New York State Department of Environmental Conservation
Division of Environmental Remediation • 625 Broadway • Albany, New York 12233-7013

Site Number 7-04-009A

Vestal Water Supply Site Quarterly Report and Annual Groundwater Summary

Fourth Quarter 2008

New York State Department of Environmental Conservation Work Assignment D004443-4

Report Prepared By:

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MALCOLM PIRNIE

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1. Introduction

The New York State Department of Environmental Conservation (NYSDEC) has issued a Work Assignment (# D004443-4) to Malcolm Pirnie, Inc. (Malcolm Pirnie) for Operation, Maintenance, and Monitoring at the Vestal Water Supply Site in New York State (Site # 7-04-009A). Malcolm Pirnie has prepared this Quarterly Report in accordance with the NYSDEC-approved Work Plan to summarize site activities.

2. Site Description

The Vestal Water Supply (Site 1-1) Site is located on Pumphouse Road, Vestal, Broome County, New York (Figure 2-1), along the southern bank of the Susquehanna River. Well 1-1 is located just south of the Susquehanna River and northwest of an industrial park located along Stage Road. Until 1980, Well 1-1 was the main source of water for Water District 1, which provides drinking water for several areas of the Town of Vestal. Currently, there are two other production wells, Wells 1-2A and 1-3 that function as the main source of water for Water District 1. Well 1-1A was installed in 1993 to replace Well 1-1 and is currently being used to pump and treat groundwater, which is then discharged to the Susquehanna River.

3. Operation and Maintenance

Malcolm Pirnie has maintained continuous operation of the groundwater treatment plant at the Vestal Water Supply Site. This includes the operation, maintenance, and influent/effluent sampling in accordance with the operations and maintenance (O&M) manual (Final Operation and Maintenance Manual, Long-Term Response, Operable Unit 1, Vestal Well 1-1 Site, Vestal, New York, October 2006, Tetra Tech EC, Inc.) (Final O&M Manual). However, as indicated in the Work Assignment, no work was performed on the Vestal Water Supply (Site 1-1) soil vapor extraction system.

As part of managing the Vestal Water Supply Site, Malcolm Pirnie has a subcontract with Environmental Compliance, Inc. (ECI), who has unique knowledge of operating the groundwater treatment plant. ECI provides materials, labor, equipment, and supervision to maintain continuous operation of the groundwater treatment plant.

3.1. System Operation

The groundwater treatment system was shut down on October 6, 2008 to begin well redevelopment and pump replacement procedures and corrosion protection system upgrades. As shown in the Monthly Reports and System O&M Logs provided by ECI (Appendix A), the system flow prior to shutdown was approximately 100 gallons per minute (gpm). Groundwater treatment system flow rates from the Monthly Reports and System O&M Logs are summarized on Table 3-1. As shown on Table 3-1, approximately 57,824,000 gallons of water were treated in 2008.

3.2. Influent – Effluent Sampling

No samples were collected from the treatment system during the fourth quarter 2008. Based on influent sample concentrations and total flow volumes from the Well 1-1A treatment system, approximately 188 pounds of VOCs have been removed by the treatment system in 2008.

3.3. General Operation and Maintenance

The following site operation and maintenance activities were performed during the fourth quarter of 2008:

- Well development
- Pump removal and inspection
- Evaluation and selection of replacement components

- Retrofit well discharge head
- Corrosion protection system upgrades

3.4. Well Development and Pump Replacement

Well development and pump replacement procedures for Well 1-1A were initiated on October 6, 2008 by Subsurface Technologies, Inc. (Subsurface Tech) by injecting liquid and vapor phase carbon dioxide using their patented Aqua Freed® process. Details of the well development are provided below. A photo log is provided in Appendix B.

3.4.1. Pump Removal

The vertical line-shaft pump for Well 1-1A was removed and inspected (Photo 1). Upon removal of the pump bowl assembly, significant corrosion and catastrophic pump failure were noted (Photo 2). The discharge column pipes and line-shafts were also coated with iron and manganese deposits (Photo 3). The column pipes and line-shafts were transported to Subsurface Tech's repair shop in Rock Tavern, New York for cleaning and inspection. Based corrosion found during their inspection, Subsurface Tech recommended replacement of the column pipe and line shafts.

3.4.2. Pre-treatment Video

A pre-treatment well video revealed significant buildup on the well screen (Photo 4). In addition, a slight bend in the well screen was noted at approximately 107 feet below ground surface (bgs) (Photo 5). The cause of the bend in the screen is not known.

3.4.3. Wire Brushing

A wire brush assembly was used to remove heavy buildup from the well (Photo 6); however, the brush could not be inserted into the screened interval to due to the bend observed in the screen.

3.4.4. Aqua Freed® Process

An expandable well packer was placed in the well casing to focus development activity in the screened interval (Photo 7). The CO_2 delivery system was then connected to the packer and approximately 4,000 pounds of liquid and vapor-phase CO_2 were injected to develop the well (Photo 8).

3.4.5. Mechanical Well Development

The well was mechanically developed using conventional air-lift techniques to remove sediment and debris generated during the Aqua Freed process. Well development water was first discharged into a 12,000 gallon holding tank (Photo 9). The water was then pumped through a 100 micron bag filter assembly to remove sediment before it was directed into the influent pipe for the stripper tower of the treatment system (Photo 10).

3.4.6. Post-treatment Video

A post-treatment well video showed that the well development procedures removed nearly all of the buildup on the well screen (Photos 11 and 12).

3.4.7. Corrosion Analysis

Based on the significant corrosion observed on the pump bowl assembly, a sample of the bowl was sent to Cathodix, Inc. (Cathodix) in Lakewood, New York for corrosion analysis. According to Cathodix, the sample showed "metallic graphitization coupled with stress corrosion cracking resulting in metallic failure and penetration". Cathodix concluded that a significant contributor to the corrosion was the two cathode protection systems being operated to protect buried pipelines bounding the site to the north and south. Based on their evaluation, Cathodix recommended adding a second caged-anode assembly to the existing on-site cathode protection system to improve the level of protection for the well components.

