
GM17SR				56.61							
GM17D				53.16							
9921				35.02							
✓ N10627				35.04							
✓ N10624				34.47							
GM75D2				38.01							
10634				42.17							
GM71D2				42.38							
GM70D2				43.28							
N10631				36.67							
GM36D				37.12							
GM36D2				38.96							

1) Dewatering Correction 2) Equivalent Artesian Drawdown 3) pH, Spec. Cond., Temp., Weather, Sand, Turbidity, etc.

ARCADIS GERAGHTY & MILLER

Water Level/Pumping Test Record

Project NY003348.0013.00002 Well _____ Site _____

Screen Setting _____ Measuring Point Description _____ Height Above Ground Surface _____

Static Water Level _____ Measured With _____ Date/Time 4-6-04

Drawdown ☐ Start of Test _____ Pumping Well _____

Recovery ☐ End of Test _____

Distance From Well Measured To Pumping Well _____ Discharge Rate _____ Orifice _____

Date & Time	Well Or t (mins)	Held (ft)	Wet (ft)	Depth to Water (ft)	s (ft)	Dew. 1) Corr. (ft)	Art. 2) s' (ft)		Q (gpm)	Mano-meter (in)	Remarks 3)
GM38D				39.63		needs lock					
GM38D2				41.14		needs lock					
GM37D				41.07							
GM37D2				41.50							
GM-79S				42.74							
HN 42S				53.85							
HN 42I				54.55							
HN 40I				51.80		needs	lock				
HN 40S				52.00							
PW 03				59.45							
HN 29D				50.44							
HN 29I				50.35		need	lock				
HN 24I				54.29		needs	lock				
HN 24S				55.15							
KP-1				92.00		92ft					1050 SM
GM-34D											4-7-04
GM-34D2				18.18							4-7-04

1) Dewatering Correction 2) Equivalent Artesian Drawdown 3) pH, Spec. Cond., Temp., Weather, Sand, Turbidity, etc.

ARCADIS

Appendix B

Groundwater Sampling Logs

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project N-Grumman | Project No N001348.0012.00002 | Page 1 of

Site Location | Date 4.5.04

Site/Well No. MW 1 GR | Replicate No. | Code No.

Weather Clear 40°F | Sampling Time: Begin 12:15 End 12:43

Evacuation Data		Field Parameters	I	1 V	2 V	3 V
Measuring Point		Color				
MP Elevation (ft)		Odor				
Land Surface Elevation (ft)		Appearance				
Sounded Well Depth (ft bmp)	57.00	pH (s.u.)	4.50	4.98	4.94	4.99
Depth to Water (ft bmp)		Conductivity (mS/cm)				
Water-Level Elevation (ft)	48.34	(µmhos/cm)	299	358	336	362
Water Column in Well (ft)		Turbidity (NTU)	350	385	27	12
Casing Diameter/Type		Temperature (°C)	15.7	17.3	15.9	17.3
Gallons in Well		Dissolved Oxygen (mg/L)				
Gallons Pumped/Bailed Prior to Sampling	19.5	Salinity (%)				
Sample Pump Intake Setting (ft bmp)		Sampling Method				
		Remarks	12:20	12:26	12:32	12:39
Purge Time	begin 12:15 end 12:43		6.5 min			
Pumping Rate (gpm)						
Evacuation Method						

Constituents Sampled	Container Description	Number	Preservative
Total cd cr	500 ml Plastic	1	HNO3
Dissolved cd cr	500 ml Plastic	1	HNO3
~~VOC~~	~~40 ml Vorovials~~	~~2~~	

Sampling Personnel BH 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 N-Grumman | Project No. NN001342.0013.0002 | Page 1 of ____

Site Location Bethpage | Date 4.5.04

Site/Well No. MW 2CF | Replicate No. ____ | Code No. ____

Weather Clear 40°F | Sampling Time: Begin 2:03 | End 2:27

Evacuation Data		Field Parameters	I	1V	2V	3V
Measuring Point		Color				
MP Elevation (ft)		Odor				
Land Surface Elevation (ft)		Appearance				
Sounded Well Depth (ft bmp)		pH (s.u.)	5.99	6.49	6.61	6.72
Depth to Water (ft bmp)	59.00	Conductivity (mS/cm)				
Water-Level Elevation (ft)	47.74	(µmhos/cm)	357	341	342	345
Water Column in Well (ft)	11.26	Turbidity (NTU)	55	55		
Casing Diameter/Type	4"(0.65)	Temperature (°C)	13.9	14.6	14.9	14.7
Gallons in Well	7.3 x3	Dissolved Oxygen (mg/L)				
Gallons Pumped/Bailed Prior to Sampling		Salinity (%)				
Sample Pump Intake Setting (ft bmp)	21 yellow	Sampling Method				
Purge Time	begin 203 end 2:27	Remarks	2:03	2:10	2:17	2:24
Pumping Rate (gpm)						
Evacuation Method						

Constituents Sampled	Container Description	Number	Preservative
VOC	40 ml VOA	2	—
total/dissolved cd/cr	500 ml P/clear	2	HNO3

Sampling Personnel BH / 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: Grumman | Project No. NY001348.0013.0002 | Page 1 of ____

Site Location: Bethpage NY | Date: 3.18.04

Site/Well No.: FW-03 (03) M.C | Replicate No. ____ | Code No. ____

Weather: cloudy - cold | Sampling Time: Begin ____ End ____

Evacuation Data	
Measuring Point	
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	64.0
Depth to Water (ft bmp)	59.45
Water-Level Elevation (ft)	
Water Column in Well (ft)	~5
Casing Diameter/Type	
Gallons in Well	2 0.8 x 3
Gallons Pumped/Bailed Prior to Sampling	2.4
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin ____ end ____
Pumping Rate (gpm)	
Evacuation Method	

Field Parameters	I	1V	2V	3V
Color				
Odor				
Appearance				
pH (s.u.)	6.71	6.82	6.81	6.92
Conductivity (mS/cm)				
(µmhos/cm)	457	471	464	474
Turbidity (NTU)				
Temperature (°C)	11.6	12.6	12.5	12.5
Dissolved Oxygen (mg/L)				
Salinity (%)				
Sampling Method				
Remarks				

11:15

Constituents Sampled	Container Description	Number	Preservative

Sampling Personnel: BH AW

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: NY001378.0013 | Project No.: 00002 | Page 1 of ____

Site Location: BETHPAGE NY | Date: 3-19-04

Site/Well No.: [redacted] MW-3R | Replicate No.: ____ | Code No.: ____

Weather: CLEAR 35° | Sampling Time: Begin ____ End ____

Evacuation Data	
Measuring Point	
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	55
Depth to Water (ft bmp)	38.65
Water-Level Elevation (ft)	
Water Column in Well (ft)	16.35
Casing Diameter/Type	2" (0.16)
Gallons in Well	2.6
Gallons Pumped/Bailed Prior to Sampling	8
Sample Pump Intake Setting (ft bmp)	[redacted] 1
Purge Time	begin ____ end ____
Pumping Rate (gpm)	Q=1 T=2.5min
Evacuation Method	

Field Parameters	I	1J	2J	3J	N
Color					
Odor					
Appearance					
pH (s.u.)	6.77	6.43	6.30	6.13	6.06
Conductivity (mS/cm)			165	161	160
(µmhos/cm)	207	168	[redacted]		
Turbidity (NTU)					
Temperature (°C)	13.9	14.4	14.9	15.0	15.1
Dissolved Oxygen (mg/L)					
Salinity (%)					
Sampling Method					

Remarks	5
pH	5.98
Con	159.1
Temp	15.1

Constituents Sampled	Container Description	Number	Preservative
VOC	40ml VOA	2	—
total dissolved cd/cr	500 ml plastic	2	HNO_3

Sampling Personnel: GW BTI

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: GRUMMAN | Project No.: NY001318.13.2 | Page: 1 of

Site Location: | Date: 3/17/04

Site/Well No.: DTI MW04 | Replicate No.: | Code No.:

Weather: | Sampling Time: Begin 1503 End 1516

Evacuation Data

Measuring Point	T.O.C.
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	57
Depth to Water (ft bmp)	46.58
Water-Level Elevation (ft)	
Water Column in Well (ft)	~11'
Casing Diameter/Type	2"
Gallons in Well	2
Gallons Pumped/Bailed Prior to Sampling	6 gal
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1503 end 1516
Pumping Rate (gpm)	0.5 gpm
Evacuation Method	

Field Parameters

Field Parameters	1	1V	2V	3V
Color				
Odor				
Appearance				
pH (s.u.)	5.90	5.80	5.80	5.77
Conductivity (mS/cm)				
(µmhos/cm)	382	376	302	360
Turbidity (NTU)	233	15	5.1	3.9
Temperature (°C)	12.2	13.9	13.7	13.5
Dissolved Oxygen (mg/L)				
Salinity (%)				
Sampling Method				

Remarks:

Constituents Sampled	Container Description	Number	Preservative
VOC	40 mL VOA	2	—
Cr only	500 ml plastic	1	HNO3

Sampling Personnel: MS 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: GRUMMAN
Project No.: NY0013W.13.2
Page: 1 of
Site Location:
Date: 3/17/04
Site/Well No.: PT1MW06
Replicate No.:
Code No.:
Weather:
Sampling Time: Begin 1430 End 1445

Evacuation Data	
Measuring Point	
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	62
Depth to Water (ft bmp)	
Water-Level Elevation (ft)	47.69
Water Column in Well (ft)	~15
Casing Diameter/Type	2"
Gallons in Well	2.4
Gallons Pumped/Bailed Prior to Sampling	7.5
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1430 end 1445
Pumping Rate (gpm)	~.75 gpm
Evacuation Method	

Field Parameters	I	1V	2V	3V	4V
Color					
Odor					
Appearance					
pH (s.u.)	5.38	5.55	5.49	5.51	5.46
Conductivity (mS/cm)					
(µmhos/cm)	563	624	615	613	611
Turbidity (NTU)	913	391	137	46.1	16
Temperature (°C)	11.4	13.3	14.7	15.0	15.1
Dissolved Oxygen (mg/L)					
Salinity (%)					
Sampling Method					
Remarks					

Constituents Sampled	Container Description	Number	Preservative
from COC Cr Only	500 ml plastic	1	HNO3

Sampling Personnel: GW MS

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	mililiter	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
Low-Flow Groundwater Sampling Log

Project Number: NY00/3418.0013 Task: 0002 Well ID: OM-~~MW~~ 13D
Date: 4.5.04 Sampled By: BMCW
Sampling Time: 3:57 Recorded By: BMCW
Weather: Clear 40°F Coded Replicate No.: Rep 4.5.04

WELL IMFORMATION

Casing Material: 4" Purge Method: Low flow
Casing Diameter: PVC Purge Rate:
Total Depth: Total Volume Purged:
Depth to Water: 49.59 Pump Intake Depth
Water Column: Pump on: 2:55 pm Off: 4:00 pm
Gallons/Foot: Parameters Sampled: VOCs
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
2:55				203	7.24	~~1425~~	11.6	49.59	10.25	
3:00				208	7.20	65.4	11.5		8.60	
3:05				249	6.60	243	13.0		2.20	
3:10				265	5.93	245	13.4		0.68	
3:15				269	5.81	245	13.5		0.50	
3:20				270	5.79	245	13.5		0.52	
3:25				272	5.69	243	13.4		0.46	
3:30				273	5.67	243	13.4		0.46	
3:35				273	5.69	242	13.4		0.44	
3:40				278	5.70	242	12.7		0.47	
3:45				279	5.70	243	12.5		0.48	
3:50				279	5.69	243	12.7		0.49	
3:55				279	5.69	243	12.2		0.51	
			21							

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

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: GRUMMAN Project No.: NY001348.0013.T2 Page 1 of

Site Location: BETHPAGE, NY Date: 3/17/04

Site/Well No.: GM-14 Replicate No.: Code No.:

Weather: Sampling Time: Begin 1549 End 1610

Evacuation Data

Measuring Point	
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	55
Depth to Water (ft bmp)	45.45
Water-Level Elevation (ft)	
Water Column in Well (ft)	~10
Casing Diameter/Type	
Gallons in Well	6.5
Gallons Pumped/Bailed Prior to Sampling	20
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1549 end 1609
Pumping Rate (gpm)	1 gpm
Evacuation Method	

Field Parameters

Field Parameters	I	1V	2V	
Color				
Odor				
Appearance				
pH (s.u.)	6.18	5.55	5.28	5.25
Conductivity (mS/cm)				
(µmhos/cm)	344	345	329	334
Turbidity (NTU)				1.2
Temperature (°C)	9.9	11.8	14.1	13.8
Dissolved Oxygen (mg/L)				
Salinity (%)				
Sampling Method				
Remarks				

Constituents Sampled	Container Description	Number	Preservative
VOC	40ml VOA vial	2	—
SVOC	1L amber glass	2	—

Sampling Personnel: MS 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	mililiter	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: GRUMMAN | Project No. NY001348.13.T2 | Page 1 of ____

Site Location: BETHPAGE, NY | Date: 17 MAR 04

Site/Well No.: GM-155 | Replicate No. ____ | Code No. ____

Weather: 35°, SLEETING | Sampling Time: Begin 1320 End 1340

Evacuation Data

Measuring Point	T.O.C.
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	80'
Depth to Water (ft bmp)	47.50
Water-Level Elevation (ft)	
Water Column in Well (ft)	32.5
Casing Diameter/Type	4"
Gallons in Well	21
Gallons Pumped/Bailed Prior to Sampling	63
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1320 end ____
Pumping Rate (gpm)	2 GPM
Evacuation Method	

Field Parameters

Field Parameters	I	IV	2V	3V
Color				
Odor				
Appearance				
pH (s.u.)	5.58	5.96	5.67	5.64
Conductivity (mS/cm)				
(µmhos/cm)	374	297	301	298
Turbidity (NTU)	212	53	2.3	3.4
Temperature (°C)	14.2	14.3	13.3	13.9

Dissolved Oxygen (mg/L): ____

Salinity (%): ____

Sampling Method: ____

Remarks: ____

Constituents Sampled	Container Description	Number	Preservative
VOC	40ml VOA VIAL	2	—
Cr only	500 ml plastic	1	HNO3

Sampling Personnel: MS 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: N. Grumman | Project No.: NY003485.13.2 | Page: 1 of ____

Site Location: Bethpage, NY | Date: 4/5/04

Site/Well No.: GM 15I | Replicate No.: ____ | Code No.: ____

Weather: clear, 40 | Sampling Time: Begin 10:27 End 11:50

Evacuation Data		Field Parameters	I	1V	2V	3V
Measuring Point		Color				clear
MP Elevation (ft)		Odor				odor
Land Surface Elevation (ft)		Appearance				clear
Sounded Well Depth (ft bmp)	105'	pH (s.u.)	6.03	5.65	5.35	5.41
Depth to Water (ft bmp)	64'	Conductivity (mS/cm)				
Water-Level Elevation (ft)		(µmhos/cm)	277	300	305	305
Water Column in Well (ft)	11'	Turbidity (NTU)				V
Casing Diameter/Type	4"(.65)	Temperature (°C)	13.3	14.4	15.5	15.9
Gallons in Well	7.15	Dissolved Oxygen (mg/L)				
Gallons Pumped/Bailed Prior to Sampling	21.45	Salinity (%)				
Sample Pump Intake Setting (ft bmp)	PSI - 90	Sampling Method	10:28	10:57	11:25	11:47
Purge Time	begin 10:27 end 11:50	Remarks	5 Gallon containers			
Pumping Rate (gpm)			1111 + 1½ gallons			
Evacuation Method	dedicated bladder		* no turbidity meter			

Constituents Sampled	Container Description	Number	Preservative
VOC	40 ml VOA vial	2	—

Sampling Personnel: KT

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
Low-Flow Groundwater Sampling Log

Project Number: NY001348.0013 Task: T2 Well ID: GM-15D
Date: 17 MARCH 04 Sampled By: MS GW
Sampling Time: 1150 Recorded By: MS
Weather: 40° SLEETING Coded Replicate No.:

WELL IMFORMATION

Casing Material: PVC Purge Method: LOW FLOW BLADDER
Casing Diameter: 4" Purge Rate: 450 mL/min
Total Depth: Total Volume Purged:
Depth to Water: 49.67 Pump Intake Depth
Water Column: Pump on: 1050 Off: 1150
Gallons/Foot: Parameters Sampled: VOC
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
1055	450	—	—	276	5.01	245	12.4	—	29.1	
1100	"	—	—	249	4.82	249	12.2	—	14.0	
1105	"	—	—	317	4.60	255	12.2	—	14.8	
1110	"	—	—	326	4.46	263	12.3	—	15.4	
1115	"	—	—	331	4.38	265	12.2	—	15.2	
1120	"	—	—	336	4.36	266	12.2	—	15.6	
125	"	—	—	339	4.33	264	12.4	—	15.7	
1130	"	—	—	343	4.31	265	12.2	—	15.2	
1135	"	—	—	346	4.31	265	12.2	—	15.7	
1140	"	—	—	347	4.30	263	12.4	49.65	15.9	
1145	"	10	0.95	351	4.32	263	12.5	49.70	15.8	

Well Secure: NO MANHOLE COVER Purge Water Disposal:
Color: clear, colorless, odorless Turbidity(qualitative):

ARCADIS GERAGHTY & MILLER
Low-Flow Groundwater Sampling Log

Project Number: NY001348.0013 Task: T2 Well ID: GM-15D2
Date: 17 MARCH 04 Sampled By: MS GW
Sampling Time: _____ Recorded By: MS
Weather: 40° SLEETING Coded Replicate No.: _____

WELL IMFORMATION

Casing Material: PVC Purge Method: LOW FLOW
Casing Diameter: 4" Purge Rate: 450 ML/min
Total Depth: _____ Total Volume Purged: _____
Depth to Water: 52.59 Pump Intake Depth _____
Water Column: _____ Pump on: 1155 Off: 1300
Gallons/Foot: _____ Parameters Sampled: VOC
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
1200	450	—	—	344	4.69	274	7.0	—	41.2	
1205	"	—	—	347	4.54	157.1	11.2	—	16.4	
1210	"	—	—	345	4.50	136.5	12.0	52.22	~~5.000~~	20.3 DO
1215	"	—	—	347	4.47	125.4	12.5	—	32.3	
1220	"	—	—	350	4.51	118.2	12.7	—	36.0	
1225	"	—	—	349	4.49	116.2	12.6	—	38.7	
1230	"	—	—	353	4.49	113.6	12.9	—	38.1	
1235	"	—	—	357	4.49	112.4	12.9	—	39.1	
1240	"	—	—	355	4.51	110.7	13.0	—	39.9	
1245	"	—	—	353	4.54	109.4	13.4	52.19	38.9	
1250	"	9	0.66	357	4.52	110.0	13.2		39.0	

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

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: GRUMMAN | Project No. NY001318.0013.TZ | Page 1 of ____

Site Location: BETHPAGE, NY | Date 03/29/04

Site/Well No. GM-16SR | Replicate No. ____ | Code No. ____

Weather 50° SUNNY | Sampling Time: Begin ____ End ____

Evacuation Data	
Measuring Point	T.O.C.
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	70.
Depth to Water (ft bmp)	51.20
Water-Level Elevation (ft)	
Water Column in Well (ft)	18.6
Casing Diameter/Type	
Gallons in Well	12.5
Gallons Pumped/Bailed Prior to Sampling	38
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1426 end 1441
Pumping Rate (gpm)	2.5
Evacuation Method	

Field Parameters	I	IV	2V	3V
Color				NONE
Odor				NONE
Appearance				CLEAR
pH (s.u.)	8.03	7.17	7.04	6.73
Conductivity (mS/cm)				
(µmhos/cm)	155.2	146.6	146.5	151.4
Turbidity (NTU)	50 (illegible)	23	7.4	4.2
Temperature (°C)	15.4	15.16	15.8	15.9
Dissolved Oxygen (mg/L)				
Salinity (%)				
Sampling Method				
Remarks				

Constituents Sampled	Container Description	Number	Preservative

Sampling Personnel: MS, 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-leve	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: N. Grumman | Project No.: 30/001348.13.2 | Page: 1 of ____

Site Location: Bethpage, NY | Date: 4/2/04

Site/Well No.: GM 16I | Replicate No.: ____ | Code No.: ____

Weather: overcast, 45 | Sampling Time: Begin 211 | End 355

Evacuation Data

Measuring Point	____
MP Elevation (ft)	____
Land Surface Elevation (ft)	____
Sounded Well Depth (ft bmp)	145'
Depth to Water (ft bmp)	134'
Water-Level Elevation (ft)	____
Water Column in Well (ft)	11'
Casing Diameter/Type	4"(.65)
Gallons in Well	7.15
Gallons Pumped/Bailed Prior to Sampling	21.45
Sample Pump Intake Setting (ft bmp)	PSI 90
Purge Time	begin 211 end 355
Pumping Rate (gpm)	____
Evacuation Method	dedicated bladder

Field Parameters

	I	1V	2V	3V
Color				brown
Odor				odor-ed
Appearance				turbid
pH (s.u.)	6.29	8.23	8.31	8.01
Conductivity (mS/cm)				
(µmhos/cm)	290	287	290	295
Turbidity (NTU)				✗
Temperature (°C)	12.4	14.5	17.1	9.5
Dissolved Oxygen (mg/L)				
Salinity (%)				
Sampling Method	212	238	317	350

Remarks: 5 Gallon containers; 1111 + 1½ gal.; ✗ no turbidity meter

Constituents Sampled	Container Description	Number	Preservative
VOC	40ml VOA VIAL	2	—

Sampling Personnel: KF

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 GRUMMAN　　Project No. NY00B48.00BT2　　Page 1 of ____

Site Location BETHPAGE, NY　　Date 03/29/04

Site/Well No. GM-17SR　　Replicate No. ____　　Code No. ____

Weather 50° SUNNY　　Sampling Time: Begin ____ End ____

Evacuation Data	
Measuring Point	TOC
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	70
Depth to Water (ft bmp)	50.58
Water-Level Elevation (ft)	
Water Column in Well (ft)	19.5
Casing Diameter/Type	4"
Gallons in Well	12.5
Gallons Pumped/Bailed Prior to Sampling	38
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1457 end 1312
Pumping Rate (gpm)	2.5 gpm
Evacuation Method	

Field Parameters	I	1V	2V	3V
Color				
Odor				
Appearance				
pH (s.u.)	6.01	5.98	6.08	6.12
Conductivity (mS/cm)				
(μmhos/cm)	125.2	116.8	124.7	124.4
Turbidity (NTU)	9.90	2.19	—	
Temperature (°C)	13.9	14.6	14.5	14.5
Dissolved Oxygen (mg/L)				
Salinity (%)				
Sampling Method				
Remarks				

Constituents Sampled	Container Description	Number	Preservative

Sampling Personnel MS, 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	mililiter	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
Low-Flow Groundwater Sampling Log

Project Number: NY000348.B.2 Task: _____ Well ID: GM 17 I
Date: 4/6/09 Sampled By: KT
Sampling Time: 1290 Recorded By: KT
Weather: clear, 50 Coded Replicate No.: MS/MSD

WELL IMFORMATION

Casing Material: PVC Purge Method: dedicated low flow
Casing Diameter: 4" Purge Rate: 450 ml/min
Total Depth: 120' Total Volume Purged: _____
Depth to Water: _____ Pump Intake Depth _____
Water Column: _____ Pump on: 1151 Off: 1242
Gallons/Foot: _____ Parameters Sampled: VOC
Gallons in Well: _____ * no m.scope to do water level

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
11:53	450			206	6.05	119.8	11.5		8.48	
11:58	↓			233	6.07	114.9	14.0		8.16	
12:03				240	6.05	115.5	14.1		8.01	
12:08				241	6.08	115.5	14.1		8.07	
12:13				248	6.08	115.8	14.1		8.21	
12:18				247	6.09	115.9	14.1		8.14	
12:23				257	6.10	115.8	14.2		7.56	
12:28				260	6.10	115.9	14.2		7.86	
12:33				256	6.06	115.9	14.2		8.42	
12:38	↓		3.3	259	6.08	116.0	14.2		7.92	

Well Secure: Y/N/S Purge Water Disposal: _____
Color: clear colorless, odorless Turbidity(qualitative): _____

S:\GW\PROJECTS\Lockheed Martin\Great Neck\NY001227.0002\Data\GW\sampfrm_ldc- Sheet1

ARCADIS GERAGHTY & MILLER
Low-Flow Groundwater Sampling Log

Project Number: NY001348.0013 Task: T2 Well ID: GM-17D
Date: 3/31/04 Sampled By: MS GW
Sampling Time: _____ Recorded By: MS
Weather: 50° RAINING Coded Replicate No.: _____

WELL IMFORMATION

Casing Material: _____ Purge Method: LOW FLOW BL (DED)
Casing Diameter: 4" Purge Rate: 450 mL/min
Total Depth: _____ Total Volume Purged: _____
Depth to Water: 53.19 Pump Intake Depth _____
Water Column: _____ Pump on: 1435 Off: _____
Gallons/Foot: _____ Parameters Sampled: VOC
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
1440	450			102	6.12	98.8	14.2	—	43.4	
1445				215	5.92	95.6	15.0	—	59.2	
1450				244	5.91	95.4	15.1	53.15	54.0	
1455				254	5.95	95.1	15.0	—	51.2	
1500				267	5.85	95.0	15.1	—	53.1	
1505				274	5.91	95.0	15.1	—	52.1	
1510				278	5.78	94.5	15.2	—	52.4	
1515				283	5.90	94.0	15.3	—	52.0	
1520				288	5.99	94.1	15.3	—	52.0	
1525				298	5.99	94.2	15.1	—	52.8	
1530			2.2	300	6.02	94.5	15.1		52.6	

Well Secure: YES Purge Water Disposal: _____
Color: NONE Turbidity(qualitative): CLEAR

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: GRUMMAN | Project No. N4001348.0013.T2 | Page 1 of

Site Location: BETHPAGE | Date 03/30/04

Site/Well No. GM-18S | Replicate No. | Code No.

Weather 45° CLOUDY | Sampling Time: Begin 1300 | End 1330

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	67'
Depth to Water (ft bmp)	44.80
Water-Level Elevation (ft)	
Water Column in Well (ft)	22.2
Casing Diameter/Type	2"
Gallons in Well	3.5
Gallons Pumped/Bailed Prior to Sampling	11
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1308 end 1319
Pumping Rate (gpm)	1 GPM
Evacuation Method	SUB PUMP

Field Parameters

	I	IV	2V	3V
Color				NONE
Odor				NONE
Appearance				CLEAR
pH (s.u.)	5.35	5.39	5.24	5.22
Conductivity (mS/cm)				
(µmhos/cm)	359	271	295	296
Turbidity (NTU)	190	50	35	21
Temperature (°C)	15.4	16.8	16.8	16.8

Dissolved Oxygen (mg/L)

Salinity (%)

Sampling Method

Remarks

Constituents Sampled	Container Description	Number	Preservative
VOC	40 mL VOA	2	—
Cd/Cr - TOTAL	500 mL PLASTIC	1	HNO_3
Cd/Cr - DISSOLVED	" "	1	"

Sampling Personnel: MS, 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: N. Grumman | Project No.: NY001345.0013.00007 | Page: 1 of ____

Site Location: Bethpage, NY | Date: 3/30/04

Site/Well No.: GM 18I | Replicate No.: ____ | Code No.: ____

Weather: cloudy | Sampling Time: Begin 3:35 End 4:44

Evacuation Data

Measuring Point	____
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" (.65)
Gallons in Well	7.15
Gallons Pumped/Bailed Prior to Sampling	21.45
Sample Pump Intake Setting (ft bmp)	PSI 90
Purge Time	begin 3:35 end 4:44
Pumping Rate (gpm)	____
Evacuation Method	dedicated bladder

Field Parameters

	I	IV	2V	3V
Color				
Odor				
Appearance				
pH (s.u.)	7.50	8.15	7.29	6.79
Conductivity (mS/cm)	3.11			
(µmhos/cm)		607	412	330
Turbidity (NTU)				*
Temperature (°C)	10.3	15.0	15.6	14.5
Dissolved Oxygen (mg/L)				
Salinity (%)				
Sampling Method	3:37	3:56	4:20	4:36

Remarks: 5 gallon containers
1111 & 1½ gallons
* no turbidity meter

Constituents Sampled	Container Description	Number	Preservative
VOC	40ml VOA vial	2	—

Sampling Personnel: JCT

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: NG | Project No. NY001348.0015.00002 | Page 1 of

Site Location: Bethpage NY | Date: 03/24/04

Site/Well No.: GM 20 D | Replicate No. | Code No.

Weather: Clear 50°F | Sampling Time: Begin 9:50 End 10:50

Evacuation Data		Field Parameters	I	1V	2V	3V
Measuring Point		Color				
MP Elevation (ft)		Odor				
Land Surface Elevation (ft)		Appearance				
Sounded Well Depth (ft bmp)	220	pH (s.u.)	6.57	7.00	6.54	6.22
Depth to ~~Water~~ Product (ft bmp)	215	Conductivity (mS/cm)				
Water-Level Elevation (ft)		(µmhos/cm)	119.7	102.2	102.1	101.D
Water Column in Well (ft)	11'	Turbidity (NTU)				7.0
Casing Diameter/Type	4" (.65)	Temperature (°C)	9.1	13.0	13.4	13.9
Gallons in Well	7.15'	Dissolved Oxygen (mg/L)				
Gallons Pumped/Bailed Prior to Sampling	x3 = 21 gal	Salinity (%)				
Sample Pump Intake Setting (ft bmp)	105 PSI	Sampling Method				
Purge Time	begin ____ end ____	Remarks	9:50	10:09	10:22	10:40
Pumping Rate (gpm)		5-gal. buckets XXXX (Removed 4 buckets in total)				
Evacuation Method						

Constituents Sampled	Container Description	Number	Preservative
VOCs	40ml VOA Vial	2	NA

Sampling Personnel: BH

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 NY 001348.0013 00002 Project No. _____ Page 1 of _____

Site Location Leithpoint, NY Date 3-23-04

Site/Well No. GM-215 Replicate No. _____ Code No. _____

Weather _____ Sampling Time: Begin _____ End _____

Evacuation Data

Measuring Point	
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	39.50
Depth to Water (ft bmp)	67
Water-Level Elevation (ft)	
Water Column in Well (ft)	27.50
Casing Diameter/Type	(0.16)
Gallons in Well	4.4
Gallons Pumped/Bailed Prior to Sampling	13.2
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin _____ end _____
Pumping Rate (gpm)	
Evacuation Method	

Field Parameters

	I	1L	2L	3L
Color				
Odor				
Appearance				
pH (s.u.)	4.29	5.35	6.25	6.44
Conductivity (mS/cm)				
(µmhos/cm)	98.9	100.9	1027	1001
Turbidity (NTU)				13
Temperature (°C)	13.0	10.3	9.3	10.2
Dissolved Oxygen (mg/L)				
Salinity (%)				
Sampling Method				
Remarks				

Constituents Sampled	Container Description	Number	Preservative
VOC	40ml VOA vial	2	—

Sampling Personnel GW BH

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	NG	Project No.	NY001SHP.0013.0002	Page	1 of
Site Location	Bethpage NY			Date	3-24-04
Site/Well No.	GM 21 I	Replicate No.		Code No.	
Weather	Clear 50°F	Sampling Time:	Begin	End	1:14

Evacuation Data	
Measuring Point	
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	129
Depth to Water (ft bmp)	118
Water-Level Elevation (ft)	
Water Column in Well (ft)	11'
Casing Diameter/Type	4" (.65)
Gallons in Well	7.15
Gallons Pumped/Bailed Prior to Sampling	21.45
Sample Pump Intake Setting (ft bmp)	PSI 90
Purge Time	begin 12:30 end
Pumping Rate (gpm)	
Evacuation Method	

Field Parameters	I	1V	2V	3V
Color				
Odor				
Appearance				
pH (s.u.)	9.80	9.62	9.65	9.63
Conductivity (mS/cm)				
(µmhos/cm)	141.4	154.7	152.3	149.1
Turbidity (NTU)				2.6
Temperature (°C)	11.1	11.0	11.1	11.0
Dissolved Oxygen (mg/L)				
Salinity (%)				
Sampling Method				
Remarks	12:35			1:10

5 gal = *** | |

total Gallons purged 21.45

Constituents Sampled	Container Description	Number	Preservative
VOCs	40 ml Voa Vial	2	NA

Sampling Personnel BJI

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	mililiter	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
Low-Flow Groundwater Sampling Log

Project Number: NY001318.0013 Task: 00002 Well ID: GM 21D
Date: 3.24.04 Sampled By: BH
Sampling Time: Recorded By: BH
Weather: Clear 50° Coded Replicate No.:

WELL IMFORMATION

Casing Material: PVC Purge Method: Low flow
Casing Diameter: 4" Purge Rate: 450 ml/min
Total Depth: Total Volume Purged:
Depth to Water: 46.60 Pump Intake Depth
Water Column: Pump on: 1:30 Off: 2:30
Gallons/Foot: Parameters Sampled: VOC
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
1:30	450			309	8.75	99.5	12.7	45.60	6.62	
1:35				325	8.27	93.2	11.4		4.24	
1:40				331	7.57	84.2	11.8		4.49	
1:45				339	6.99	84.9	11.9		4.65	
1:50				340	6.39	83.9	12.0		4.53	
1:55				346	5.98	83.8	12.0	45.60	4.30	
2:00				352	5.37	87.0	11.9		4.70	
2:05				354	5.24	88.8	11.9		4.76	
2:10				363	5.08	91.7	11.9		5.12	
2:15				361	5.09	92.3	11.9		5.14	
2:20				363	5.07	93.3	11.9	45.60	5.29	
2:25				364	5.07	93.6	11.9		5.37	
2:30	↓		6.2	367	5.04	93.7	11.9		5.35	

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

SQ:\APROJECT\Lockheed Martin\Great Neck\NY001227.0002\Data\GWsmpfrm.xls- Sheet1

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: N. Grumman | Project No.: MY001348.13.2 | Page: 1 of ____

Site Location: Bethpage, ny | Date: 4/6/04

Site/Well No.: GM 23S | Replicate No.: ____ | Code No.: ____

Weather: decr, 45 | Sampling Time: Begin 10:40 End 11:15

Evacuation Data

Measuring Point	
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	56.
Depth to Water (ft bmp)	53.60
Water-Level Elevation (ft)	
Water Column in Well (ft)	2.4
Casing Diameter/Type	4" (.65)
Gallons in Well	1.56
Gallons Pumped/Bailed Prior to Sampling	4.68
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 10:40 end 11:15
Pumping Rate (gpm)	
Evacuation Method	hand bailed

Field Parameters

Field Parameters	I	IV	2V	3V
Color				slightly brn
Odor				odorless
Appearance				silty
pH (s.u.)	5.63	5.72	6.02	5.89
Conductivity (mS/cm)				
(µmhos/cm)	322	333	393	334
Turbidity (NTU)				~~>800~~ (>1000) 75
Temperature (°C)	14.5	14.4	13.5	14.9
Dissolved Oxygen (mg/L)				
Salinity (%)				
~~Sampling Method~~ Time	10:43	10:50	10:58	11:10

Remarks: hand bailed

Constituents Sampled	Container Description	Number	Preservative
VOC	40ml VOA VIAL	2	—

Sampling Personnel: KT

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: N. Grumman | Project No. NY001345.0013.00002 | Page 1 of ____

Site Location: Bethpage, N.Y. | Date: 4/6/04

Site/Well No.: GM 23I | Replicate No. ____ | Code No. ____

Weather: clear, 45 | Sampling Time: Begin 9:39 End 11:32

Evacuation Data	
Measuring Point	
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	120'
Depth to Water (ft bmp)	109'
Water-Level Elevation (ft)	
Water Column in Well (ft)	11'
Casing Diameter/Type	4"(.65)
Gallons in Well	7.15
Gallons Pumped/Bailed Prior to Sampling	21.45
Sample Pump Intake Setting (ft bmp)	PSI 100
Purge Time	begin 9:39 end 11:32
Pumping Rate (gpm)	
Evacuation Method	drained bladder

Field Parameters	I	IV	2V	3V
Color				colorless
Odor				odorless
Appearance				clear
pH (s.u.)	5.65	5.69	5.82	5.92
Conductivity (mS/cm)				
(µmhos/cm)	153.5	170.5	179.4	179.1
Turbidity (NTU)				8.3
Temperature (°C)	10.2	12.9	14.1	14.5
Dissolved Oxygen (mg/L)				
Salinity (%)				
~~Sampling Method~~ Time	9:42	10:15	1101	11:30