3.4.8. Well Pump Replacement

Based on the observed pump, column pipe, and line-shaft corrosion, Malcolm Pirnie, Subsurface Tech, and NYSDEC discussed various pump replacement options including:

- Direct replacement using in-kind components
- Replacement using in-kind components but constructed of stainless-steel
- Replacement using a stainless-steel submersible pump/motor assembly with carbon steel, stainless-steel, or Certa-Lock PVC discharge (drop) pipe.

At the request of NYSDEC, a stainless-steel submersible pump/motor assembly and Certa-Lock® PVC drop pipe was selected based on their ability to resist corrosion. The request to order the well components was placed on November 5, 2008.

On December 11, 2008, Subsurface Tech began retrofitting the existing well head to accept the new well pump configuration. In general, the process involved:

- Removing the existing motor support pad (Photo 13)
- Welding a companion flange to the 16 inch well casing (Photo 14)
- Fabricating a discharge pipe to connect the submersible pump discharge to the existing pipe connection (Photo 15)

Final pump placement and well testing was conducted during the first quarter, 2009. Additional details will be presented in the first quarter 2009 Quarterly Report.

3.4.9. Caged-Anode Installation

On November 24, 2008, Cathodix installed a new caged-anode assembly approximately 10 feet west of Well 1-1A (Photo 16). The caged-anode was placed in a horizontal trench

approximately 18 inches bgs and backfilled with a mixture of soil and carbon-based powder. Final monitoring and adjustments to the cathode protection system were conducted during the first quarter 2009 following installation and startup of the new well pump components. Additional details will be presented in the first quarter 2009 Quarterly Report.

4. Groundwater Monitoring

The Vestal Well 1-1A groundwater monitoring program evaluates groundwater quality, monitors contaminant migration in the groundwater at the site, and assesses hydrogeologic site conditions, including groundwater flow and velocity. Figure 4-1 shows the location of the groundwater monitoring wells. Fourth quarter groundwater monitoring program activities were conducted in accordance with the Work Plan between October 8 and 10, 2009.

4.1. Well Inspection

In 2007, several groundwater monitoring wells shown in the Final O&M Manual (Figure 1, Location of Wells) either could not be located or did not spatially correlate to wells found during the well inspection process. Therefore, each well located during the well inspection survey was subsequently located using a hand-held global positioning system (GPS) and given a new identification. Appendix C contains a list of the old and new well identifications and GPS coordinates for each well. This and future reports will refer to the new well identifications.

Existing on-site groundwater monitoring wells and piezometers were evaluated for integrity and suitability for groundwater monitoring and water levels. The condition of each well and piezometer was recorded on a well inspection form, provided in Appendix D. As shown on the well inspection forms, the integrity of each well and/or piezometer is generally acceptable and no significant repair or maintenance is required at this time.

4.2. Water Level Survey

Prior to collecting samples, water levels were measured to the nearest hundredth of a foot and recorded on a groundwater level data form (Appendix E). As indicated in Section 3.2, Well 1-1A was turned off for repairs on October 6, 2008. Water levels were measured on October 8, 2008 while Well 1-1A was being developed. Therefore, the values presented in this report are not representative of typical pumping conditions. Table 4-1 summarizes the groundwater levels and elevations from the site. As shown in Table 4-1, groundwater elevations in groundwater monitoring wells and piezometers screened in the shallow groundwater monitoring zone ranged from 800.98-feet above mean sea level (amsl) to 824.41-feet amsl; groundwater elevations in monitoring wells and piezometers screened in the deep groundwater monitoring zone unit ranged from 800.52-feet amsl to 801.83-feet amsl. Shallow and deep potentiometric surfaces map are provided on Figure 4-2 and Figure 4-3, respectfully. As shown on Figure 4-2, the direction of groundwater flow in the shallow groundwater monitoring zone is generally northwest toward the Well 1-1A groundwater treatment plant in the vicinity of the contaminant source area and is generally toward the south in the vicinity of the Pump House Road stormwater

retention basin. Figure 4-3 shows the direction of groundwater flow in the deep groundwater monitoring zone is generally southwest, parallel to the Susquehanna River.

4.3. Groundwater Sampling

Groundwater samples were collected from 18 groundwater monitoring wells (4009-1 through 4009-11, 4009-11A, 4009-12, 4009-12A, 4009-13, 4009-13A, 4009-14, and 4009-15) using low-flow groundwater purging and sampling procedures in accordance with the Work Plan. Prior to collecting groundwater samples, pH, conductivity, turbidity, dissolved oxygen (DO), temperature, salinity, total dissolved solids (TDS), and oxidation-reduction potential (REDOX) were measured using a Horiba U-22 water quality meter and recorded on groundwater sampling purge logs. Groundwater sampling purge logs are presented in Appendix F.

Groundwater samples collected during the groundwater monitoring program were sent to Test America – Connecticut (formerly STL-Connecticut) by chain-of-custody procedures and analyzed for target compound list (TCL) (volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260. Samples collected from groundwater monitoring wells 4009-12, 4009-12A, 4009-13, and 4009-13A were also analyzed for target analyte list (TAL) metals by USEPA Method ILM05.3 Analytical data packages are provided in Appendix G.

Groundwater sampling results for the fourth quarter 2008 sampling event are summarized in Table 4-2 (VOCs) and Table 4-3 (Metals).