Remarks: 5 gallon containers (1 1 1 + 2 gallons)

Constituents Sampled	Container Description	Number	Preservative
VOC	40 ml VOA VIAL	2	—

Sampling Personnel: KT

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	mililiter	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: N. Grumman | Project No.: nyl001348.13.2 | Page: 1 of ____

Site Location: Bethpage, NY | Date: 4/7/04

Site/Well No.: GM 32S | Replicate No.: ____ | Code No.: ____

Weather: Sunny, 55 | Sampling Time: Begin 2:07 End 2:24

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	51'
Depth to Water (ft bmp)	44.82'
Water-Level Elevation (ft)	
Water Column in Well (ft)	6.18
Casing Diameter/Type	4" (.65)
Gallons in Well	4.017
Gallons Pumped/Bailed Prior to Sampling	12.05
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 2:07 end ____
Pumping Rate (gpm)	
Evacuation Method	Q=1 T=12, V=4

Field Parameters

Field Parameters	I	1V	2V	3V
Color				
Odor				
Appearance				
pH (s.u.)	6.89	6.60	6.47	6.47
Conductivity (mS/cm)				
(µmhos/cm)	912	1002	1005	1014
Turbidity (NTU)				5.6
Temperature (°C)	16.3	16.1	16.6	16.6
Dissolved Oxygen (mg/L)				
Salinity (%)				
~~Sampling Method~~ Time	2:08	2:12	2:16	2:20

Remarks: ____

Constituents Sampled	Container Description	Number	Preservative
VOC	40 ml VOA vial	2	—
Cd/Cr - total	500 ml plastic	1	HNO_3
Cd/Cr - dissolved	500 ml plastic	1	HNO_3

Sampling Personnel: VT BH

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

Low-Flow Groundwater Sampling Log

Project Number: NY001316.0013 Task: T2 Well ID: GM-33D2

Date: 3/30/04 Sampled By: MS GW

Sampling Time: 1230 Recorded By: MS

Weather: 45° CLOUDY Coded Replicate No.:

WELL IMFORMATION

Casing Material: PVC Purge Method: DED BLADDER

Casing Diameter: 4" Purge Rate: 450mL/min

Total Depth: Total Volume Purged: 9 gal

Depth to Water: 51.35 Pump Intake Depth

Water Column: Pump on: 11:30 Off: 1230

Gallons/Foot: Parameters Sampled: VOC

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
1135	450			253	5.63	105.6	13.7	—	4.97	
1140	"			276	5.64	104.2	14.1	—	4.76	
1145	"			286	5.70	103.9	14.5	—	4.96	
1150	"			280	10.19	103.7	14.6	—	5.33	
1155	"			297	5.34	102.5	14.8	—	5.02	
1200	"			298	5.35	102.0	14.8	—	5.85	
1205	"			302	5.37	102.2	14.8	—	5.88	
1210	"			300	5.96	103.1	14.9	—	5.86	
1215	"			297	5.68	103.5	14.8	—	5.88	
1220	"			296	5.53	104.0	15.1	51.55	5.75	
1225	"	~9	11	294	5.58	106.0	15.1		5.78	
1230										

Well Secure: YES Purge Water Disposal:

Color: NONE Turbidity(qualitative): CLEAR

S:\...\Sheet1

ARCADIS GERAGHTY & MILLER
Low-Flow Groundwater Sampling Log

Project Number: 60600134.13.R Task: _____ Well ID: GM 34D
Date: 4/7/04 Sampled By: KT BH
Sampling Time: 1232 Recorded By: KT BH
Weather: clear, ST Coded Replicate No.: _____

WELL IMFORMATION

Casing Material: Steel Purge Method: nondedicated bladder
Casing Diameter: 2" Purge Rate: 450 ml/min
Total Depth: 315' Total Volume Purged: _____
Depth to Water: 16.76 Pump Intake Depth _____
Water Column: _____ Pump on: 11:29 Off: 1233
Gallons/Foot: _____ Parameters Sampled: VOC
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
1130	450			73	6.24	150.7	13.3	16.76	2.25	
1135				39	6.40	179.0	13.5		1.29	
1140				-37	7.15	185.0	14.3		2.26	
1145				-47	7.20	182.1	14.3	16.97	0.31	
1150				VC	7.97	197.0	14.5		0.11	
1155				VC	7.81	197.8	14.5		0.15	
1200				-56	7.38	191.0	14.4		0.24	
1205				-30	7.20	190.2	14.4	16.85	0.23	
1210				-26	7.12	190.1	14.4		0.25	
1215				11	6.80	190.1	14.6		0.26	
1220				42	6.50	191.0	14.6	16.85	0.26	
1225				51	6.40	189.9	14.7		0.28	
1230	↓		14	55	6.39	188.7	14.7		0.25	

Well Secure: Yes Purge Water Disposal: _____
Color: clear, colorless, odorless Turbidity(qualitative): _____

ARCADIS GERAGHTY & MILLER
Low-Flow Groundwater Sampling Log

Project Number: NY001348.0013 Task: 00002 Well ID: GM 34M2
Date: 4/7/04 Sampled By: KT BH
Sampling Time: 11:12 Recorded By: KT BH
Weather: cloudy, 50 Coded Replicate No.:

WELL IMFORMATION

Casing Material: ~~Steel~~ Purge Method: nondedicated bladder
Casing Diameter: 4" Purge Rate: 450 ml/min
Total Depth: Total Volume Purged:
Depth to Water: 18.18 Pump Intake Depth
Water Column: Pump on: 9:57 Off: 11:15
Gallons/Foot: Parameters Sampled: VOC
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
10:10	450			229	6.29	86.3	11.8	18.18	2.28	
10:15				227	6.23	86.0	12.0		1.74	
10:20				226	6.17	85.2	12.2		1.72	
10:25				214	6.34	83.5	13.1		0.80	
10:30				201	6.45	83.1	13.5		0.65	
10:35				203	6.48	83.1	13.6	18.24	0.70	
10:40				192	6.46	82.8	13.9		0.60	
10:45				122	6.57	82.1	14.1		0.56	
10:50				-28	6.02	156.8	14.2		0.19	
10:55				33	6.01	149.9	14.2	18.24	1.23	
11:00				81	5.93	116.0	13.7		2.56	
11:05				114	5.85	103.9	14.0		3.49	
11:10			50	175	5.85	99.2	14.0	18.24	3.98	

Well Secure: YES Purge Water Disposal:
Color: slightly turbid, odorless Turbidity(qualitative):

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: N. Grumman | Project No. NY001348.13.2 | Page 1 of ___

Site Location: bethpage, ny | Date: 4/2/04

Site/Well No.: GM 35D2 | Replicate No.: ___ | Code No.: ___

Weather: overcast, 45 | Sampling Time: Begin 9:41 End 1245

Evacuation Data	
Measuring Point	
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	530
Depth to Water (ft bmp) (pocket)	507'
Water-Level Elevation (ft)	
Water Column in Well (ft)	23'
Casing Diameter/Type	4" (.65)
Gallons in Well	14.95
Gallons Pumped/Bailed Prior to Sampling	44.85
Sample Pump Intake Setting (ft bmp)	PSI 225
Purge Time	begin 941 end 1245
Pumping Rate (gpm)	
Evacuation Method	dedicated bladder

Field Parameters	I	1V	2V	3V
Color				colorless
Odor				odorless
Appearance				clear
pH (s.u.)	6.66	6.78	5.45	5.53
Conductivity (mS/cm)				
(µmhos/cm)	127.2	137.3	135.4	131.5
Turbidity (NTU)				*
Temperature (°C)	11.3	11.7	13.0	13.8
Dissolved Oxygen (mg/L)				
Salinity (%)				
~~Sampling~~ Time Method	9:42	10:42	11:41	12:41

Remarks: 5 gallon containers
~~IIII~~ IIII
* no turbidity meter

Constituents Sampled	Container Description	Number	Preservative
VOC	40ml vial glass	2	—
HCM	"	2	HCl

Sampling Personnel: KT

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	mililiter	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	N. Grumman	Project No.	NY001348.0013.0000 2	Page	1 of
Site Location	Bethpage, NY			Date	3/30/07
Site/Well No.	GM 36D2	Replicate No.		Code No.	
Weather	cloudy, 45	Sampling Time:	Begin 12:27	End	206

Evacuation Data	
Measuring Point	
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	540'
Depth to Water (ft bmp)	518'
Water-Level Elevation (ft)	
Water Column in Well (ft)	22'
Casing Diameter/Type	4" LST)
Gallons in Well	15
Gallons Pumped/Bailed Prior to Sampling	45
Sample Pump Intake Setting (ft bmp)	PST, 235
Purge Time	begin 12:27 end 206
Pumping Rate (gpm)	
Evacuation Method	dedicated bladder

Field Parameters	I	1V	2V	3V
Color				color(n)
Odor				odor(n)
Appearance				clear
pH (s.u.)	5.71	10.00	9.56	8.19
Conductivity (mS/cm)				
(µmhos/cm)	149.6	401	162.1	179.3
Turbidity (NTU)				*
Temperature (°C)	12.1	13.7	13.7	13.7
Dissolved Oxygen (mg/L)				
Salinity (%)				
~~Sampling Method~~ Time	12:29	1:00	130	2:02

Remarks: 5 gallon containers
HHH IIII
* no turbidity meter

Constituents Sampled	Container Description	Number	Preservative
VOC	40ml VOA vial	2	—
H2M	"	2	HCl

Sampling Personnel: KT

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	mililiter	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	N. Grumman	Project No.	NY001344.13.2	Page	1 of
Site Location	bethpage, ny			Date	3/31/04
Site/Well No.	GM 37D	Replicate No.		Code No.	
Weather	rain, 45	Sampling Time:	Begin 12:22	End	3:00

Evacuation Data		Field Parameters	I	1V	2V	3V
Measuring Point		Color				colorless
MP Elevation (ft)		Odor				odorless
Land Surface Elevation (ft)		Appearance				clear
Sounded Well Depth (ft bmp)	262'	pH (s.u.)	5.34	5.40	5.10	5.06
Depth to Water (ft bmp)	240'	Conductivity (mS/cm)				
Water-Level Elevation (ft)		(µmhos/cm)	226	204	236	232
Water Column in Well (ft)	22'	Turbidity (NTU)				*
Casing Diameter/Type	4" (.65)	Temperature (°C)	10.8	11.2	12.1	13.2
Gallons in Well	14.3	Dissolved Oxygen (mg/L)				
Gallons Pumped/Bailed Prior to Sampling	42.9	Salinity (%)				
Sample Pump Intake Setting (ft bmp)	PSI 110	~~Sampling Method~~ Time	12:25	1:20	2:05	250
Purge Time	begin 12:22 end 3:00	Remarks	Set @ B D,C on old control box			
Pumping Rate (gpm)			5 gallon container			
Evacuation Method	dedicated bladder		~~HHH~~ III + 3 gallons			
			no turbidity meter			

Constituents Sampled	Container Description	Number	Preservative
VOC	40 ml VOA vial	2	—
112m	"	2	HCl

Sampling Personnel: KT

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	mililiter	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: N. Grumman
Project No.: NY001342.13.2
Page: 1 of
Site Location: Bethpage, NY
Date: 4/1/04
Site/Well No.: GM 37D2
Replicate No.:
Code No.:
Weather: rainy, 45
Sampling Time: Begin 9:30 End 1:10

Evacuation Data	
Measuring Point	
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	390'
Depth to Water (ft bmp)	367'
Water-Level Elevation (ft)	
Water Column in Well (ft)	23'
Casing Diameter/Type	4" (.65)
Gallons in Well	14.95
Gallons Pumped/Bailed Prior to Sampling	45
Sample Pump Intake Setting (ft bmp)	PSD 180
Purge Time	begin 9:30 end 1:10
Pumping Rate (gpm)	
Evacuation Method	Redi-flo bladder

Field Parameters	I	1V	2V	3V
Color				colorless
Odor				odorless
Appearance				clear
pH (s.u.)	5.92	5.59	5.33	5.15
Conductivity (mS/cm)				
(µmhos/cm)	180.6	161.7	163.4	166.2
Turbidity (NTU)				*
Temperature (°C)	10.3	12.3	12.5	12.9
Dissolved Oxygen (mg/L)				
Salinity (%)				
Time / Sampling Method	9:35	11:05	1:05	1:05

Remarks: b.k on old control box
5 gallon container
~~||||~~ ||||
* no turbidity meter

Constituents Sampled	Container Description	Number	Preservative
VOC	40ml VOA vial	2	—
HLM	"	2	HCl

Sampling Personnel: KT

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	mililiter	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	N. Grumman	Project No.	NY001348.0013.00002	Page	1 of
Site Location	bethpage, ny			Date	3/31/04
Site/Well No.	GM 38D	Replicate No.	MS/MSD	Code No.	
Weather	rain, 45	Sampling Time:	Begin 9:33	End	12:10

Evacuation Data	
Measuring Point	
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	
Depth to Water (ft bmp)	
Water-Level Elevation (ft)	
Water Column in Well (ft)	23'
Casing Diameter/Type	4" (ss)
Gallons in Well	15
Gallons Pumped/Bailed Prior to Sampling	45 gallons
Sample Pump Intake Setting (ft bmp)	PSI 145
Purge Time	begin 9:33 end 12:10
Pumping Rate (gpm)	
Evacuation Method	dedicated bladder

Field Parameters	I	1V	2V	3V
Color				colorless
Odor				odorless
Appearance				clear
pH (s.u.)	8.34	6.01	5.44	5.67
Conductivity (mS/cm)				
(µmhos/cm)	132.9	123	123.2	127.3
Turbidity (NTU)				*
Temperature (°C)	7.3	12.1	11.0	10.2
Dissolved Oxygen (mg/L)				
Salinity (%)				
~~Sampling Method~~ Time	9:34	10:35	11:15	12:05

Remarks
5 gallon containers
~~IIII~~ III
* no turbidity

Constituents Sampled	Container Description	Number	Preservative
VOC	40ml voa vial	2	—
H2m	"	2	HCl

Sampling Personnel CT

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	mililiter	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	N. Grumman	Project No.	NY001348.13.2	Page	1 of
Site Location	bethpage, ny			Date	4/1/04
Site/Well No.	GM 38D2	Replicate No.	Rep 4.1.04	Code No.	
Weather	rain, 45	Sampling Time:	Begin 1:47	End	4:00

Evacuation Data	
Measuring Point	
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	
Depth to Water (ft bmp)	
Water-Level Elevation (ft)	
Water Column in Well (ft)	23'
Casing Diameter/Type	4" (.65)
Gallons in Well	14.95
Gallons Pumped/Bailed Prior to Sampling	45
Sample Pump Intake Setting (ft bmp)	PDT 220
Purge Time	begin 147 end 400
Pumping Rate (gpm)	
Evacuation Method	dedicated bladder

Field Parameters	I	1V	2V	3V
Color				colorless
Odor				odorless
Appearance				clear
pH (s.u.)	5.42	5.31	5.12	5.20
Conductivity (mS/cm)				
(µmhos/cm)	103.4	106.5	100.0	102.3
Turbidity (NTU)				*
Temperature (°C)	12.4	12.6	12.8	12.7
Dissolved Oxygen (mg/L)				
Salinity (%)				
Time ~~Sampling Method~~	1:50	2:30	3:10	3:50

Remarks
5 gallon containers
~~||||~~ ||||
* no turbidity meter

Constituents Sampled	Container Description	Number	Preservative
VOC	40 ml voa vial	2	—
H2m	〃	2	HCl

Sampling Personnel: KT

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	mililiter	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
Low-Flow Groundwater Sampling Log

Project Number: 4400 BH8.0013 Task: 0002 Well ID: GM 39D

Date: 3.23.04 Sampled By: GW BM

Sampling Time: 12:49 Recorded By: GW BM

Weather: Clear 35°F Coded Replicate No.:

WELL IMFORMATION

Casing Material: PVC Purge Method: Low Flow

Casing Diameter: 4" Purge Rate:

Total Depth: Total Volume Purged:

Depth to Water: 44.62 Pump Intake Depth

Water Column: Pump on: 11:43 Off: 12:49

Gallons/Foot: Parameters Sampled: VOC

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
11:45				319	5.58	121.9	10.5	HNM	8.49	
50				320	5.56	121.1	10.9		6.21	
55				319	5.58	122.7	11.2		5.53	
00				309	5.67	119.0	14.3		6.19	
05				315	5.54	119.2	14.5		6.85	
10				313	5.58	119.4	14.7		6.82	
15				316	5.58	119.4	14.6	41.85	6.71	
20				314	5.58	119.5	14.3		6.66	
25				314	5.60	119.6	14.3		6.66	
30				314	5.60	119.5	14.2		6.85	
35				314	5.60	119.7	14.2		6.92	
40				314	5.61	119.4	14.4		6.84	
12:45				314	5.63	119.7	14.3	41.88	6.84	
			38							

Well Secure: YES Purge Water Disposal:

Color: clear (slightly turbid) Turbidity(qualitative): 38

odorless

ARCADIS GERAGHTY & MILLER

Low-Flow Groundwater Sampling Log

Project Number: NY001347.0013 Task: 0002 Well ID: GM 39D-2

Date: 3.23.04 Sampled By: GW BH

Sampling Time: 11:22 Recorded By: GW BH

Weather: Clear 35° F Coded Replicate No.:

WELL INFORMATION

Casing Material: PVC Purge Method: Low Flow

Casing Diameter: 4" Purge Rate: 450 ml/min

Total Depth: Total Volume Purged:

Depth to Water: ~~[illegible]~~ Pump Intake Depth

Water Column: 21.80 Pump on: 10:25 Off: 11:30

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
10:25				307	6.27	133.8	9.6	41.80	7.24	
10:30				315	6.23	137.4	11.2		6.64	
10:35				313	6.14	137.4	11.7		6.74	
10:40				323	5.94	131.3	13.4		6.58	
10:45				318	5.92	127.0	13.6		6.64	
10:50				318	5.91	127.2	13.6		6.62	
10:55				323	5.75	127.8	13.8		6.90	
11:00				322	5.72	128.0	13.3		6.84	
11:05				323	5.67	127.4	13.6		6.96	
11:10				324	5.63	127.9	13.7		6.90	
11:15				323	5.56	127.9	13.7		6.82	
11:20				324	5.47	127.9	13.6		6.89	
11:25				324	5.41	128.0	13.6		6.67	
		24								

Well Secure: yes Purge Water Disposal:

Color: clear, colorless, odorless Turbidity(qualitative):

ARCADIS GERAGHTY & MILLER

Low-Flow Groundwater Sampling Log

Project Number: LA001348.0013 Task: 0002 Well ID: MW-525

Date: 3-25-04 Sampled By: BH KT

Sampling Time: 3:03 Recorded By: BH KT

Weather: Rainy 40°F Coded Replicate No.:

WELL IMFORMATION

Casing Material: PVC Purge Method: Low Flow nondedicated bladder

Casing Diameter: 2" Purge Rate:

Total Depth: Total Volume Purged:

Depth to Water: Pump Intake Depth

Water Column: Pump on: 1:57 Off: 3:04

Gallons/Foot: Parameters Sampled: VOC

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
2:00				187	6.23	114.6	12.4		3.38	
2:05				124	6.26	125.7	12.8		1.91	
2:10				114	6.29	130.7	13.0		1.23	
2:15				124	6.13	175.6	13.1		0.60	
2:20				115	6.12	173.0	13.0		0.47	
2:25				115	6.12	173.0	13.0		0.50	
2:30				115	6.12	173.3	13.0		0.40	
2:35				111	6.14	174.2	13.2		0.52	
2:40				113	6.13	174.6	13.2		0.43	
2:45				112	6.13	175.5	13.1		0.35	
2:50				116	6.14	176.0	13.2		0.40	
2:55				114	6.14	176.0	13.2		0.42	
3:00			0.7	113	6.14	176.8	13.4		0.45	

Well Secure: Y

Color: clear, colorless, odorless

Purge Water Disposal:

Turbidity(qualitative):

ARCADIS GERAGHTY & MILLER

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0013 Task: 0002 Well ID: MW-52I

Date: 3-25-04 Sampled By: BH KT

Sampling Time: 12:49 Recorded By: BH KT

Weather: Rainy 45°F Coded Replicate No.:

WELL IMFORMATION

Casing Material: PVC Purge Method: Low flow

Casing Diameter: 2" Purge Rate: 450 ml/min

Total Depth: Total Volume Purged:

Depth to Water: Pump Intake Depth

Water Column: Pump on: 11:45 Off: 12:50

Gallons/Foot: Parameters Sampled: VOC

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
11:45	VOC			201	6.16	144.4	11.0		8.36	
11:50				302	6.16	154.7	11.3		7.97	
11:55				288	6.89	77.9	11.9		10.78	
12:00				245	6.19	78.7	11.9		13.19	
12:05				323	5.67	134.4	12.1		14.87	
12:10				326	5.62	134.4	12.0		14.04	
12:15				326	5.62	134.3	12.1		15.59	
12:20				323	5.61	130.2	12.0		15.82	
12:25				326	5.55	129.9	12.0		14.46	
12:30				321	5.53	130.9	12.4		19.67	
12:35				323	5.55	130.9	12.6		15.20	
12:40				324	5.53	130.9	12.6		16.4	
12:45			18	321	5.53	132.4	12.7		13.13	

Well Secure: Yes Purge Water Disposal:

Color: clear, colorless, odorless Turbidity(qualitative):

ARCADIS GERAGHTY & MILLER
Low-Flow Groundwater Sampling Log

Project Number: 4001348.0013 Task: 0002 Well ID: MW-52D
Date: 3.25.04 Sampled By: BM KT
Sampling Time: 11.28 Recorded By: BM KT
Weather: Rainy 45°F Coded Replicate No.:

WELL IMFORMATION

Casing Material: pvc Purge Method: Low Flow
Casing Diameter: 2" Purge Rate: 400 ml/min
Total Depth: Total Volume Purged:
Depth to Water: Pump Intake Depth
Water Column: Pump on: 10:25 Off: 11:30
Gallons/Foot: Parameters Sampled: VOCs
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
10:25				309	5.60	178.7	11.1		5.44	
10:30				327	5.58	231	11.0		2.81	
10:35				328	5.51	329	12.2		2.01	
10:40				332	5.55	241	13.9		2.21	
10:45				325	5.57	264	13.9		2.25	
10:50				325	5.55	273	13.9		5.55	
10:55				328	5.54	261	13.8		5.47	
11:00				326	5.54	253	13.8		5.48	
11:05				327	5.47	252	13.9		5.05	
11:10				326	5.47	250	13.8		4.62	
11:15				328	5.47	274	13.7		4.82	
11:20				327	5.46	249	13.7		5.71	
11:25			25	327	5.46	248	13.7		5.22	

Well Secure: Yes Purge Water Disposal:
Color: clear, colorless, odorless Turbidity(qualitative):

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: W. Grumman | Project No. NY000348.0013.00002 | Page 1 of ____

Site Location: Bethpage, NY | Date: 3/29/01

Site/Well No.: 6M 7002 | Replicate No.: ____ | Code No.: ____

Weather: clear, 55 | Sampling Time: Begin 1:55 | End 4:00

Evacuation Data	
Measuring Point	
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	330'
Depth to Water (ft bmp)	308'
Water-Level Elevation (ft)	
Water Column in Well (ft)	22'
Casing Diameter/Type	4" (1.65)
Gallons in Well	14.3
Gallons Pumped/Bailed Prior to Sampling	42.9
Sample Pump Intake Setting (ft bmp)	PSI @ 150
Purge Time	begin 1:55 end 400
Pumping Rate (gpm)	
Evacuation Method	dedicated bladder

Field Parameters	I	1V	2V	3V
Color				colorless
Odor				odorless
Appearance				clear
pH (s.u.)	7.07	5.51	5.23	5.15
Conductivity (mS/cm)				
(µmhos/cm)	137.3	109.2	104.6	110.1
Turbidity (NTU)				*
Temperature (°C)	14.3	13.1	15.0	13.4
Dissolved Oxygen (mg/L)				
Salinity (%)				
~~Sampling~~ Time Method	1:57	2:36	3:20	3:50

Remarks: 5 gallon containers; HH | II; * no turbidity meter

Constituents Sampled	Container Description	Number	Preservative
VOC	40ml VOA vial	2	—
H2m VOC	11	2	HCl

Sampling Personnel: KT

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	N. Grumman	Project No.	NY001348.0013	Page	1 of 1
Site Location	Bethpage, NY			Date	5/7/04
Site/Well No.	GM71D2	Replicate No.	none	Code No.	
Weather	sunny, 75	Sampling Time: Begin	1335	End	1549

Evacuation Data

Measuring Point	
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	464'
Depth to ~~Water~~ packer (ft bmp)	442'
Water-Level Elevation (ft)	
Water Column in Well (ft)	22'
Casing Diameter/Type	4" (.65)
Gallons in Well	15
Gallons Pumped/Bailed Prior to Sampling	45 gallons
Sample Pump Intake Setting (ft bmp)	psi = 220
Purge Time	begin ~~1235~~ * 1335 end 1549
Pumping Rate (gpm)	
Evacuation Method	dedicated bladder

Field Parameters

	I	1V	2V	3V
Color				colorless
Odor				odorless
Appearance				clear
pH (s.u.)	7.37	5.03	4.95	4.95
Conductivity (mS/cm)				
(µmhos/cm)	217	221	219	213
Turbidity (NTU)				6.9
Temperature (°C)	18.4	16.2	16.9	17.8
Dissolved Oxygen (mg/L)				
Salinity (%)				
~~Sampling Method~~ Time	1341	1425	1507	1544
Remarks DTW	43.20	43.22	43.33	~~43.18~~ 43.18 KT

5 gallon containers |||| ||

DTW static 43.33 (pre packer)

* pH meter calibrated @ 1230

Constituents Sampled	Container Description	Number	Preservative
VOC	40 ml VOA vial	2	—
H2M	" " " "	2	HCl

* Shut off @ 1300 — wasn't getting any water, called Terry restart @ 1335

* w/ this well you need to set control box ~ 60 psi or ball check gets caught/stuck

Sampling Personnel: KT

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

* turned packer pressure up to 250 b/c water level was dropping think gauge is broken

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
Low-Flow Groundwater Sampling Log

Project Number: W001348.0013 Task: 0002 Well ID: GM 73D
Date: 3-22-04 Sampled By: BH GW
Sampling Time: 4:32 Recorded By: BH GW
Weather: _____ Coded Replicate No.: MS/MSD

WELL IMFORMATION

Casing Material: PVC Purge Method: LowFlow
Casing Diameter: 4" Purge Rate: 450 ml/min
Total Depth: _____ Total Volume Purged: _____
Depth to Water: 46.80 Pump Intake Depth _____
Water Column: _____ Pump on: 3:21 Off: 4:35
Gallons/Foot: _____ Parameters Sampled: VOC
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
3:30				351	5.80	146.4	5.4	46.80	8.76	
3:35				349	5.82	152.1	5.9		8.38	
3:40				350	5.84	155.0	8.2		7.20	
3:45				350	5.74	151.2	10.2		5.36	
3:50				353	5.58	150.0	10.5		6.25	
3:55				356	5.42	149.2	10.5		6.63	
4:00				357	5.39	149.2	10.3	46.84	6.70	
4:05				354	5.39	148.3	10.7		6.62	
4:10				353	5.40	147.3	10.6		6.72	
4:15				353	5.40	147.7	10.6		6.71	
4:20				352	5.40	147.7	10.6		6.63	
4:25				352	5.42	146.7	10.6	46.88	6.63	
4:30			33							

★ Spike ★

Well Secure: YES
Color: clear, colorless, odorless

Purge Water Disposal: _____
Turbidity(qualitative): _____

ARCADIS GERAGHTY & MILLER
Low-Flow Groundwater Sampling Log

Project Number: NY001348.0013 Task: 00002 Well ID: GM 73-D2
Date: 3.22.04 Sampled By: GW BH
Sampling Time: 3:19 Recorded By: GW BH
Weather: Clear 30°F Coded Replicate No.: Rep 3.22.04

WELL IMFORMATION

Casing Material: PVC Purge Method: Low Flow
Casing Diameter: 4" Purge Rate: 450 ml/min
Total Depth: Total Volume Purged:
Depth to Water: 48.88 Pump Intake Depth
Water Column: Pump on: 2:08 Off: 3:15
Gallons/Foot: Parameters Sampled: VOC
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
2:10	450			353	5.65	134.8	9.3	48.88	8.18	
2:15	↓			354	5.52	137.4	11.1		4.94	
2:20				354	5.50	137.7	11.3		4.36	
2:25				366	5.29	136.1	11.4		4.74	
2:30				365	5.27	134.0	11.4		4.89	
2:35				367	5.28	132.3	12.1		4.78	
2:40				365	5.28	132.9	12.1		5.02	
2:45				365	5.27	132.8	12.2	48.90	4.82	
2:50				368	5.29	134.7	12.1		4.95	
2:55				366	5.28	134.7	11.9		4.94	
3:00				367	5.28	135.0	11.9		4.92	
3:05				367	5.28	134.5	11.9		4.83	
3:10	↓			367	5.28	134.5	11.9		4.96	
			4/10							

Well Secure: YES Purge Water Disposal:
Color: clear, colorless, odorless Turbidity(qualitative):

ARCADIS GERAGHTY & MILLER
Low-Flow Groundwater Sampling Log

Project Number: NY001348.0013 Task: 0002 Well ID: GM 74I
Date: 3.22.04 Sampled By: BH GW
Sampling Time: 11.21 Recorded By: BH GW
Weather: Clear Coded Replicate No.:

WELL IMFORMATION

Casing Material: PVC Purge Method: Low Flow
Casing Diameter: 4" Purge Rate: 450 ml/min
Total Depth: Total Volume Purged:
Depth to Water: 41.30 Pump Intake Depth
Water Column: Pump on: 10:38 Off: 11:30
Gallons/Foot: Parameters Sampled: VOC
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
10:40	450		—	227	5.71	106.2	6.9	41.30	8.84	
10:45				264	5.72	105.6	7.1		7.54	
10:50				280	5.74	107.0	7.1	41.30	7.89	
10:55				279	5.74	106.4	7.3		7.85	
11:00				280	5.73	106.4	7.3		7.59	
11:05				286	5.68	106.1	7.3		7.44	
11:10				287	5.70	106.3	7.2		7.58	
11:15				290	5.72	106.4	7.0		7.35	
11:20				291	5.70	107.0	6.7	41.30	7.59	
11:25				293	5.71	106.7	7.0		7.44	

Well Secure: Y/N J
Color: clear, colorless, odorless
Purge Water Disposal:
Turbidity(qualitative):

ARCADIS GERAGHTY & MILLER
Low-Flow Groundwater Sampling Log

Project Number: NY001348.0013 Task: 00002 Well ID: GM-74D
Date: 3-22-04 Sampled By: GW BH
Sampling Time: 12:43 Recorded By: GW
Weather: Clear 30° F Coded Replicate No.:

WELL IMFORMATION

Casing Material: Purge Method: Low flow
Casing Diameter: Purge Rate:
Total Depth: Total Volume Purged:
Depth to Water: 47.75 Pump Intake Depth
Water Column: Pump on: 11:33 Off: 12:45
Gallons/Foot: Parameters Sampled: VOC
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
11:35				314	5.04	102.7	5.4	47.75	7.91	
11:40				327	4.90	95.1	8.9		5.22	
11:45				331	4.93	97.8	9.4		5.67	
11:50				333	4.91	92.3	10.2	47.75	5.59	
11:55				341	4.94	92.6	10.2		5.81	
12:00				347	5.00	92.9	10.2		5.70	
12:05				347	5.05	93.2	10.5		5.81	
12:10				352	5.10	93.0	10.5		5.90	
12:15				353	5.10	94.0	9.7		5.63	
12:20				354	5.11	94.1	9.4		5.80	
12:25				358	5.13	93.8	9.5		5.84	
12:30				359	5.08	94.2	9.0	47.65	5.89	
12:35				363	5.10	95.1	8.8		5.83	
12:42				366	5.10	95.1	8.8		5.89	
			20							

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

.SO:\PROJECT\Lockheed Martin\Great Neck\NY001227.0002\Data\GWsampfrm.xls- Sheet1

ARCADIS GERAGHTY & MILLER
Low-Flow Groundwater Sampling Log

Project Number: NY001348.0013 Task: 00002 Well ID: GM-74D-2
Date: 3.22.03 Sampled By: GW BM
Sampling Time: 1:56 Recorded By: BM
Weather: Clear 30°F Coded Replicate No.:

WELL IMFORMATION

Casing Material: Purge Method: Low Flow
Casing Diameter: Purge Rate: 450ml/min
Total Depth: Total Volume Purged:
Depth to Water: 54.33 Pump Intake Depth
Water Column: Pump on: 12:55 Off: 1:57
Gallons/Foot: Parameters Sampled: VOC
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
12:55	450ml			353	6.38	76.4	7.5	54.33	6.15	
1:00				358	5.27	74.9	9.0		1.31	
1:05				357	5.23	74.5	9.2		1.21	
1:10				354	5.27	74.1	10.0		2.04	
1:15				357	5.27	69.8	10.0		2.16	
1:20				358	5.20	71.6	10.1		2.32	
1:25				354	5.22	74.0	10.1	54.40	2.55	
1:30				354	5.18	74.0	10.3		2.56	
1:35				360	5.23	74.6	10.0		2.73	
1:40				361	6.23	75.6	9.9		2.71	
1:45				366	5.22	76.5	10.0		2.73	
1:50				207	5.22	76.6	10.3		2.82	
1:55			35	266	5.21	76.8	10.3	54.42		

Well Secure: YES Purge Water Disposal:
Color: clear, colorless, odorless Turbidity(qualitative):

ARCADIS GERAGHTY & MILLER

Low-Flow Groundwater Sampling Log

Project Number: NY001348.0013 Task: T2 Well ID: GM-75D2

Date: 03/30/04 Sampled By: MS GW

Sampling Time: 1602 Recorded By: MS

Weather: 45° CLOUDY Coded Replicate No.:

WELL INFORMATION

Casing Material: PVC Purge Method: LOW FLOW BLADDER (DED)

Casing Diameter: 4" Purge Rate: 450 mL/min

Total Depth: Total Volume Purged:

Depth to Water: 37.65 Pump Intake Depth:

Water Column: Pump on: 1505 Off: 1605

Gallons/Foot: Parameters Sampled: VOC

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
1510	450			288	5.63	79.3	14.0	—	5.10	
1515	"			317	4.77	71.3	14.8	—	2.24	
1520	"			323	4.49	167.7	14.9	—	3.88	
1525	"			329	5.42	168.1	14.9	—	4.35	
1530	"			329	4.46	167.8	14.9	—	4.28	
1535	"			332	4.42	168.1	14.8	—	4.31	
1540	"			336	4.46	167.9	14.9	—	4.34	
1545	"			338	4.51	168.2	14.8	—	4.27	
1550	"			341	4.53	167.6	14.9	—	4.25	
1555	"			344	4.59	167.7	14.9	—	4.31	
1600	"	~9 gal	22	345	4.54	167.8	14.8		4.26	

Well Secure: yes Purge Water Disposal:

Color: clear, colorless, odorless Turbidity(qualitative):

ARCADIS GERAGHTY & MILLER
Low-Flow Groundwater Sampling Log

Project Number: NY001342013 Task: 00002 Well ID: 6M-78S
Date: 3-19-04 Sampled By: GW MC
Sampling Time: 12 12 Recorded By: MC
Weather: Coded Replicate No.:

WELL IMFORMATION

Casing Material: Purge Method: Low flow
Casing Diameter: Purge Rate: 500 ml/min
Total Depth: 110 Total Volume Purged:
Depth to Water: 44.24 Pump Intake Depth
Water Column: Pump on: 11:22 Off: 12:15
Gallons/Foot: Parameters Sampled: VOC + total solids
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
11:25	500		18	258	6.61	440	14.5	44.14	10.60	
11:30	500		10.11	259	6.26	443	14.9		5.81	
11:35	500		7.5	257	6.22	442	15.4	44.28	5.29	
11:40	500		6.04	257	6.16	440	15.7		5.35	
11:45	500		4.60	258	6.10	439	16.1		5.26	
11:50	500		3.35	260	6.10	439	16.1	44.27	5.28	
11:55	500		2.80	260	6.02	441	16.1		5.73	
12:00	500		1.99	261	6.00	441	16.2		5.30	
12:05	500		1.64	263	6.00	443	16.1	44.26	4.69	
12:10	500		1.47	263	5.98	442	16.1		4.84	