4.3.1. VOCs - Shallow Groundwater Monitoring Wells

As shown in Table 4-2, VOCs were detected at concentrations greater than the corresponding NYSDEC Class GA Standards in nine of the 13 groundwater samples collected from the shallow groundwater monitoring network. Figure 4-4 shows the horizontal distribution of total VOC concentrations from shallow monitoring well network. As shown on Figure 4-4, the greatest concentrations of total VOCs were detected in the samples from shallow groundwater monitoring wells 4009-3 (962 ug/L), 4009-8 (466 ug/L), and 4009-7 (390 ug/L). Table 4-2 shows that the concentrations of 1,1,1-trichloroethane (1,1,1-TCA) in the sample from 4009-3 (810 ug/L) increased significantly from the concentration in the sample from this well (130 ug/L) in 2007, while the concentration of 1,1,1-TCA in the sample collected from 4009-8 decreased from 540 ug/L in 2007 to 130 ug/L in 2008. With the exception of trichloroethene, the concentrations of 1,1,1-TCA (7.2 ug/L), 1-1, dichloroethane (20 ug/L), cis-1,2-dichloroethene (130 ug/L), and vinyl chloride (100 ug/L) in the sample from 4009-7 increased nearly three times compared to sample results from 2007. The concentration of 1,1-dichlorethane in the sample from up gradient well 4009-1 increased from 3.2 ug/L in 2007 to 6.7 ug/L in 2008 which is greater than the corresponding NYSDEC Class GA Standard of 5 ug/L. The concentrations of cis-1,2-dichloroethene (20 ug/L), trichloroethene (63 ug/L), and vinyl chloride (12 ug/L) in the 2008 samples from 4009-5 increased from 12 ug/L, 40 ug/L, and 0.89 ug/L,

respectively, in 2007. The corresponding NYSDEC Class GA Standard for these compounds is 5 ug/L. As shown in Table 4-2, the concentrations of VOCs in samples collected from the remainder of wells in the shallow groundwater monitoring network were generally consistent with the 2007 monitoring results.. The four remaining shallow groundwater monitoring wells with concentrations of VOCs greater than the applicable NYSDEC Class GA Standards (4009-2, 4009-4, 4009-9, and 4009-12A) contained concentrations of total VOCs that ranged from 12 ug/L (4009-9) to 40 ug/L (4009-12A). The estimated (based on the "J" qualifier) concentrations of acetone in groundwater samples collected from monitoring wells 4009-6 and 4009-11A and 4009-13A were 3.1 ug/L , 2 ug/L, and 1 ug/L, respectfully. As shown in Table 4-2, acetone and methylene chloride (common laboratory contaminants) were also detected in the Trip Blank at estimated concentrations of 1.2 ug/L, and 1.5 ug/L, respectively. Table 4-2 shows that no VOCs were detected in the groundwater sample collected from shallow monitoring well 4009-10.

4.3.2. VOCs – Deep Groundwater Monitoring Wells

Table 4-2 shows that the concentrations of total VOCs in the groundwater sample collected from the deep groundwater monitoring well 4009-12 (312 ug/L) increased significantly compared to results reported in 2007 (27 ug/L). As shown in Table 4-2, the concentrations of 1,1-TCA (200 ug/L), trichloroethene (43 ug/L) and, cis-1,2-dichloroethene (48 ug/L) and estimated concentrations (based on "J" qualifier) of 1,1-dichloroethane (10 ug/L) and 1,1-dichloroethene (11 ug/L), were greater than the corresponding NYSDEC Class GA Standard of 5 ug/L for these compounds. Table 4-2 shows that acetone was the only VOC detected in groundwater samples collected from 4009-11 (7.8 ug/L), 4009-13 (3.6 ug/L), and 4009-14 (2.1 ug/L). As indicated in Section 4.3.1, acetone was also detected in the Trip Blank; therefore, these detections may be a result of laboratory cross-contamination.

One duplicate sample (4009-X) was collected from monitoring well 4009-12 and submitted as a laboratory quality assurance/quality control check. As shown in Table 4-2, the concentrations of VOCs in these samples correlate well.

4.3.3. Metals

Groundwater samples were collected from groundwater monitoring wells 4009-12 and 4009-12A in accordance with the Work Plan and analyzed for total and dissolved metals. Metals samples were also collected from 4009-11A and 4009-13A; however, no metals samples were collected from 4009-13 or 4009-15 during the 2008 monitoring event. Table 4-3 shows that all of the groundwater samples analyzed for metals in 2008 contained at least one metals concentration greater than the applicable NYSDEC Class GA Standards. As shown in Table 4-3, the maximum total iron concentration (59,500 ug/L) was reported in the sample from groundwater monitoring well 4009-12. The total iron concentrations in the other wells exceeding the corresponding NYSDEC Class GA standard of 300 ug/L, ranged from 323 ug/L (4009-11A) to 5,400 ug/L (4009-12A). The concentrations of sodium greater than the applicable NYSDEC Class GA Standard (20,000 ug/L) ranged from 52,000 ug/L in the sample from 4009-11A to 137,000 ug/L in the sample from 4009-13A Based on

the proximity of these sample locations to local highways and roadways, the sodium exceedances in these samples is likely the result of de-icing agents. Groundwater samples from 4009-11A (369 ug/L) and 4009-13A (435 ug/L) contained concentrations of manganese greater than the corresponding NYSDEC Class GA Standard of 300 ug/L.

5. Summary

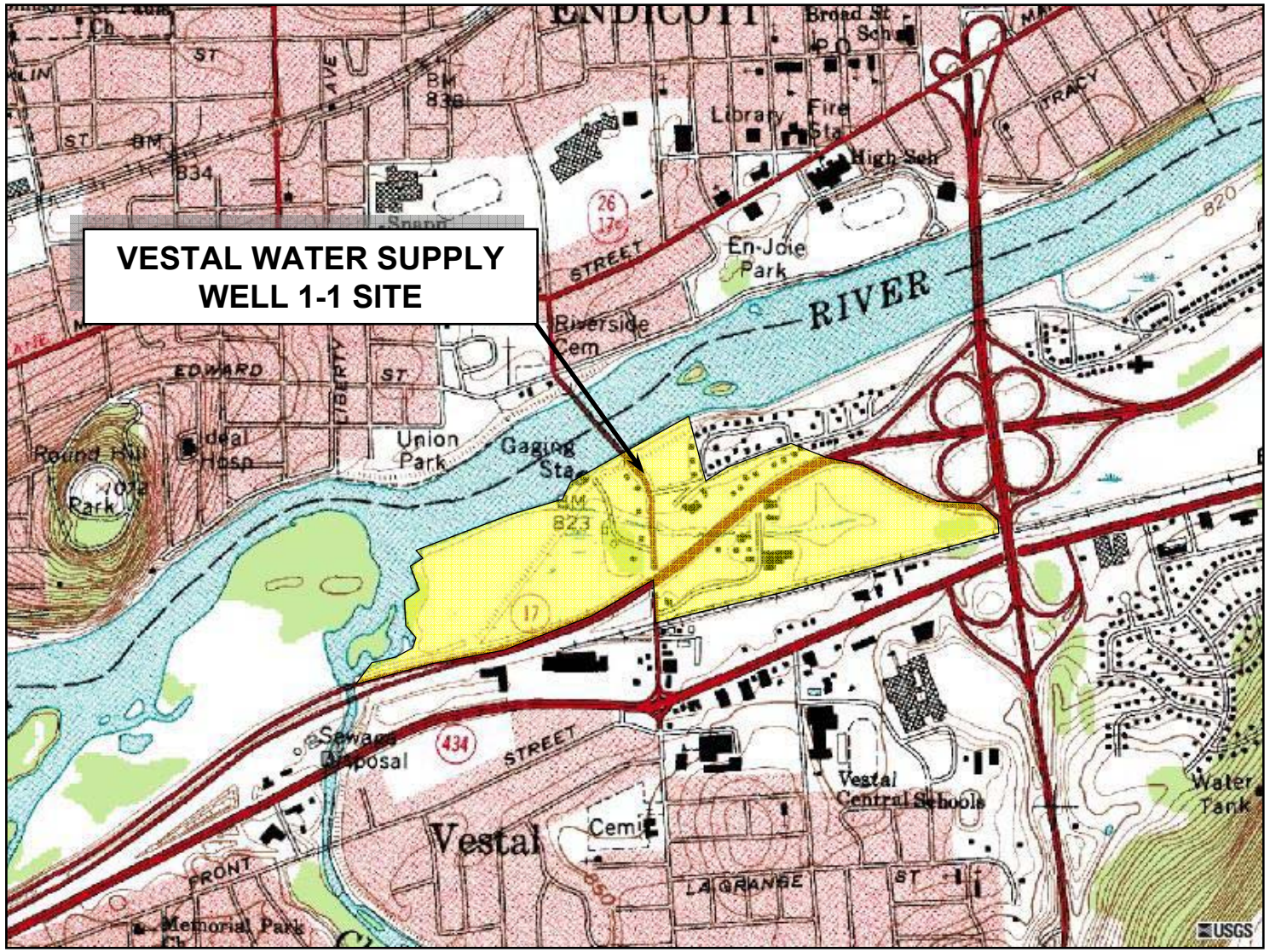
Total flow through the Vestal Well 1-1A treatment system in 2008 was approximately 57,824,000 gallons. Approximately 188 pounds of VOCs were removed by the treatment system during the 2008 operational period. The groundwater treatment system was shut down on October 6, 2008 to begin well development and repair procedures, including pre- and post-well development videos, wire brushing, Aqua Freed® well development, mechanical well development, pump corrosion analysis, pump evaluation and selection, and installation of a new caged anode for additional corrosion protection. Installation and testing of new well pump components was completed during the first quarter 2009 and will be discussed in the next (First Quarter 2009) Quarterly Report.

Fourth quarter groundwater monitoring activities were conducted between October 8 and 10, 2009. Based on the well inspection survey, the condition of monitoring wells and piezometers evaluated during the groundwater monitoring program were generally acceptable. Evaluations of groundwater flow indicate that the direction of shallow groundwater flow from the contaminant source area is generally toward the Well 1-1A treatment plant. Deep groundwater flow is generally parallel to the Susquehanna River.

The concentrations of VOCs in samples collected from the shallow groundwater monitoring network were greater than the corresponding NYSDEC Class GA Standards in nine of the 13 wells evaluated during the third quarter 2007 sampling event. The maximum concentration of total VOCs was 962 ug/L in the sample from shallow monitoring well 4009-3. Total VOC concentrations in the samples from 2008 generally increased compared to the 2007 groundwater monitoring results. Only one deep groundwater monitoring well contained concentrations of VOCs greater than the applicable NYSDEC Class GA Standard. Sample results from deep groundwater monitoring well 4009-12 showed a considerable increase in total VOCs compared to 2007 sample results. Groundwater samples collected from several deep groundwater monitoring wells, and the associated Trip Blank, contained acetone.

In general, groundwater samples collected from monitoring wells located downgradient of the contaminant source area contained the greatest concentrations of VOCs. No VOCs were detected in any of the groundwater samples collected from monitoring wells located downgradient of the Well 1-1A groundwater capture zone.

The concentrations of iron, sodium, and/or manganese were detected at concentrations greater than the corresponding NYSDEC Class GA Standards in each of groundwater samples analyzed for metals during the fourth quarter 2008 sampling event.



SCALE IN FEET

0 500 1000 2000

SOURCE: U.S.G.S 7.5 MIN. ONEONTA QUAD, 1988

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NYSDEC STANDBY CONTRACT NO. D004443-4
VESTAL WATER SUPPLY – NYSDEC SITE NO. 7-04-009
VESTAL, NEW YORK

VESTAL WATER SUPPLY SITE 1-1 LOCATION

FIGURE 2-1

F:\PROJECT\0266352\FILE\Reports\Figure 1-1 Vestal Site Location.ppt

N.

N. MAIN ST.

OLD VESTAL RD.

GROUNDWATER TREATMENT PLANT

WELL 1-1A

WELL 1-1

SUSQUEHANNA RIVER

PUMPHOUSE RD.

4009-10

4009-11A

4009-11

4009-9

4009-15

4009-12

4009-12A

4009-5

4009-4

4009-3

4009-7

NOTE: 4009-12 IS CLOSER TO BRIDGE

4009-16A

4009-16

4009-18

4009-20

4009-21

4009-19

4009-17

4009-13A

4009-13

4009-14

4009-8

4009-2

4009-1

STAGE RD.