Well Secure: YES Purge Water Disposal:
Color: clear, colorless, odorless Turbidity(qualitative):

ARCADIS GERAGHTY & MILLER
Low-Flow Groundwater Sampling Log

Project Number: NY001348.0017 Task: 000002 Well ID: GM-78I
Date: 3-19-04 Sampled By: GW MC
Sampling Time: 1:17 Recorded By: MC
Weather: _____ Coded Replicate No.: _____

WELL IMFORMATION

Casing Material: _____ Purge Method: Low Flow
Casing Diameter: _____ Purge Rate: 500 ml/min
Total Depth: 110 Total Volume Purged: _____
Depth to Water: 44.52 Pump Intake Depth _____
Water Column: _____ Pump on: 12:28 Off: 1:20
Gallons/Foot: _____ Parameters Sampled: VOC + total Cd/Cr
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
12:30	500		2.81	265	6.14	2500	12.9	44.52	4.42	
12:35	500		2.05	265	6.10	319	13.0		4.24	
12:40	500		1.9	264	6.10	334	12.7		4.11	
12:45	500		1.4	262	6.09	334	13.8	44.52	4.04	
12:50	500		1.00	259	6.07	350	14.2		4.23	
12:55	500		0.75	259	6.06	352	14.4		4.48	
1:00	500		0.55	257	6.06	355	14.4	44.52	4.75	
1:05	500		0.45	257	6.06	357	14.6		4.16	
1:10	500		0.40	256	6.06	357	14.6		3.93	
1:15	500		0.35	257	6.06	356	14.5	44.52	3.93	

Well Secure: YES Purge Water Disposal: _____
Color: clear, odorless, odorless Turbidity(qualitative): _____

ARCADIS GERAGHTY & MILLER
Low-Flow Groundwater Sampling Log

Project Number: WY001347.13.2 Task: _____ Well ID: GM 79I
Date: 4/6/09 Sampled By: ICT
Sampling Time: 1356 Recorded By: KT
Weather: Clear, 50 Coded Replicate No.: _____

WELL IMFORMATION

Casing Material: PVC Purge Method: dedicated low flow
Casing Diameter: 4" Purge Rate: 450 ml/min
Total Depth: 180 Total Volume Purged: _____
Depth to Water: _____ Pump Intake Depth _____
Water Column: _____ Pump on: 1308 Off: 1357
Gallons/Foot: _____ Parameters Sampled: VOC
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
1310	450			299	5.81	117	10.8		7.95	
1315	↓			298	5.71	111.6	11.8		7.17	
1320				303	5.45	112.4	12.8	42.64	6.47	
1325				314	5.39	113.2	12.3		6.18	
1330				307	5.39	112.8	12.9		6.08	
1335				313	5.39	112.6	13.0	42.64	6.27	
1340				319	5.37	112.6	13.2		6.13	
1345				311	5.37	112.1	13.3		6.46	
1350				319	5.36	112.3	13.4	42.59	6.67	
1355	↓		1.9	318	5.26	112.0	13.4		6.34	

Well Secure: Yes Purge Water Disposal: _____
Color: Clear, colorless, odorless Turbidity(qualitative): _____

ARCADIS GERAGHTY & MILLER
Low-Flow Groundwater Sampling Log

Project Number: NY001348.13.2 Task: _____ Well ID: GM 79D
Date: 4/6/04 Sampled By: KT
Sampling Time: 1504 Recorded By: KT
Weather: clear, 50 Coded Replicate No.: _____

WELL IMFORMATION

Casing Material: PVC Purge Method: dedicated low flow
Casing Diameter: 4" Purge Rate: 450 ml/mn
Total Depth: _____ Total Volume Purged: _____
Depth to Water: 43.8 Pump Intake Depth _____
Water Column: _____ Pump on: 1402 Off: 1506
Gallons/Foot: _____ Parameters Sampled: VOC
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
1403	450			321	5.52	109	11.4	43.8	6.88	
1408				319	5.42	107.5	12.9		2.65	
1413				327	5.33	106.2	13.3		2.53	
1418				328	5.31	103.7	13.4	43.79	2.76	
1423				328	5.29	103.7	13.5		2.93	
1428				336	5.29	102.3	13.4		2.81	
1433				330	5.28	105.4	13.5	43.80	2.85	
1438				335	5.28	105.5	13.5		2.70	
1443				336	5.28	105.2	13.2		2.96	
1448				337	5.28	105.8	13.5	43.8	2.86	
1453				334	5.28	105.9	13.5		2.90	
1458				336	5.28	105.7	13.5		2.72	
1503	↓		1.0	338	5.28	105.7	13.5	43.8	2.85	

Well Secure: Y/N Purge Water Disposal: _____
Color: clear, colorless, odorless Turbidity(qualitative): _____

ARCADIS GERAGHTY & MILLER
Low-Flow Groundwater Sampling Log

Project Number: WY001348.0013 Task: 0002 Well ID: MW-24R
Date: 3.18.04 Sampled By: BMCW
Sampling Time: _____ Recorded By: _____
Weather: _____ Coded Replicate No.: Rep 3.18.04

WELL IMFORMATION

Casing Material: _____ Purge Method: _____
Casing Diameter: _____ Purge Rate: _____
Total Depth: _____ Total Volume Purged: _____
Depth to Water: 59.12 Pump Intake Depth _____
Water Column: _____ Pump on: 3:30 Off: _____
Gallons/Foot: _____ Parameters Sampled: VOC
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
3:30				265	7.33	—	11.5		94.0	
3:35				267	6.97	—	12.6		92.2	
3:40				272	6.95	449	13.0		91.5	
3:45				273	6.75	447	12.8		92.7	
3:50				274	6.63	449	12.7		93.0	
3:55				277	6.42	442	12.8		93.1	
4:00				278	6.32	444	13.0		92.8	
4:05				277	6.29	444	13.1		92.8	
4:10				277	6.27	446	13.2		92.8	
4:15			13.3	276	6.27	446	13.4		92.7	
4:20										
4:25										
4:30										

Well Secure: Yes Purge Water Disposal: _____
Color: clear, colorless, odorless Turbidity(qualitative): _____

Rep

ARCADIS GERAGHTY & MILLER
Low-Flow Groundwater Sampling Log

Project Number: NY001548.0013 Task: 0002 Well ID: HN-29I
Date: 3.18.04 Sampled By: BH GV
Sampling Time: 1:33 Recorded By: BH
Weather: cloudy Coded Replicate No.:

WELL IMFORMATION

Casing Material: PVC Purge Method: Low Flow
Casing Diameter: 4" Purge Rate:
Total Depth: Total Volume Purged:
Depth to Water: 49.90 Pump Intake Depth
Water Column: Pump on: 12:30 Off: 1:35
Gallons/Foot: Parameters Sampled: VOC
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
12:30				100	7.92	585	12.5		55.8	
12.35				68	11.65	562	14.0		52.5	
12 40				63	11.79	557	14.1		53.4	
12 45				60	11.80	560	14.2		52.5	
12 50				54	11.91	556	14.3	51.65	50.9	
12 55				52	11.94	557	14.4		53.3	
1 00				50	11.97	554	14.4		53.2	
1 05				50	11.94	548	14.4		52.4	
1 10				50	11.94	547	14.4	[redacted]	55.1	
1 15				50	11.97	505	15.2	51.65	55.3	
1 20				48	11.94	503	15.2		57.8	
1 25				49	11.95	495	15.1		56.8	
1 30			6.97	49	11.97	493	15.2		56.9	

Well Secure: Y(N)
Color: clear, (cloudy, odorless)

Purge Water Disposal:
Turbidity(qualitative):

ARCADIS GERAGHTY & MILLER
Low-Flow Groundwater Sampling Log

Project Number: NY001318.0013 Task: 0002 Well ID: MW 29D
Date: 3·18·04 Sampled By: BM GW
Sampling Time: 2:02 Recorded By: BM
Weather: Cloudy Coded Replicate No.:

WELL IMFORMATION

Casing Material: PVC Purge Method: Low Flow
Casing Diameter: 4" Purge Rate:
Total Depth: Total Volume Purged:
Depth to Water: 50.40 Pump Intake Depth
Water Column: Pump on: 1:58 Off: 2:04
Gallons/Foot: Parameters Sampled: VOC
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
2:00				128	10.25	176.8	12.1		78.7	
2:05				128	10.22	181.0	14.2		66.0	
2:10				166	9.05	172.1	14.4		82.8	
2:15				187	8.51	170.0	14.3		65.4	
2:20				188	8.54	143.0	14.4		65.2	
2:25				190	8.54	142.6	14.4		64.3	
2:30				191	8.52	142.6	14.4		65.6	
2:35				200	8.37	142.7	14.4		62.3	
2:40				201	8.33	142.7	14.3		65.1	
2:45				206	8.34	142.7	14.5		63.3	
2:50				208	8.22	141.5	14.6		63.0	
2:55				220	8.03	141.6	14.2	50.38	64.4	
2:00			3.04	227	8.15	141.7	14.0		63.8	

Well Secure: YES Purge Water Disposal:
Color: Clear, colorless, odorless Turbidity(qualitative):

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: GRUMMAN | Project No. NY001348.0003T2 | Page 1 of ____

Site Location: BETHPAGE, NY | Date: 16 MARCH 04

Site/Well No.: HN-4DS | Replicate No. ____ | Code No. ____

Weather: 35°, SNOWING | Sampling Time: Begin 1530 End 1545

Evacuation Data	
Measuring Point	T.O.C.
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	59
Depth to Water (ft bmp)	52
Water-Level Elevation (ft)	
Water Column in Well (ft)	7'
Casing Diameter/Type	
Gallons in Well	~4.5
Gallons Pumped/Bailed Prior to Sampling	15
Sample Pump Intake Setting (ft bmp)	56
Purge Time	begin ____ end ____
Pumping Rate (gpm)	1 gpm
Evacuation Method	

Field Parameters	I	1V	2V	3V
Color				
Odor				
Appearance				
pH (s.u.)	6.23	5.24	5.07	5.03
Conductivity (mS/cm)				
(µmhos/cm)	137.6	177.0	193.5	195.6
Turbidity (NTU)				
Temperature (°C)	14.7	15.4	15.7	15.9
Dissolved Oxygen (mg/L)				
Salinity (%)				
Sampling Method				
Remarks	TURB: 12.2 NTU			

Constituents Sampled	Container Description	Number	Preservative
VOC	40 ml VOA VIAL	2	—

Sampling Personnel: MS, 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

Low-Flow Groundwater Sampling Log

Project Number: 40013648.0013 Task: T2 Well ID: HN-40I

Date: 3/16/04 Sampled By: MS GW

Sampling Time: 1520 Recorded By: MS

Weather: 36° SNOW Coded Replicate No.:

WELL IMFORMATION

Casing Material: PVC Purge Method: LOW FLOW

Casing Diameter: 4" Purge Rate: 500 mL/min

Total Depth: 118' Total Volume Purged:

Depth to Water: 51.75 Pump Intake Depth: 113'

Water Column: Pump on: 1420 Off: 1515

Gallons/Foot: Parameters Sampled: VOC

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
1425	500	—	—	278	6.04	313	14.0	—	8.62	
1430	"	—	—	311	5.26	314	15.4	—	6.37	
1435	"	—	—	313	4.95	317	15.7	—	6.14	
1440	"	—	—	320	4.99	314	15.9	—	6.22	
1445	"	—	—	322	5.00	314	15.8	51.85	6.12	
1450	"	—	—	315	5.00	323	15.8	—	6.13	
1455	"	—	—	324	4.99	315	15.1	—	6.06	
1500	"	—	—	324	4.99	316	15.2	—	6.14	
1505	"	~3.5	<50	325	5.01	315	15.3	51.89	6.01	

Well Secure: YES Purge Water Disposal:

Color: Clear, colorless, odorless Turbidity(qualitative):

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: GRUMMAN | Project No. NY001348.13.2 | Page 1 of ____

Site Location: BETHPAGE, NY | Date 3/16/04

Site/Well No. HN-425 | Replicate No. ____ | Code No. ____

Weather 35°, SNOWING | Sampling Time: Begin ____ End 1347

Evacuation Data

Measuring Point	T.O.C.
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	60
Depth to Water (ft bmp)	54.50
Water-Level Elevation (ft)	
Water Column in Well (ft)	5.5
Casing Diameter/Type	4"
Gallons in Well	4 gal
Gallons Pumped/Bailed Prior to Sampling	
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1335 end 1347
Pumping Rate (gpm)	1 gpm
Evacuation Method	

Field Parameters

	I	IV	2V	3V
Color				NONE
Odor				NONE
Appearance				CLEAR
pH (s.u.)	7.92	7.29	7.14	6.61
Conductivity (mS/cm)				
(µmhos/cm)	319	342	344	347
Turbidity (NTU)				
Temperature (°C)	14.4	14.9	15.7	15.8
Dissolved Oxygen (mg/L)				

Salinity (%): ____

Sampling Method: ____

Remarks: TURB = 4.05 NTU

Constituents Sampled	Container Description	Number	Preservative
VOC	40 ml VOA VIAL	2	—

Sampling Personnel: MS, 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

Low-Flow Groundwater Sampling Log

Project Number: N4001348.13.8 Task: 2 Well ID: MW-42I

Date: 16 MARCH 04 Sampled By: MS GW

Sampling Time: 1317 Recorded By: MS

Weather: 35°, SNOWING Coded Replicate No.:

WELL IMFORMATION

Casing Material: PVC Purge Method: LOW FLOW

Casing Diameter: 4" Purge Rate: 500 mL/min

Total Depth: 110 Total Volume Purged:

Depth to Water: 53.78 Pump Intake Depth 105

Water Column: Pump on: 1230 Off: 1320

Gallons/Foot: Parameters Sampled: VOC

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
1235	500	—	—	98	10.61	106.5	12.8	[illegible]	5.43	
1240	"	—	—	100	10.42	454	12.2	—	5.30	
1245	"	—	—	102	10.28	433	14.0	54.0	5.17	
1250	"	—	—	106	10.14	378	14.7	—	5.14	
1255	"	—	—	111	10.01	340	14.4	53.98	5.10	
1300	"	—	—	116	9.93	338	14.5	—	4.64	
1305	"	—	—	119	9.77	312	14.6	—	5.06	
1310	"	—	—	123	9.71	312	14.6	—	5.11	
1315	"	—	—	121	9.72	309	14.7	—	5.08	
			9.54					53.99		

Well Secure: YES Purge Water Disposal:

Color: CLEAR, COLORLESS, ODORLESS Turbidity(qualitative):

ARCADIS GERAGHTY & MILLER
Low-Flow Groundwater Sampling Log

Project Number: NY001348.0013 Task: T2 Well ID: N 10624
Date: 3/31/04 Sampled By: MS GW
Sampling Time: 1228 Recorded By: MS
Weather: 50° RAINING Coded Replicate No.:

WELL IMFORMATION

Casing Material:
Casing Diameter: 2"
Total Depth:
Depth to Water: 33.10
Water Column:
Gallons/Foot:
Gallons in Well:

Purge Method: LOW FLOW SUB
Purge Rate: ~500 mL/min
Total Volume Purged:
Pump Intake Depth
Pump on: 1125 Off: 1230
Parameters Sampled: VOC

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
1130	500			119	6.29	70.9	12.5	—	15.6	
1135	"			105	7.18	68.9	13.0	—	6.8	
1140	400			85	7.49	62.8	13.5	41.25	4.3	
1145	"			68	7.69	61.2	13.7	—	5.0	
1150	"			56	8.06	62.3	13.5	—	4.1	
1155	"			44	8.04	62.8	13.4	47.25	3.9	
1200	200			37	8.02	65.3	12.9	—	3.1	
1205	100			27	8.00	63.7	13.0	—	2.4	
1210	"			19	8.29	62.7	13.3	—	2.5	
1215	"			7	8.08	62.5	13.5	—	2.5	
1220	"			3	8.12	62.4	13.6	51.00	2.8	
1226	"	~3	45	-10	8.06	62.5	13.7	51.50	2.6	

Well Secure: Yes
Color: NONE

Purge Water Disposal:
Turbidity(qualitative): CLOUDY

ARCADIS GERAGHTY & MILLER
Low-Flow Groundwater Sampling Log

Project Number: NY001348.0013 Task: T2 Well ID: N10627
Date: 3/31/04 Sampled By: MS GW
Sampling Time: _____ Recorded By: MS
Weather: 50° RAINING Coded Replicate No.: _____

WELL IMFORMATION

Casing Material: _____ Purge Method: LOW FLOW BLADDER
Casing Diameter: 4" Purge Rate: 450 ml/min
Total Depth: _____ Total Volume Purged: _____
Depth to Water: 34.82 Pump Intake Depth _____
Water Column: _____ Pump on: 1300 Off: 1405
Gallons/Foot: _____ Parameters Sampled: VOC
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
1305	450			88	7.06	62.9	14.1	—	13.0	
1310				-85	7.00	81.6	14.2	—	5.5	
1315				*Ur	7.32	199	14.3	—	3.3	
1320				Ur	7.42	238	14.3	—	2.8	
1325				Ur	7.52	244	14.3	—	2.4	
1330				-84	7.60	246	14.3	—	3.0	
1335				-74	7.39	255	14.3	—	3.0	
1340				-96	7.16	264	14.3	—	3.0	
1345				Ur	7.02	268	14.2	—	2.6	
1350				Ur	7.52	268	14.2	—	2.3	
1355	V	~9		Ur	7.09	266	14.2	—	2.3	
1401			50	Ur	7.11	266	14.1	37.20	2.3	
1404								37.20		

Well Secure: YES Purge Water Disposal: _____
Color: NONE Turbidity(qualitative): CLOUDY

*Ur: LESS THAN -99

S:\GW\PROJECT\Lockheed Martin\Great Neck\NY001227.0002\Data\GW\mwpfrm.xls- Sheet1

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project: GRUMMAN | Project No.: NY001348.0013.T2 | Page: 1 of

Site Location: BETHPAGE, NY | Date: 03/30/04

Site/Well No.: N106'31 | Replicate No.: | Code No.:

Weather: 45° CLOUDY | Sampling Time: Begin 1030 End 1115

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	67
Depth to Water (ft bmp)	41.65
Water-Level Elevation (ft)	
Water Column in Well (ft)	~25.5
Casing Diameter/Type	2"
Gallons in Well	84
Gallons Pumped/Bailed Prior to Sampling	12
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1052 end 1101
Pumping Rate (gpm)	1.5gpm
Evacuation Method	SUB PUMP

Field Parameters

Field Parameters	I	IV	2V	3V
Color				NONE
Odor				NONE
Appearance				CLEAR
pH (s.u.)	5.76	5.74	5.39	5.36
Conductivity (mS/cm)				
(µmhos/cm)	202	176	194.8	189.2
Turbidity (NTU)	>200	—	—	↓
Temperature (°C)	13.5	14.6	14.5	14.2
Dissolved Oxygen (mg/L)				
Salinity (%)				
Sampling Method				

Remarks: * TURBIDITY METER NOT WORKING - WATER VISUALLY < 50 NTU.