4009-6

NYS RTE. 17

NYS RTE. 434

150 0 150 300

SCALE: 1" = 300'

LEGEND:

- 4009-2 — APPROXIMATE MONITORING WELL LOCATION
- RAILROAD TRACKS
- ROADWAY/DRIVEWAY
- BUILDING
- EDGE OF RIVER

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NYSDEC STANDBY CONTRACT NO. D004443-4
NYSDEC SITE NO. 7-04-009
VESTAL WATER SUPPLY
VESTAL, NEW YORK

MONITORING WELL LOCATION MAP

SCALE: 1" = 300'

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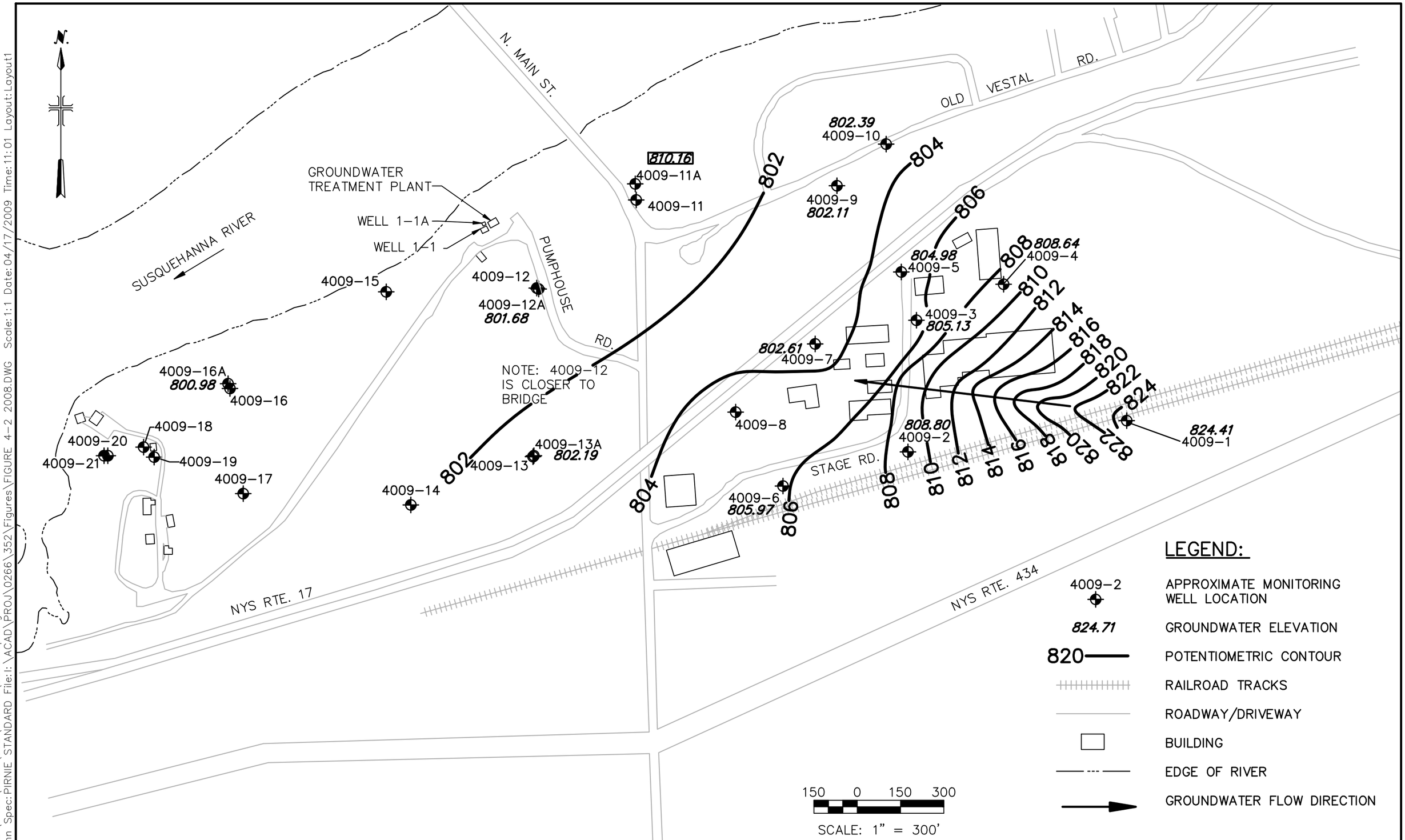
APRIL 2009

FIGURE 4-1



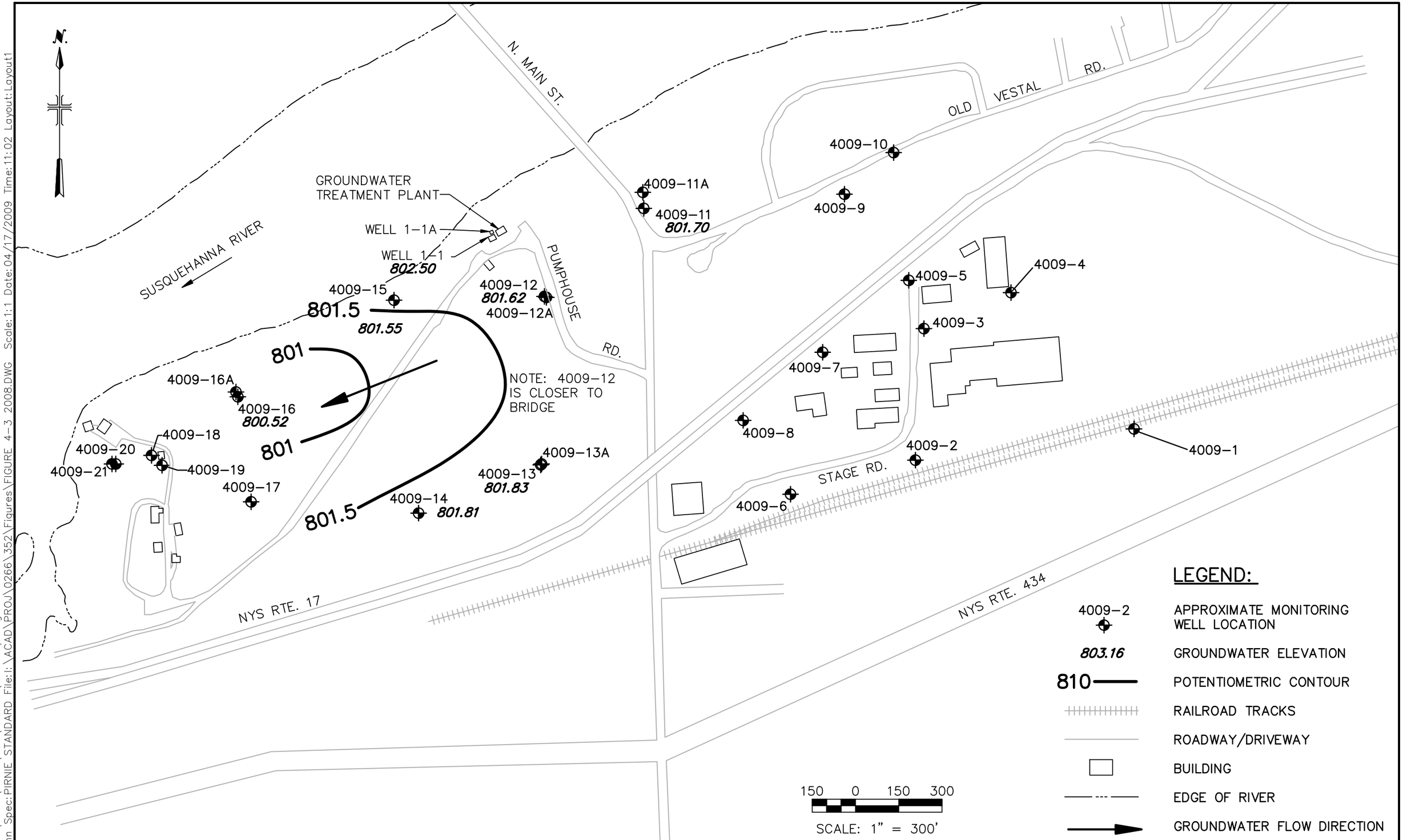
MALCOLM PIRNIE

NYSDEC STANDBY CONTRACT NO. D004443-4
NYSDEC SITE NO. 7-04-009
VESTAL WATER SUPPLY
VESTAL, NEW YORK

SHALLOW POTENTIOMETRIC SURFACE MAP (10/8/2008)

SCALE: 1" = 300'

MALCOLM PIRNIE, INC.
APRIL 2009
FIGURE 4-2

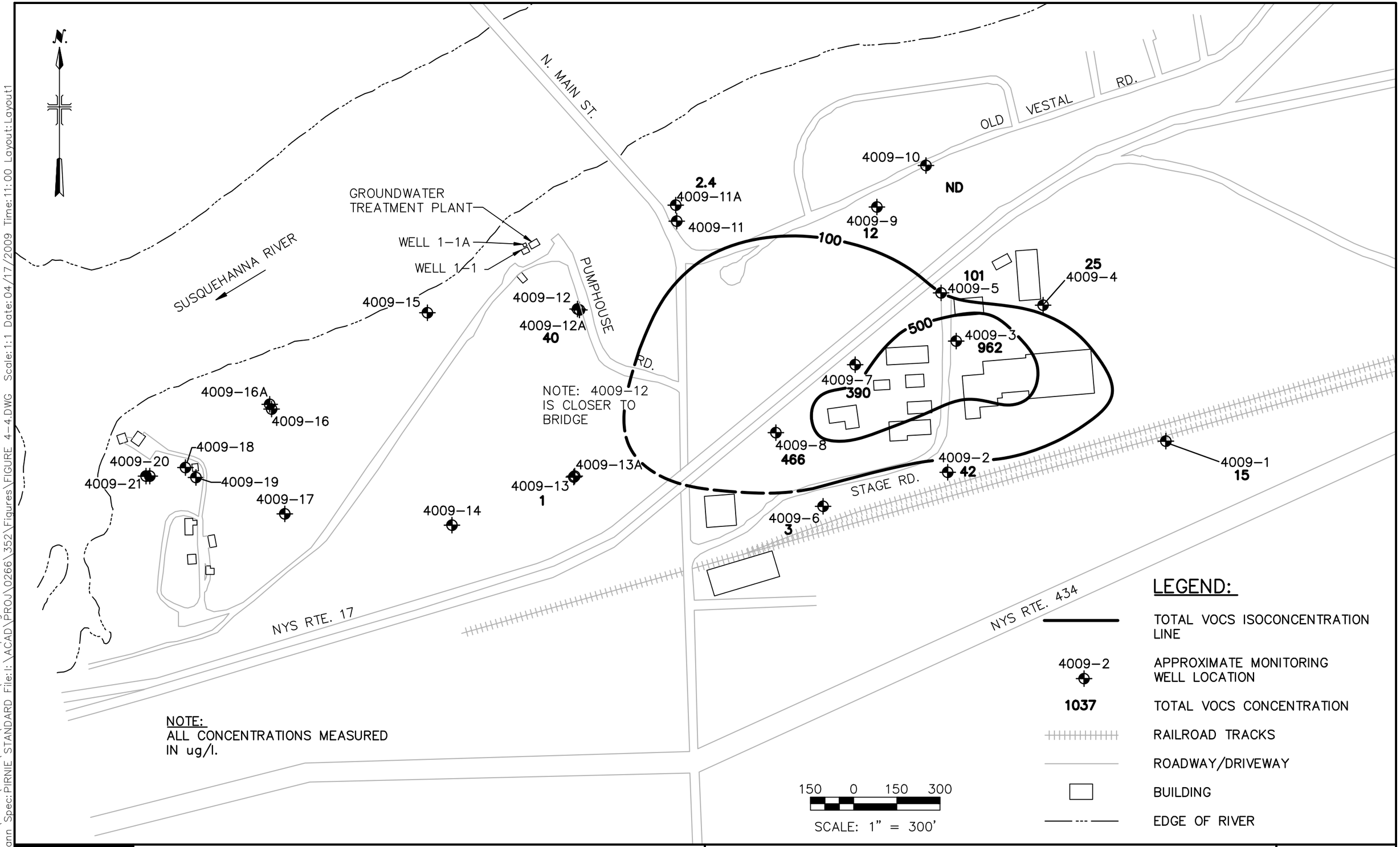


MALCOLM PIRNIE

NYSDEC STANDBY CONTRACT NO. D004443-4
NYSDEC SITE NO. 7-04-009
VESTAL WATER SUPPLY
VESTAL, NEW YORK

DEEP POTENTIOMETRIC SURFACE MAP (10/8/2008)
SCALE: 1" = 300'