Constituents Sampled	Container Description	Number	Preservative
VOC	40mL VOA	2	—
Cd/Cr - TOTAL	500mL PLASTIC	1	HNO_3
Cd/Cr - DISSOLVED	" " "	1	"

Sampling Personnel: MS, 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: NY001348.0013.0002 | Project No.: 0002 | Page 1 of ____

Site Location: Bethpage NY | Date: ____

Site/Well No.: N 10634 | Replicate No.: ____ | Code No.: ____

Weather: ____ | Sampling Time: Begin ____ End ____

Evacuation Data		Field Parameters	I	1V	2V	3V
Measuring Point		Color				
MP Elevation (ft)		Odor				
Land Surface Elevation (ft)		Appearance				
Sounded Well Depth (ft bmp)	67.20	pH (s.u.)	5.95	6.30	6.39	6.28
Depth to Water (ft bmp)	42.54	Conductivity (mS/cm)				
Water-Level Elevation (ft)	24.46 ± .14	(µmhos/cm)	145.2	145.6	145.5	143.0
Water Column in Well (ft)	3.9	Turbidity (NTU)				
Casing Diameter/Type		Temperature (°C)	13.8	13.6	13.5	13.8
Gallons in Well		Dissolved Oxygen (mg/L)				
Gallons Pumped/Bailed Prior to Sampling	11 gallons	Salinity (%)				
Sample Pump Intake Setting (ft bmp)		Sampling Method				
Purge Time	begin ____ end ____	Remarks				
Pumping Rate (gpm)						
Evacuation Method						

Constituents Sampled	Container Description	Number	Preservative
VOC	40ml VOA vials	2	—

Sampling Personnel: GW BH

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 _____ Project No. _____ Page 1 of _____

Site Location _____ Date 4/7/04

Site/Well No. DMCT-1 Replicate No. _____ Code No. _____

Weather _____ Sampling Time: Begin _____ End _____

Evacuation Data

Measuring Point _____

MP Elevation (ft) _____

Land Surface Elevation (ft) _____

Sounded Well Depth (ft bmp) _____

Depth to Water (ft bmp) _____

Water-Level Elevation (ft) _____

Water Column in Well (ft) _____

Casing Diameter/Type _____

Gallons in Well _____

Gallons Pumped/Bailed Prior to Sampling _____

Sample Pump Intake Setting (ft bmp) _____

Purge Time begin _____ end _____

Pumping Rate (gpm) _____

Evacuation Method _____

Field Parameters

Color _____

Odor _____

Appearance _____

pH (s.u.) 6.56

Conductivity (mS/cm) _____

(µmhos/cm) 101.3

Turbidity (NTU) _____

Temperature (°C) 17.0

Dissolved Oxygen (mg/L) _____

Salinity (%) _____

Sampling Method _____

Remarks _____

Constituents Sampled	Container Description	Number	Preservative

Sampling Personnel KT

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 _____ Project No. _____ Page 1 of _____

Site Location _____ Date 4/7/04

Site/Well No. OMCT-2 Replicate No. _____ Code No. _____

Weather _____ Sampling Time: Begin _____ End _____

Evacuation Data

Measuring Point _____

MP Elevation (ft) _____

Land Surface Elevation (ft) _____

Sounded Well Depth (ft bmp) _____

Depth to Water (ft bmp) _____

Water-Level Elevation (ft) _____

Water Column in Well (ft) _____

Casing Diameter/Type _____

Gallons in Well _____

Gallons Pumped/Bailed Prior to Sampling _____

Sample Pump Intake Setting (ft bmp) _____

Purge Time begin _____ end _____

Pumping Rate (gpm) _____

Evacuation Method _____

Field Parameters

Color _____

Odor _____

Appearance _____

pH (s.u.) 6.32

Conductivity (mS/cm) _____

(µmhos/cm) 100.2

Turbidity (NTU) _____

Temperature (°C) 15.8

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 _____ Project No. _____ Page 1 of _____

Site Location _____ Date 4/7/04

Site/Well No. ONCT-3 Replicate No. _____ Code No. _____

Weather _____ Sampling Time: Begin _____ End _____

Evacuation Data

Measuring Point _____

MP Elevation (ft) _____

Land Surface Elevation (ft) _____

Sounded Well Depth (ft bmp) _____

Depth to Water (ft bmp) _____

Water-Level Elevation (ft) _____

Water Column in Well (ft) _____

Casing Diameter/Type _____

Gallons in Well _____

Gallons Pumped/Bailed Prior to Sampling _____

Sample Pump Intake Setting (ft bmp) _____

Purge Time begin _____ end _____

Pumping Rate (gpm) _____

Evacuation Method _____

Field Parameters

Color _____

Odor _____

Appearance _____

pH (s.u.) 6.76

Conductivity (mS/cm) _____

(µmhos/cm) 1005

Turbidity (NTU) _____

Temperature (°C) 16.4

Dissolved Oxygen (mg/L) _____

Salinity (%) _____

Sampling Method _____

Remarks _____

Constituents Sampled	Container Description	Number	Preservative

Sampling Personnel KT

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

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
allons per minute	N/A	Not Applicable	umhos/cm	Micromhos per centimeter
igrams per liter	NR	Not Recorded	VOC	Volatile Organic Compounds

ARCADIS GERAGHTY & MILLER

Water Sampling Log

Project _____ Project No. _____ Page 1 of _____

Site Location _____ Date 4/7/04

Site/Well No. GP-1 Replicate No. _____ Code No. _____

Weather _____ Sampling Time: Begin _____ End _____

Evacuation Data

Measuring Point _____

MP Elevation (ft) _____

Land Surface Elevation (ft) _____

Sounded Well Depth (ft bmp) _____

Depth to Water (ft bmp) _____

Water-Level Elevation (ft) _____

Water Column in Well (ft) _____

Casing Diameter/Type _____

Gallons in Well _____

Gallons Pumped/Bailed Prior to Sampling _____

Sample Pump Intake Setting (ft bmp) _____

Purge Time begin _____ end _____

Pumping Rate (gpm) _____

Evacuation Method _____

Field Parameters

Color _____

Odor _____

Appearance _____

pH (s.u.) 5.88

Conductivity (mS/cm) _____

(µmhos/cm) 110.7

Turbidity (NTU) _____

Temperature (°C) 15.3

Dissolved Oxygen (mg/L) _____

Salinity (%) _____

Sampling Method _____

Remarks _____

Constituents Sampled	Container Description	Number	Preservative

Sampling Personnel KT

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 _____ Project No. _____ Page 1 of _____

Site Location _____ Date 4/7/04

Site/Well No. GP-3 Replicate No. _____ Code No. _____

Weather _____ Sampling Time: Begin _____ End _____

Evacuation Data

Measuring Point _____

MP Elevation (ft) _____

Land Surface Elevation (ft) _____

Sounded Well Depth (ft bmp) _____

Depth to Water (ft bmp) _____

Water-Level Elevation (ft) _____

Water Column in Well (ft) _____

Casing Diameter/Type _____

Gallons in Well _____

Gallons Pumped/Bailed Prior to Sampling _____

Sample Pump Intake Setting (ft bmp) _____

Purge Time begin _____ end _____

Pumping Rate (gpm) _____

Evacuation Method _____

Field Parameters

Color _____

Odor _____

Appearance _____

pH (s.u.) 5.69

Conductivity (mS/cm) _____

(µmhos/cm) 133.7

Turbidity (NTU) _____

Temperature (°C) 15.7

Dissolved Oxygen (mg/L) _____

Salinity (%) _____

Sampling Method _____

Remarks _____

Constituents Sampled	Container Description	Number	Preservative

Sampling Personnel KT

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	mililiter	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		Project No.		Page	1 of
Site Location				Date	9/7/04
Site/Well No.	GP13 influent	Replicate No.	FB 9.7.04	Code No.	
Weather		Sampling Time:	Begin	End	

Evacuation Data

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

Field Parameters

Color	
Odor	
Appearance	
pH (s.u.)	5.83
Conductivity (mS/cm)	
(µmhos/cm)	117.2
Turbidity (NTU)	
Temperature (°C)	17.2
Dissolved Oxygen (mg/L)	
Salinity (%)	
Sampling Method	
Remarks	

Constituents Sampled	Container Description	Number	Preservative

Sampling Personnel KT

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 _____ Project No. _____ Page 1 of _____

Site Location _____ Date 9/7/04

Site/Well No. GP13 effluent Replicate No. _____ Code No. _____

Weather _____ Sampling Time: Begin _____ End _____

Evacuation Data

Measuring Point _____

MP Elevation (ft) _____

Land Surface Elevation (ft) _____

Sounded Well Depth (ft bmp) _____

Depth to Water (ft bmp) _____

Water-Level Elevation (ft) _____

Water Column in Well (ft) _____

Casing Diameter/Type _____

Gallons in Well _____

Gallons Pumped/Bailed Prior to Sampling _____

Sample Pump Intake Setting (ft bmp) _____

Purge Time begin _____ end _____

Pumping Rate (gpm) _____

Evacuation Method _____

Field Parameters

Color _____

Odor _____

Appearance _____

pH (s.u.) 6.01

Conductivity (mS/cm) _____

(µmhos/cm) 113.7

Turbidity (NTU) _____

Temperature (°C) 19.7

Dissolved Oxygen (mg/L) _____

Salinity (%) _____

Sampling Method _____

Remarks _____

Constituents Sampled	Container Description	Number	Preservative

Sampling Personnel KT

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 _____ Project No. _____ Page 1 of _____

Site Location _____ Date 4/7/04

Site/Well No. ONCT influent Replicate No. MS/MSD Code No. _____

Weather _____ Sampling Time: Begin _____ End _____

Evacuation Data

Measuring Point _____

MP Elevation (ft) _____

Land Surface Elevation (ft) _____

Sounded Well Depth (ft bmp) _____

Depth to Water (ft bmp) _____

Water-Level Elevation (ft) _____

Water Column in Well (ft) _____

Casing Diameter/Type _____

Gallons in Well _____

Gallons Pumped/Bailed Prior to Sampling _____

Sample Pump Intake Setting (ft bmp) _____

Purge Time begin _____ end _____

Pumping Rate (gpm) _____

Evacuation Method _____

Field Parameters

Color _____

Odor _____

Appearance _____

pH (s.u.) 5.78

Conductivity (mS/cm) _____

(µmhos/cm) 98.2

Turbidity (NTU) _____

Temperature (°C) 14.2

Dissolved Oxygen (mg/L) _____

Salinity (%) _____

Sampling Method _____

Remarks _____

Constituents Sampled	Container Description	Number	Preservative

Sampling Personnel KT

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	mililiter	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 ______ Project No. ______ Page 1 of ______

Site Location ______ Date ______

Site/Well No. GP-1/3 ~~Inf~~ Air Eff Replicate No. ______ Code No. ______

Weather ______ Sampling Time: Begin ______ End ______

Evacuation Data		Field Parameters	
Measuring Point	BED A ADSORB	Color	
MP Elevation (ft)	BED B off STNBY	Odor	
Land Surface Elevation (ft)		Appearance	
Sounded Well Depth (ft bmp)		pH (s.u.)	
Depth to Water (ft bmp)		Conductivity (mS/cm)	
Water-Level Elevation (ft)		(µmhos/cm)	
Water Column in Well (ft)		Turbidity (NTU)	
Casing Diameter/Type		Temperature (°C)	
Gallons in Well		Dissolved Oxygen (mg/L)	
Gallons Pumped/Bailed Prior to Sampling		Salinity (%)	
Sample Pump Intake Setting (ft bmp)		Sampling Method	
Purge Time	begin ______ end ______	Remarks	
Pumping Rate (gpm)			
Evacuation Method			

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	mililiter	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 _____ Project No. _____ Page 1 of _____

Site Location _____ Date 4/7/04

Site/Well No. OMCT eff/Long Replicate No. _____ Code No. _____

Weather _____ Sampling Time: Begin _____ End _____

Evacuation Data

Measuring Point _____

MP Elevation (ft) _____

Land Surface Elevation (ft) _____

Sounded Well Depth (ft bmp) _____

Depth to Water (ft bmp) _____

Water-Level Elevation (ft) _____

Water Column in Well (ft) _____

Casing Diameter/Type _____

Gallons in Well _____

Gallons Pumped/Bailed Prior to Sampling _____

Sample Pump Intake Setting (ft bmp) _____

Purge Time begin _____ end _____

Pumping Rate (gpm) _____

Evacuation Method _____

Field Parameters

Color _____

Odor _____

Appearance _____

pH (s.u.) 6.10

Conductivity (mS/cm) _____

(µmhos/cm) 95.5

Turbidity (NTU) _____

Temperature (°C) 14.9

Dissolved Oxygen (mg/L) _____

Salinity (%) _____

Sampling Method _____

Remarks _____

Constituents Sampled	Container Description	Number	Preservative

Sampling Personnel KT

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: NGC | Project No. 114001348.0013.TC | Page 1 of 1

Site Location: Bethpage | Date: 4/23/04

Site/Well No.: OW 1-10 | Replicate No.: NA | Code No.:

Weather: Clear | Sampling Time: Begin 2:10 | End

Evacuation Data		Field Parameters	I	10	20	30
Measuring Point		Color				
MP Elevation (ft)		Odor				
Land Surface Elevation (ft)		Appearance				
Sounded Well Depth (ft bmp)	241'	pH (s.u.)	4.59	4.31	4.28	4.05
Depth to Water (ft bmp)	29.85	Conductivity (mS/cm)	143.0	306	332	328
Depth to Product ~~Water Level Elevation~~ (ft)	169'	(µmhos/cm)				
Water Column in Well (ft)	72'	Turbidity (NTU)				
Casing Diameter/Type	4"	Temperature (°C)	12.6	12.3	12.1	12.0
Gallons in Well	46.8	Dissolved Oxygen (mg/L)				
Gallons Pumped/Bailed Prior to Sampling	140.4	Salinity (%)				
Sample Pump Intake Setting (ft bmp)	175	Sampling Method				
Purge Time	begin ____ end ____	Remarks	DTW	29.65'	29.85	29.50
Pumping Rate (gpm)						29.50
Evacuation Method	Packer/Sub Pump					

Constituents Sampled	Container Description	Number	Preservative
Product Press:	110 psi		

Sampling Personnel: SH MF

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: N. Grumman | Project No. NY000348.0013.00002 | Page 1 of ____

Site Location: NWIRP Bethpage | Date: 4/20/04

Site/Well No.: OW1-1 | Replicate No. ____ | Code No. ____

Weather: sunny, 73 | Sampling Time: Begin ____ End ____

Evacuation Data		Field Parameters	I	1V	2V	3V
Measuring Point		Color				colorless
MP Elevation (ft)		Odor				odorless
Land Surface Elevation (ft)		Appearance				clear
Sounded Well Depth (ft bmp)	241'	pH (s.u.)	6.49	5.15	4.60	4.37
Depth to Water (ft bmp) packer	169'	Conductivity (mS/cm)				
Water-Level Elevation (ft)		(µmhos/cm)	245	223	259	244
Water Column in Well (ft)	72'	Turbidity (NTU)				
Casing Diameter/Type	4" (.65)	Temperature (°C)	20.5	18.1	15.2	18.2
Gallons in Well	46.8	Dissolved Oxygen (mg/L)				
Gallons Pumped/Bailed Prior to Sampling	140.4	Salinity (%)				
Sample Pump Intake Setting (ft bmp)	176'	Sampling Method	11:08	11:14	11:21	1128
Purge Time	begin 1107 end 1130	Remarks				
Pumping Rate (gpm)	PSF = 110	DTW →	29.27	29.22	29.2	29.18
Evacuation Method	packer submpump	stick 29.4				

Constituents Sampled	Container Description	Number	Preservative
VOC	40ml VOA VIAL	2	—

Sampling Personnel: KT 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	NJ001348.0003.00002	Project No.	N. Grumman	Page	1 of 1
Site Location	NWIRP - Bethpage, NY			Date	5/6/04
Site/Well No.	OW1-1	Replicate No.	none	Code No.	
Weather	sunny, 70	Sampling Time:	Begin 1132	End	11:57

Evacuation Data	
Measuring Point	
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	241'
Depth to ~~Water~~ packer (ft bmp)	168'
Water-Level Elevation (ft)	
Water Column in Well (ft)	73'
Casing Diameter/Type	4" (.65)
Gallons in Well	47.45
Gallons Pumped/Bailed Prior to Sampling	142.35
Sample Pump Intake Setting (ft bmp)	174' bottom of pump
Purge Time	begin 1132 end 11:57
Pumping Rate (gpm)	psi = 120
Evacuation Method	

Field Parameters	I	1V	2V	3V
Color				clear
Odor				odorless
Appearance				colorless
pH (s.u.)	7.51	6.03	5.24	4.76
Conductivity (mS/cm)				
(µmhos/cm)	313	299	274	274
Turbidity (NTU)				
Temperature (°C)	17.0	12.8	12.5	12.5
Dissolved Oxygen (mg/L)				
Salinity (%)				
Time Sampling Method	11:34	1142	11:46	1153
Remarks DTW	~~29.28~~ 29.15	29.15	29.15	29.15

Static DTW 29.28

Constituents Sampled	Container Description	Number	Preservative
VOC	40ml VOA VIAL	2	—
✓ GW calibrated pH/conductivity meter @ 11:25			