MALCOLM PIRNIE, INC.
APRIL 2009
FIGURE 4-3



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NYSDEC STANDBY CONTRACT NO. D004443-4
NYSDEC SITE NO. 7-04-009
VESTAL WATER SUPPLY
VESTAL, NEW YORK

TOTAL VOC CONCENTRATIONS – SHALLOW MONITORING WELLS

SCALE: 1" = 300'

MALCOLM PIRNIE, INC.
APRIL 2009
FIGURE 4-4

TABLE 3-1
WELL 1-1A FLOW SUMMARY
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE NO. 7-04-009A

Date	System Operation* (days/month)	Pumping Rate* (gpm)	Total Flow** (gallons)	Quarterly Flow (gallons)
January-07	31	280	12,499,200	
February-07	28	260	10,483,200	33,840,000
March-07	29 ***	260	10,857,600	
April-07	30	260	11,232,000	
May-07	31	260	11,606,400	31,910,400
June-07	30	210	9,072,000	
July-07	31	210	9,374,400	
August-07	31	200	8,928,000	26,942,400
September-07	30	200	8,640,000	
October-07	31	186	8,303,040	
November-07	29	198	8,268,480	24,874,560
December-07	31	186	8,303,040	
January-08	31	170	7,588,800	
February-08	29	170	7,099,200	22,321,440
March-08	31	171	7,633,440	
April-08	30	166	7,171,200	
May-08	31	147	6,562,080	19,651,680
June-08	30	137	5,918,400	
July-08	31	125	5,580,000	
August-08	31	113	5,044,320	14,987,520
September-08	30	101	4,363,200	
October-08	6 ****	100	864,000	
November-08	0 ****	0	0	864,000
December-08	0 ****	0	0	
Total Flow (2007)			**117,567,360**	
Toal Flow (2008)			**57,824,640**	

Notes:
* - Average monthly flow from Environmental Compliance, Inc. O&M Reports.
** - Calculated assuming system operating 24-hours per day
*** - System shut down for flooding
**** - System shut down for repairs
gpm - Gallons per minute

TABLE 4-1
SUMMARY OF GROUNDWATER ELEVATIONS
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE NO. 7-04-009A

New Well ID	Old Well ID	Monitored Interval	Measuring Point Elevation [1] (feet)	10/8/2008	
				DTW (feet)	Elevation (feet)
4009-1	S-8	Shallow	832.20	7.79	824.41
4009-2	EB-33	Shallow	828.59	19.79	808.80
4009-3	S-7	Shallow	823.72	18.59	805.13
4009-4	S-6	Shallow	822.46	13.82	808.64
4009-5	EB-31	Shallow	825.77	20.79	804.98
4009-6	S-1	Shallow	827.16	21.19	805.97
4009-7	S-2	Shallow	823.72	21.11	802.61
4009-8	S-11	Shallow	**	21.95	-
4009-9	EB-41	Shallow	825.29 [2]	23.18	802.11
4009-10	EB-42	Shallow	831.54	29.15	802.39
4009-11	1-32	Deep	831.08	29.38	801.70
4009-11A	1-32A	Shallow	830.86	20.70	810.16
4009-12	1-29	Deep	823.55	21.93	801.62
4009-12A	1-29A	Shallow	824.08	22.40	801.68
4009-13	1-30	Deep	816.54	14.71	801.83
4009-13A	1-30A	Shallow	816.42	14.23	802.19
4009-14	1-23	Deep	820.91	19.10	801.81
4009-15	1-24	Deep	826.76	25.21	801.55
4009-16	1-20	Deep	825.93	25.41	800.52
4009-16A	1-20A	Shallow	826.32	25.34	800.98
4009-17	Piezo-levee*	Deep	-	18.81	-
4009-18	well-west well house*	Deep	-	33.32	-
4009-19	well-south well house*	Deep	-	23.52	-
4009-20	Piezo-north*	Shallow	-	21.44	-
4009-21	Piezo-west*	Deep	-	21.59	-
Well 1-1	Former Pumping Well	Deep	832.53 [3]	30.03	802.50

Notes:

* - Could not identify well location from site map (Figure 1, Final Operation and Maintenance Manual, Long-Term Response, Operable Unit 1, Vestal Well 1-1 Site, Vestal, New York, October 2006, Tetra Tech EC, Inc.). Old Well ID based on 2007 field description of well location.

** - Well casing damaged. Measuring point elevation not known.

(1) - Data from Final Operation and Maintenance Manual, Long-Term Response, Operable Unit 1, Vestal Well 1-1 Site, Vestal, New York, October 2006, Tetra Tech EC, Inc.

(2) - TOC elevation estimated following 4/22/08 well repair.

(3) - TOC Elevation from well level survey conducted on 3/13/08.