Sampling Personnel: KT 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 GERAGHTY & MILLER

Water Sampling Log

Project: NGC | Project No.: NY001348.0013.TZ | Page: 1 of 1

Site Location: Bethpage, NY | Date: 4/26/04

Site/Well No.: GW1-2 | Replicate No.: NA | Code No.:

Weather: Raining | Sampling Time: Begin 10:00 End 11:00

Evacuation Data			Field Parameters	I	10	20	30
Measuring Point			Color				
MP Elevation (ft)			Odor				
Land Surface Elevation (ft)			Appearance				
Sounded Well Depth (ft bmp)	335	3.88	pH (s.u.)	5.52	5.34	4.69	4.01
Depth to Water (ft bmp)	31.19	80.0	Conductivity (mS/cm)	75.2	73.7	78.5	80.0
~~Water Level Elevation~~ Depth to Pucker (ft)	305		(µmhos/cm)				
Water Column in Well (ft)			Turbidity (NTU)				
Casing Diameter/Type	4"	11.7	Temperature (°C)	11.3	11.3	11.3	11.3
Gallons in Well	19.5		Dissolved Oxygen (mg/L)				
Gallons Pumped/Bailed Prior to Sampling	58.5		Salinity (%)				
Sample Pump Intake Setting (ft bmp)	[redacted]	31.86	Sampling Method				@ 60 scfs
Purge Time	begin ____ end ____		Remarks	31.88	31.95	31.89	31.86
Pumping Rate (gpm)			water very turbid, dark grey in color				
Evacuation Method							

Constituents Sampled	Container Description	Number	Preservative
Updated DS/GW on Turbidity / Continue Purge			

Sampling Personnel: SH / MF

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: N. Grumman | Project No. NY001341.0013.00002 | Page 1 of ____

Site Location: NWIRP Bethpage | Date: 4/20/04

Site/Well No.: OU1-3 | Replicate No. ____ | Code No. ____

Weather: Sunny, 75 | Sampling Time: Begin ____ End ____

Evacuation Data	
Measuring Point	
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	419'
Depth to ~~Water~~ packer (ft bmp)	~~339'~~ (FT) 343'
Water-Level Elevation (ft)	
Water Column in Well (ft)	76'
Casing Diameter/Type	4" (.65)
Gallons in Well	49.4
Gallons Pumped/Bailed Prior to Sampling	148.2
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1304 end 1334
Pumping Rate (gpm)	PSF 18F 5 gpm
Evacuation Method	Grinfloted to just over 200 PSI h/c water level was dropping

Field Parameters	I	1V	2V	3V
Color				
Odor				
Appearance				
pH (s.u.)	4.70	4.99	4.82	4.80
Conductivity (mS/cm)				
(µmhos/cm)	77.6	75.7	36.7	72.1
Turbidity (NTU)				
Temperature (°C)	18.0	15.7	16.0	14.9
Dissolved Oxygen (mg/L)				
Salinity (%)				
Sampling Method	1305	1318	1324	1330
Remarks	DTW	30.10	30.77	30.27

* turbidity > 200

DTW stable Δ in mp. .49

30.08

Constituents Sampled	Container Description	Number	Preservative
VOC	40ml VOA vial	2	—
H2m	" " "	"	HCl

Sampling Personnel: KT (FH)

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 NGC | Project No. NY001348.0013.T2 | Page 1 of ____

Site Location Bethpage, NY | Date 4/26/04

Site/Well No. OW2-1 | Replicate No. N/A | Code No. ____

Weather Rain | Sampling Time: Begin 1:30 | End 2:20

Evacuation Data		Field Parameters	I	10	20	30
Measuring Point		Color				
MP Elevation (ft)		Odor				
Land Surface Elevation (ft)		Appearance				
Sounded Well Depth (ft bmp)	400'	pH (s.u.)	4.11	3.81	3.75	3.75
Depth to Water (ft bmp)	21.49	Conductivity (mS/cm)				
~~Water Level Elevation~~ Depth to Packer (ft)	310'	(µmhos/cm)	285	276	161	175.8
Water Column in Well (ft)		Turbidity (NTU)				
Casing Diameter/Type	4"	Temperature (°C)	12.8	12.6	13.5	13.0
Gallons in Well	58.5	Dissolved Oxygen (mg/L)				
Gallons Pumped/Bailed Prior to Sampling	175.5	Salinity (%)				
Sample Pump Intake Setting (ft bmp)	1	Sampling Method				
Purge Time	begin ____ end ____	Remarks		21.56	21.35	20.93	20.20
~~Pumping Rate (gpm)~~ Packer Press	174.						
Evacuation Method							

Constituents Sampled	Container Description	Number	Preservative

Sampling Personnel SH/ME

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: N. Grumman | Project No.: NY001348.0013.00002 | Page: 1 of ____

Site Location: Bethpage, NY | Date: 5/3/04

Site/Well No.: OW 2-2 | Replicate No.: ____ | Code No.: ____

Weather: rain, 60 | Sampling Time: Begin 1201 End 1224

Evacuation Data

Measuring Point	
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	495'
Depth to ~~Water~~ Product (ft bmp)	420'
Water-Level Elevation (ft)	
Water Column in Well (ft)	75'
Casing Diameter/Type	4" (.65)
Gallons in Well	48.75
Gallons Pumped/Bailed Prior to Sampling	146.25
Sample Pump Intake Setting (ft bmp)	426 to bottom of pump
Purge Time	begin 1201 end ____
Pumping Rate (gpm)	PSI = 230
Evacuation Method	

Field Parameters

Field Parameters	I	IV	2V	3V
Color				slightly turb.
Odor				odor
Appearance				cloudy
pH (s.u.)	5.88	5.60	4.86	4.97
Conductivity (mS/cm)				
(µmhos/cm)	194.7	87.9	82.0	81.8
Turbidity (NTU)				
Temperature (°C)	14.6	13.3	12.6	12.9
Dissolved Oxygen (mg/L)				
Salinity (%)				
Sampling Method	1203	1210	1215	1221
Remarks	DTW 21.9	21.9	21.95	

DTW static

20.75

Constituents Sampled	Container Description	Number	Preservative
VOC	40ml VOA VIAL	2	—

Sampling Personnel: KT (GL)

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	N. Grumman	Project No.	NY000748.0013.0000	Page	1 of
Site Location	Bethpage, NY			Date	5/3/04
Site/Well No.	OW3-1	Replicate No.		Code No.	
Weather	rain 60°	Sampling Time: Begin	2:59	End	3:32

Evacuation Data

Measuring Point	
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	516'
Depth to ~~Water~~ Packer (ft bmp)	415'
Water-Level Elevation (ft)	
Water Column in Well (ft)	101'
Casing Diameter/Type	4" (.65)
Gallons in Well	65.65
Gallons Pumped/Bailed Prior to Sampling	196.95
Sample Pump Intake Setting (ft bmp)	420
Purge Time	begin end
Pumping Rate (gpm)	DS7 Set@ ~~[illegible]~~ (CT)
Evacuation Method	increased to 250

Field Parameters

	I	1V	2V	3V
Color				cloudy
Odor				odorless
Appearance				slightly turbid
pH (s.u.)	6.65	5.47	5.50	4.92
Conductivity (mS/cm)				
(µmhos/cm)	120.8	187.5	196.3	~~[illegible]~~ 193
Turbidity (NTU)				
Temperature (°C)	14.8	13.7	13.0	12.3
Dissolved Oxygen (mg/L)				
Salinity (%)				
Time	300	306	313	3:28
DTW (~~Sampling Method~~)	34.78	32.04	30.75	28.95

Remarks: Static DTW 25.70'

Constituents Sampled	Container Description	Number	Preservative
VOC	40 ml VOA VIAL	2	—

Sampling Personnel: KT 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	mililiter	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: N. Grumman | Project No.: NY001348.0013.00002 | Page: 1 of ____

Site Location: Bethpage, NY | Date: 5/4/04

Site/Well No.: OW7-2 | Replicate No.: ____ | Code No.: ____

Weather: sunny | Sampling Time: Begin 12:07 End 13:55

Evacuation Data		Field Parameters	I	IV	2V	3V
Measuring Point		Color				clear
MP Elevation (ft)		Odor				odor ↓
Land Surface Elevation (ft)		Appearance				odor ↓
Sounded Well Depth (ft bmp)	647	pH (s.u.)	11.16	9.20	7.84	4.92
Depth to packer Water (ft bmp)	(R) 493'	Conductivity (mS/cm)				
Water-Level Elevation (ft)		(µmhos/cm)	1017	98.1	67.9	61.7
Water Column in Well (ft)	154'	Turbidity (NTU)				
Casing Diameter/Type	4" (.65)	Temperature (°C)	18.1	13.8	14.4	15.5
Gallons in Well	100.1	Dissolved Oxygen (mg/L)				
Gallons Pumped/Bailed Prior to Sampling	300.3	Salinity (%)				
Sample Pump Intake Setting (ft bmp)	499	Sampling Time Method	1211	1224	1232	13:49
Purge Time	begin 12:09 end 1355	Remarks PW	27.94	27.80	27.70	27.12
Pumping Rate (gpm)	PJ = 260	static - 28.07				1335 began pumping
Evacuation Method						stopped pumping 1st 100 gallons to go dump water

Constituents Sampled	Container Description	Number	Preservative
VOC	40 ml VOA VIAL	2	—
TIM			

Sampling Personnel: KT | 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	N. Grumman	Project No.	NY001346.0012.00002	Page	1 of
Site Location	NWIRP Bethpage, NY			Date	5/6/04
Site/Well No.	OW4-1	Replicate No.	MS/MSD = rep 5.6.04	Code No.	
Weather	sunny, 70	Sampling Time:	Begin 1346	End	1432

Evacuation Data	
Measuring Point	
MP Elevation (ft)	
Land Surface Elevation (ft)	
Sounded Well Depth (ft bmp)	692'
Depth to Water (ft bmp) (packer)	502'
Water-Level Elevation (ft)	
Water Column in Well (ft)	190
Casing Diameter/Type	2" (.16)
Gallons in Well	30.4
Gallons Pumped/Bailed Prior to Sampling	91.2
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1346 end 1432
Pumping Rate (gpm)	PSI 265
Evacuation Method	

Field Parameters	I	1V	2V	3V	4V
Color			> 200 NTU	turbid	
Odor				odorless	
Appearance				cloudy	
pH (s.u.)	11.42	10.75	10.13	9.40	9.05
Conductivity (mS/cm)					
(µmhos/cm)	986	239	180.0	119.3	121.6
Turbidity (NTU)					
Temperature (°C)	16.2	14.4	12.9	13.2	12.8
Dissolved Oxygen (mg/L)					
Salinity (%)					
~~Sampling Method~~ Time	1347	1351	1355	1406	1413
~~Remarks~~ DTW	31.66	31.23	30.87	30.17	28.13

slowed rate down

DTW Static 26.66

Constituents Sampled	Container Description	Number	Preservative
VOC	40ml VOA vial	9	—
ph — Rep 5.6.04	" " "	3	—
cond			
Temp			
Time			
DTW			

* turbid after 3 well volume, gary calls Dave
* going to do 5 well volumes

Sampling Personnel: KT / 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: N. Grumman | Project No. N/Y001348.0013.0002 | Page 1 of ____

Site Location: NWIRP Bethpage, NY | Date: 5/5/04

Site/Well No.: OW14-2 | Replicate No. ____ | Code No. ____

Weather: Sunny, 70 | Sampling Time: Begin 1101 | End 1350

Evacuation Data		Field Parameters	I	1V	2V	3V
Measuring Point		Color				clear
MP Elevation (ft)		Odor				colorless
Land Surface Elevation (ft)		Appearance				odorless
Sounded Well Depth (ft bmp)	724'	pH (s.u.)	7.79	5.31	4.51	4.82
Depth to ~~Water~~ Packer (ft bmp)	502'	Conductivity (mS/cm)				
Water-Level Elevation (ft)		(µmhos/cm)	140.9	159.4	43.2	39.5
Water Column in Well (ft)	222'	Turbidity (NTU)				
Casing Diameter/Type	4" (.65)	Temperature (°C)	15.4	12.9	13.6	14.0
Gallons in Well	144.3	Dissolved Oxygen (mg/L)				
Gallons Pumped/Bailed Prior to Sampling	432.9	Salinity (%)				
		~~Sampling Method~~ Time	1103	1121	1222	1345
Sample Pump Intake Setting (ft bmp)	bottom of pump 508'	Remarks DTW	26.59	26.00	25.70	25.8
Purge Time	begin 1101 end 1350					
Pumping Rate (gpm)	PSI = 265	static DTW 2688				
Evacuation Method		Instruments calibrated				

Constituents Sampled	Container Description	Number	Preservative
VOC	40 ml VOA VIAL	2	—

remarks ① @ 11:23 pumped 148 gallons ④ stopped pump @ 1230 pumped 150 gallons & dumped water

① stopped pumping @ 200 gallons 1130

③ started pumping again @ 12:10 DTW 25.8' ③ started pumping @ 1332 DTW 25.57

⑥ pumped water @ 1400

Sampling Personnel: JCT / 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

Appendix C

Chain Of Custody Records

ARCADIS

Laboratory Task Order No./P.O. No. ______ **CHAIN-OF-CUSTODY RECORD** Page 1 of ____

Project Number/Name N100IS48.0013.72 | NGC

Project Location BETHPAGE NY

Laboratory STL CT

Project Manager ___ SAN GIOVANNI

Sampler(s)/Affiliation M.S. (GW)

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: VOC 40ml VOA VIALS (CLP)						Remarks	Total
FB031604	L	3/16/04		2							2
TB031604	↓	↓		2							2
HN-41DS	↓	↓		2							2
HN-41DI	↓	↓		2							2
HN-112S	↓	↓		2							2
HN-112I	↓	↓		2							2

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

Total No. of Bottles/Containers 12

Relinquished by: [illegible]	Organization: ARCADIS	Date 03/16/04	Time 1800	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:

CALL QUESTIONS TO DAVID STERN (631 391 5284)

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 ___ of ___

Project Number/Name NY00B48.0013.00002

Project Location BETHPAGE NY

Laboratory SEVERN-TRENT SHELTON

Project Manager DAVE STERN

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

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40ml VIAL VOC624 (UNP)	1L AMBER GLASS SVOC625 (UNP)				Remarks	Total
GM-14	L	3-17-04		2	2					4
FB-3-17-04	↓	↓			2					2

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

Total No. of Bottles/Containers 6

Relinquished by: [signature]	Organization: ARCADIS	Date 3/17/04	Time 5:30	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.

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 N4003B18.0013 00007

Project Location BETHPAGE NY

Laboratory SVDPRN - TRENT SHELTON

Project Manager DAVE STERN.

Sampler(s)/Affiliation GW, MS

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40ml VOA VOC 95-1A8	500ml Plastic Cr only (HNO3)					Remarks	Total
6m-15D	L	3-17-04		2							2
6m 15D-2				2							2
6m-15S				2	1						3
PT/MW-04				2	1						1
PT/MW-06					1						1
FB-3-17-04				2	1						3
TB 3-17-04				2							2

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

Total No. of Bottles/ Containers: 14

					Seal Intact?
Relinquished by: S. H. W.	Organization: ARCADIS	Date 3/17/04	Time 5:30		
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 1 of 1

Project Number/Name NY001348.0013.0002

Project Location Grumman / Bethpage

Laboratory STL

Project Manager David Stern

Sampler(s)/Affiliation BH / GW

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40 ml VOA vial VOCs						Remarks	Total
FB 3.18.04	L	3.18.04		2							2
TB 3.18.04				2							2
MW-29D				2							2
MW-29I				2							2
FW-01				2							2
REP 3.18.04				2							2
MW-24I				2							2
				14							

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

Total No. of Bottles/ Containers: 14

				Seal Intact?
Relinquished by: BH	Organization: ARCADIS	Date 3/18/04	Time 5:20	
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: NY001348.0013.00002
Project Location: BETHPAGE NY
Laboratory: SEVERN TRENT SHELTON
Project Manager: DAVE STERN
Sampler(s)/Affiliation: G.W. R.H.

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	40ml VOA VOC GC/MS (0.02)	500ml Plastic Ca/Cl (HNO3)	500ml Plastic Dissolved Ca/Cl (HNO3)			Remarks	Total
6M-78S	L	3-19-04		2	1					3
6M-78I	↓	↓		2	1					3
MW-3R	↓	↓		2	1	1				4
N-10634	↓	↓		2						2
FB-3-19-04	↓	↓		2						2
TB-3-19-04	↓	↓		2						2

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

Total No. of Bottles/Containers: 16

Relinquished by: RHW	Organization: ARCADIS	Date 3/19/04	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 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 NY001348.0013.0002

Project Location Bethpage NY

Laboratory STL CT

Project Manager Carlo SanGiovanni

Sampler(s)/Affiliation BH GW

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: HOM VOA VIALS VOCs						Remarks	Total
GM 74 I	L	3.22.04		2							2
GM 74 D				2							2
GM 74 D2				2							2
GM 73 D2				2							2
GM 73 D				6							6
REP 3.22.04				2							2
TB 3.22.04				2							2
FB 3.22.04				2							2
				(20)							

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

Total No. of Bottles/ Containers [redacted] 20

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	

(DH)

Special Instructions/Remarks:

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 001348.0003.00002

Project Location BETHPAGE NY

Laboratory SEVERN-TRENT SHELTON

Project Manager DAVE STERN

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

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: HDM VOA 95 TASP (VOC)						Remarks	Total
GM-39D	L	3.23.04		2							2
GM-39D-2	↓	↓		2							2
GM-18D	↓	↓		2							2
GM-21DS	↓	↓		2							2
FB-3.23.04	↓	↓		2							2
TB-3-23-04	↓	↓		2							2

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

Total No. of Bottles/Containers 12

Relinquished by: [signature]	Organization: ARCADIS	Date 3/23/04	Time 5:30	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

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 N Grumman NY001348.0013.0002

Project Location Bethpage NY

Laboratory STL CT

Project Manager Carlo San Giovanni

Sampler(s)/Affiliation RH

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40ml VOA vial VOCs						Remarks	Total
GM20I	L	3/24/04		2							2
GM20D				2							2
GM21D				2							2
GM21I				2							2
TB 3-24-04				2							2

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

Total No. of Bottles/Containers 10

Relinquished by: [illegible signature]	Organization: ARCADIS	Date 3/24/04	Time 4:00pm	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:

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

ARCADIS

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

CHAIN-OF-CUSTODY RECORD

Project Number/Name NY001398.0013.00002

Project Location Bethpage, NY

Laboratory Severn-Trent Shelton

Project Manager David Stern

Sampler(s)/Affiliation LT BH

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 8260 VOC (unp)						Remarks	Total
TB 3.25.04	L	3/25/04		2							2
FB 3.25.04	↓			2							2
52S	↓			2							2
52I	↓			2							2
52D	↓			2							2

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

Total No. of Bottles/Containers: 10

Relinquished by: KET	Organization: Arcadis	Date 3/25/04	Time 4:30	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 to Dave Stern

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

Project Number/Name NY001318.13.T2 / GRUMMAN

Project Location BETHPAGE, NY

Laboratory STL, CT

Project Manager D. STERN

Sampler(s)/Affiliation AS, GW, YT

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	40mL VOA VIAL VOC	500mL PLASTIC (HNO3) CD/CR-TOTAL	500mL PLASTIC (HNO3) CD/CR-DISSOLVED				Remarks	Total
GM 70D2	L	3/29/04		2							2
GM 116SR	L	3/29/04		2	1	1					4
GM 175R	L	3/29/04		2	1	1					4
FB032904	L	3/29/04		2	1						3
TB032904	L	3/29/04		2							2

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

Total No. of Bottles/Containers 15

Relinquished by: A. Sambourn	Organization: ARCADIS	Date 03/29/04	Time 1700	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 (631 391 5282)

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

Project Number/Name [illegible]

Project Location [illegible], NY

Laboratory [illegible]

Project Manager ______

Sampler(s)/Affiliation [illegible]

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: VOC ([illegible])						Remarks	Total
m7-07	L	3/24/09		2							2

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

Total No. of Bottles/Containers: 2

Relinquished by: [illegible]	Organization: [illegible]	Date 3/24/09	Time [illegible]	Seal Intact?
Received by: [illegible]	Organization: [illegible]	Date 3/24/09	Time 16:30	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

Project Number/Name NY001318.0013.T2
Project Location BETHPAGE, NY
Laboratory STL, CT
Project Manager DAVE STERN
Sampler(s)/Affiliation MS, GW, KT

ANALYSIS / METHOD / SIZE

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	40mL VOA VIAL VOC	500mL ... (NSP)	500mL PLASTIC ...				Remarks	Total
TB033004	L	03/30/04		2							2
FB033004	↓	↓		2	1						3
GM-18S				2	1	1					4
GM-33D2				2							2
N10631				2	1	1					4
GM-75D2				2							2
GM-36D				2							2
GM-36D2				2							2
GM-18I	↓	↓		2							2

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

Total No. of Bottles/Containers 23

Relinquished by: [illegible]	Organization: ARCADIS	Date 03/30/04	Time 1800	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 (631 391 5254)

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: N. Crummin / Bethpage Water

Project Location: Bethpage, NY

Laboratory: TTM

Project Manager: _____

Sampler(s)/Affiliation: LT

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE						Remarks	Total
				40 ml TTM VOC (HCl)							
GM 36D	L	3/30/09		2							2
GM 36D2	↓			2							2

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

Total No. of Bottles/ Containers: 4

Relinquished by: [signature]	Organization: ARCADIS	Date 3/31/09	Time 900	Seal Intact? Yes No N/A
Received by: [signature]	Organization: _____	Date 3/31/09	Time 09:15	
Relinquished by: _____	Organization: _____	Date / /	Time _____	Seal Intact? Yes No N/A
Received by: _____	Organization: _____	Date / /	Time _____	

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.

CHAIN-OF-CUSTODY RECORD

Project Number/Name N1601348.0003.T2/NGC

Project Location BETHPAGE, NY

Laboratory STL, CT

Project Manager DAVID STERN

Sampler(s)/Affiliation MS, GW, KT

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40ML VOA VIALS (UNP) VOC						Remarks	Total
TB033104	L	03/31/04		2							2
FB033104	↓	↓		2							2
N10624	↓	↓		2							2
N10627	↓	↓		2							2
GM-38D	↓	↓		6 *	* GM 38D AS MS/MSD QA/QC **						6
GM-37D	↓	↓		2							2
GM-17D	↓	↓		2							2

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

Total No. of Bottles/Containers 18

Relinquished by: [illegible signature]	Organization: ARCADIS	Date 03/31/04	Time 1800	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 (631 391 5284)

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 [illegible]

Project Location Jefferson Ky

Laboratory [illegible]

Project Manager _____

Sampler(s)/Affiliation LFT

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE						Remarks	Total
[illegible]	L	1/31/04		2							2
[illegible]											

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

Total No. of Bottles/ Containers 2

Relinquished by: LFT	Organization: Arcadis	Date 1/31/04	Time 9:15	Seal Intact? Yes No N/A
Received by: SHW	Organization: HQM	Date 1/31/04	Time 4:15	
Relinquished by: _____	Organization: _____	Date / /	Time _____	Seal Intact? Yes No N/A
Received by: _____	Organization: _____	Date / /	Time _____	

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. _____

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number/Name [illegible]

Project Location Rutherford, NJ

Laboratory Severn - Trent Laboratories

Project Manager David Stern

Sampler(s)/Affiliation LT

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 10mL VOA vial VOC (WP)						Remarks	Total
TB 4.1.04	L	4/1/04		2							2
Rep 4.1.04	↓			2							2
EM 3702				2							2
EM 3802				2							2

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

Total No. of Bottles/ Containers: 8

Relinquished by: LFT	Organization: Arcadis	Date 4/1/04	Time 4:15	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 to Rick 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: N. Common / Bethpage Water district

Project Location: bethpage, ny

Laboratory: H2m

Project Manager: ______

Sampler(s)/Affiliation: KT

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: VOC (40 ml vial)						Remarks	Total
GM 37D2	L	4/1/04		2							2
GM 38D2	√			2							2

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

Total No. of Bottles/ Containers: 4

Relinquished by: KT	Organization: Arcadis	Date 4/1/04	Time 4:45	Seal Intact?
Received by: [illegible]	Organization: H2m	Date 4/1/04	Time 1615	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)

AG 05-12/01

ARCADIS

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

CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number/Name NY001541.0013.00002

Project Location Bethpage, NY

Laboratory Severn-Trent Shelton

Project Manager David Stern

Sampler(s)/Affiliation KFT

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 8260 VOC (WP)						Remarks	Total
TS 4.2.04	L	4/2/04		2							2
GM 3502	↓	↓		2							2
GM 4.1	↓	↓		-							2

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

Total No. of Bottles/ Containers: 6

Relinquished by: KFT	Organization: Arcadis	Date 4/2/04	Time 4:15	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 to David 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 N. Grumman/Bethpage Water District

Project Location Bethpage, NY

Laboratory H2M

Project Manager _____

Sampler(s)/Affiliation LFT

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40 mL VOA vial						Remarks	Total
GM 35D2	L	4/2/04		2							2
										Total No. of Bottles/ Containers	2

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

Relinquished by: LFT	Organization: Arcadis	Date 4/2/04	Time	Seal Intact?		
Received by:	Organization: H2M	Date 4/2/04	Time 1:40	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)

AG 05-12/01

ARCADIS

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

CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number/Name N. Grumman NY001348.0013.0002
Project Location Bethpage NY
Laboratory STL
Project Manager David Stern
Sampler(s)/Affiliation ______

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	40ml VOA VOC 95-1852 (UNP)	500ml PLASTIC TOTAL Cd/Cr (HNO3)	500ml PLASTIC DISSOLVED Cd/Cr (HNO3)			Remarks	Total
GM-15I	L	4-5-04		2						2
MW-16F	L	4-5-04			1	1				2
MW-26F	L	4-5-04			1	1				2
FB-4-5-04	L	4-5-04		[illegible]	1					1
TB 4-5-04	L	4-5-04		2						2
GM-13D	L	4-5-04		2						2
REP-4-5-04	L	4-5-04		2						2

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

Total No. of Bottles/Containers 13

Relinquished by: S. HW	Organization: ARCADIS	Date 4/5/04	Time 4:00	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 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

Project Number/Name NY) 1501X.0015.00002

Project Location Bethpage, NY

Laboratory Severn Trent Shelton

Project Manager David Stern

Sampler(s)/Affiliation KT

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: VOC (8260)						Remarks	Total
TB 4.6.04	L	4/6/04		2							2
FB 4.6.04	↓	↓		2							2
GM 23 I	↓	↓		2							2
GM 23 S	↓	↓		2							2
GM 17 I	↓	↓		6							6
GM 79 I	↓	↓		2							2
GM 79 D	↓	↓		2							2

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

Total No. of Bottles/ Containers: 18

Relinquished by: KFT	Organization: Arcadis	Date 4/6/04	Time 4:15	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 perform QA/QC MS/MSD on 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. _____

CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number/Name: N40013.48.0013.00002

Project Location: BETHPAGE NY

Laboratory: SEVERN TRENT VT.

Project Manager: DAVE STERN

Sampler(s)/Affiliation: E.W.

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: SUMMA TO-14A						Remarks	Total
ONCT INF	A	4-7-01		1							1
ONCT EFF	↓			1							1
GP 1/3 INF				1							1
GP 1/3 EFF				1							1

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

Total No. of Bottles/ Containers: 4

Relinquished by: [signature]	Organization: ARCADIS	Date 4/7/01	Time 15:00	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: N4001348.0013.00002

Project Location: BETHPAGE NY

Laboratory: SEVERN-TRENT SHELTON

Project Manager: DANE STERN

Sampler(s)/Affiliation: G.W. BH. ICT

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: HUMI USAR VOC GS-MS (WP)	500ml PLASTIC TOTAL Ca/Cr (HNO3)	500ml PLASTIC DISSOLVED Ca/Cr (HNO3)				Remarks	Total
GM-34D	L	4-7-04		2							2
GM-34D-2				2							2
GM-32S				2	1	1					4
~~TB~~-4-7-04				2							2
TB 4-7-04				2	1	~~0~~ SD					3
ONCT-1				2							2
ONCT-2				2							2
ONCT-3				2							2
GP-1				2							2
GP-3				2							2
GP-1/3 INF				2							2
GP-1/3 EFF				2							2
ONCT INF				6*							6*
ONCT EFF				2							2
REP-4-7-04				2							2

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

Total No. of Bottles/ Containers: 37

Relinquished by: JAW	Organization: ARCADIS	Date 4/7/04	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

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

AG 05-12/01

H2M LABS, INC.

11121

EXTERNAL CHAIN OF CUSTODY

575 Broad Hollow Rd, Melville, NY 11747-5076
Tel: (516) 694-3040 Fax: (516) 420-8436

CLIENT:

H2M SDG NO:

PROJECT NAME/NUMBER: South Farmingdale Water District Outpost Monitoring Well Sample Analyses

SAMPLERS: (signature)/Client: CJF

DELIVERABLES:

TURNAROUND TIME:

NOTES: Volatile organic compounds by Method SW846 8260B. Reports + invoices to GEL.

Project Contact: GEL

Phone Number: X-1140

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	Sample Container Description: 40ml vial with HCl	ANALYSIS REQUESTED: ORGANIC VOA	ORGANIC BNA	ORGANIC Pest/PCB	INORG: Metal	INORG: CN	LAB I.D. NO.	REMARKS:
4/23	15:[illegible]	GW	MW#: BP-OW 1-1	2	2							See notes for analyses.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	4/23/04	16:30	[signature]	4/23/04	16:30
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

LABORATORY USE ONLY

Discrepancies Between Sample Labels and COC Record? Y or N

Explain: _____

Samples were:
1. Shipped___ or Hand Delivered___ Airbill# _____
2. Ambient or chilled
3. Received in good condition: Y or N
4. Properly preserved: Y or N
5. Samples returned to lab ___ Hrs from collection.

COC Tape was:
1. Present on outer package: Y or N
2. Unbroken on outer package: Y or N
3. COC record present & complete upon sample receipt: Y or N

WHITE COPY - ORIGINAL YELLOW COPY - CLIENT PINK COPY - LABORATORY

ARCADIS

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

CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number/Name: IN001348.0013

Project Location: Bethpage, NY

Laboratory: STL

Project Manager: David Stern

Sampler(s)/Affiliation: SH/ME

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40 mL VOA Vial VOC EPA Method 502.2	Remarks	Total
QW 1-1	L	4/23/04		3		3
TB 4/23/04	L	4/23/04		3		3

24 Hour TAT

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

Total No. of Bottles/Containers: 6

Relinquished by: Shawn Haley	Organization: Arcadis	Date 4/23/04	Time 1700	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 David 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 1 of 1

Project Number/Name NY001348.0013

Project Location Bethpage, NY

Laboratory HZMJS

Project Manager David Stern

Sampler(s)/Affiliation SH/ME

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40 ML VOA VIAL (HCL) VOC - 8260B						Remarks	Total
OW 1-2	L	4/26/04		2							2
OW 2-1	L	4/26/04		2							2

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

Total No. of Bottles/ Containers: 4

Relinquished by: Shawn Healy	Organization: Arcadis	Date 4/26/04	Time 1630	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: _____

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

Project Number/Name NY001348.0013

Project Location Bethpage, NY

Laboratory STL

Project Manager David Stern

Sampler(s)/Affiliation SH/ME

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	40 ML VOA VIAL (UNP) VOC – Method 5021					Remarks	Total
OW1-2	L	4/26/04		3						3
OW2-1	L	↓		3						3
TB 4/26/04	L			3						3

Standard TAT

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

Total No. of Bottles/Containers 9

Relinquished by: Shawn [illegible]	Organization: Arcadis	Date 4/26/04	Time 1700	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 David Stern

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 _____

Project Location _____

Laboratory _____

Project Manager _____

Sampler(s)/Affiliation _____

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE						Remarks	Total

72 HR TURNAROUND ON OW-1-1 ONLY

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

Total No. of Bottles/ Containers

Relinquished by:		Organization:		Date / /	Time
Received by:		Organization:		Date / /	Time
Relinquished by:		Organization:		Date / /	Time
Received by:		Organization:		Date / /	Time

Seal Intact? Yes No N/A

Seal Intact? Yes No N/A

Special Instructions/Remarks: _____

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

SPECIFY

SPECIFY

AG 05-12/01

ARCADIS

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

CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number/Name [illegible]

Project Location [illegible]

Laboratory [illegible]

Project Manager CHRIS FLYNN

Sampler(s)/Affiliation [illegible]

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE						Remarks	Total
[illegible]	L	[illegible] 12:00		[illegible]							2

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

Total No. of Bottles/ Containers

Relinquished by: [illegible]	Organization: [illegible]	Date [illegible]	Time [illegible]	Seal Intact?
Received by: [illegible]	Organization: [illegible]	Date [illegible]	Time 14:15	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)

AG 05-12/01

ARCADIS

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

Project Number/Name [illegible]

Project Location Bethpage NY

Laboratory [illegible]

Project Manager [illegible]

Sampler(s)/Affiliation [illegible] GW

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: 40 ml VOA vial VOC 502.2						Remarks	Total
TG 5.2.01	L	5/3/04		3							3
GW 2-2	↓			3							3
GW 3-1	↓			3							3

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

Total No. of Bottles/Containers 9

Relinquished by: [illegible]	Organization: [illegible]	Date 5 / 3 / 04	Time [illegible]	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 to [illegible]

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 ____ of ____

Project Number/Name: NY001548.0015.00002

Project Location: Bethpage, NY

Laboratory: Severn Trent Shelton

Project Manager: David Stern

Sampler(s)/Affiliation: LT GW

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: VOC 8260						Remarks	Total
TB 5.4.04	L	5/4/04		3							3
MW3-2	L			3							3

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

Total No. of Bottles/Containers: 6

Relinquished by: GW	Organization: Arcadis	Date 5/4/04	Time 500	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 to Dave Stern

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 ____ of ____

Project Number/Name NY001348.0013.00002

Project Location BETHPAGE NY

Laboratory SEVERN-TRENT SHELTON

Project Manager DAVE STERN

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

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: HDMI USAR 5021 VOC (8260)						Remarks	Total
TB 5-5-04	L	5-5-04		3							3
OW-4-2		5-5-04		3							3

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

Total No. of Bottles/ Containers: 6

Relinquished by: [signature]	Organization: ARCADIS	Date 5/5/04	Time 3:00	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 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.11348.0013 00002

Project Location NWIRP Bethpage, NY

Laboratory Severn Trent Laboratories

Project Manager David Stern

Sampler(s)/Affiliation KT GW

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: VOC 8260	VOC 524.2					Remarks	Total
TB 5.6.04	L	5/6/04		3							3
Rep 5.6.04				3							3
MW1-1				3							3
MW4-1	↓			*9							9

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

Total No. of Bottles/ Containers: 18

Relinquished by: KT	Organization: Arcadis	Date 5/6/04	Time 4:00	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: * please perform QA/QC MS/MSD on sample - please 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 NY001314.0002.0002
Project Location Bethpage, NY
Laboratory Severn Trent - Shelton
Project Manager David Stern
Sampler(s)/Affiliation KT

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	ANALYSIS / METHOD / SIZE: VOC						Remarks	Total
TB 5.7.04	L	5/7/04		2							2
GM 71D2	✓			2							2

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

Total No. of Bottles/Containers 4

Relinquished by: KT	Organization: Arcadis	Date 5/7/04	Time 1400	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 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 12 Crossman/Rathbone Water district

Project Location Rathbone NY

Laboratory H2M

Project Manager _____

Sampler(s)/Affiliation KT

Sample ID/Location	Matrix	Date/Time Sampled	Lab ID	42 MI VOA vial VOC (HCl)	ANALYSIS / METHOD / SIZE					Remarks	Total
EM 71 D2	L	5/7/04		2							2

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

Total No. of Bottles/ Containers 2

Relinquished by: KT	Organization: ARCADIS	Date 5/7/04	Time 420	Seal Intact? Yes No N/A
Received by: [signature]	Organization: H2M	Date 5/7/04	Time 16:21	
Relinquished by: _____	Organization: _____	Date / /	Time _____	Seal Intact? Yes No N/A
Received by: _____	Organization: _____	Date / /	Time _____	

Special Instructions/Remarks: _____

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

AG 05-12/01