TABLE 4-2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS (VOCS)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Monitoring Interval Units	NYSDEC GA Standard ug/L	4009-1 8/14/2007 Shallow ug/L	4009-1 10/9/2008 Shallow ug/L	4009-2 8/14/2007 Shallow ug/L	4009-2 10/9/2008 Shallow ug/L	4009-3 8/14/2007 Shallow ug/L	4009-3 10/9/2008 Shallow ug/L
VOCs							
1,1,1-Trichloroethane	5	10 U	5 U	10 U	5 U	**130**	**810**
1,1,2-Trichloro-1,2,2-trifluoroethane		10 U		8.5 J		10 U	
1,1,2-Trichloroethane	1	10 U	5 U	10 U	5 U	10 U	50 U
1,1-Dichloroethane	5	3.2 J	**6.7**	2.4 J	3.3 J	**19**	**39 J**
1,1-Dichloroethene	5	10 U	5 U	10 U	5 U	1.4 J	50 U
Acetone		10 U	1.1 J	10 U	1 J B	10 U	100 U
Benzene	1	10 U	5 U	10 U	5 U	10 U	50 U
Carbon disulfide		10 U	5 U	10 U	5 U	10 U	50 U
Carbon tetrachloride	5	10 U	5 U	10 U	5 U	10 U	50 U
Chloroethane	5	10 U	5 U	10 U	5 U	10 U	50 U
cis-1,2-Dichloroethene	5	1.4 J	3 J	**34**	**34**	**26**	**37 J**
cis-1,3-Dichloropropene	0.4	10 U	5 U	10 U	5 U	10 U	50 U
Methyl tert-butyl ether	10	10 U		0.57 J		10 U	
Methylene Chloride	5	10 U	5 U	10 U	5 U	0.24 J	50 U
Tetrachloroethene	5	0.65 J	1.6 J	10 U	5 U	10 U	50 U
trans-1,2-Dichloroethene	5	10 U	5 U	0.83 J	1 J	0.46 J M	50 U
Trichloroethene	5	0.95 J	2.1 J	2.5 J	2.5 J	**8 J**	**13 J**
Vinyl chloride	2	10 U	5 U	**12**	**15**	**40**	**63**
Xylenes, Total		10 U		10 U	5 U	10 U	50 U
Total VOCs		6	15	61	42	224	962

Notes

- Concentration exceeds corresponding NYSDEC Class GA Standard.

U - The compound was not detected at the indicated concentration.

J - Compound detected below the reporting limit or Concentration is estimated for TICS.

B - The analyte was found in the method blank as well as the sample.

M - Manual integrated compound

* - Sample 4009-X is a duplicate sample from 4009-

TABLE 4-2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS (VOCS)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Monitoring Interval Units	NYSDEC GA Standard ug/L	4009-4 8/14/2007 Shallow ug/L	4009-4 10/9/2008 Shallow ug/L	4009-5 8/14/2007 Shallow ug/L	4009-5 10/9/2008 Shallow ug/L	4009-6 8/14/2007 Shallow ug/L	4009-6 10/9/2008 Shallow ug/L
VOCs							
1,1,1-Trichloroethane	5	10 U	5 U	10 U	5 U	10 U	5 U
1,1,2-Trichloro-1,2,2-trifluoroethane		10 U		10 U		10 U	
1,1,2-Trichloroethane	1	10 U	5 U	10 U	5 U	10 U	5 U
1,1-Dichloroethane	5	10 U	5 U	2.3 J	3.7 J	10 U	5 U
1,1-Dichloroethene	5	10 U	5 U	1.1 J	2.4 J	10 U	5 U
Acetone		10 U	3.7 J B	10 U	10 U	10 U	3.1 J B
Benzene	1	10 U	5 U	10 U	5 U	10 U	5 U
Carbon disulfide		10 U	5 U	10 U	5 U	10 U	5 U
Carbon tetrachloride	5	10 U	5 U	10 U	5 U	10 U	5 U
Chloroethane	5	10 U	5 U	10 U	5 U	10 U	5 U
cis-1,2-Dichloroethene	5	**15**	**13**	**12**	**20**	10 U	5 U
cis-1,3-Dichloropropene	0.4	10 U	5 U	10 U	5 U	10 U	5 U
Methyl tert-butyl ether	10	10 U		10 U		2.3 J	
Methylene Chloride	5	10 U	5 U	10 U	5 U	10 U	5 U
Tetrachloroethene	5	10 U	5 U	10 U	5 U	10 U	5 U
trans-1,2-Dichloroethene	5	10 U	5 U	10 U	5 U	10 U	5 U
Trichloroethene	5	**26**	**8.5**	**40**	**63**	0.75 J	5 U
Vinyl chloride	2	0.52 J	5 U	0.89 J	**12**	10 U	5 U
Xylenes, Total		10 U	5 U	10 U	5 U	10 U	5 U
Total VOCs		42	25	56	101	3	3

Notes

- Concentration exceeds corresponding NYSDEC Class GA Standard.

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B - The analyte was found in the method blank as well as the sample.

M - Manual integrated compound

* - Sample 4009-X is a duplicate sample from 4009-

TABLE 4-2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS (VOCS)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Monitoring Interval Units	NYSDEC GA Standard ug/L	4009-7 8/15/2007 Shallow ug/L	4009-7 10/9/2008 Shallow ug/L	4009-8 8/14/2007 Shallow ug/L	4009-8 10/9/2008 Shallow ug/L	4009-9 8/14/2007 Shallow ug/L	4009-9 10/9/2008 Shallow ug/L
VOCs							
1,1,1-Trichloroethane	5	1.9 J M	**7.2 J**	**540**	**130**	10 U	5 U
1,1,2-Trichloro-1,2,2-trifluoroethane		0.42 J		54		10 U	
1,1,2-Trichloroethane	1	10 U	10 U	40 U	10 U	10 U	5 U
1,1-Dichloroethane	5	**6.1 J**	**20**	**73**	**16**	10 U	5 U
1,1-Dichloroethene	5	1.5 J	4.4 J	**17 J**	4.3 J	10 U	5 U
Acetone		10 U	2.8 J	40 U	3.5 J	10 U	10 U
Benzene	1	0.47 J	10 U	40 U	10 U	10 U	5 U
Carbon disulfide		10 U	10 U	40 U	10 U	10 U	5 U
Carbon tetrachloride	5	10 U	10 U	40 U	10 U	10 U	5 U
Chloroethane	5	10 U	10 U	**5.8 J**	10 U	10 U	5 U
cis-1,2-Dichloroethene	5	**74**	**130**	**180**	**130**	**9.3 J**	**12**
cis-1,3-Dichloropropene	0.4	10 U	10 U	40 U	10 U	10 U	5 U
Methyl tert-butyl ether	10	10 U		40 U		0.8 J	
Methylene Chloride	5	10 U	10 U	1.9 J B	10 U	10 U	5 U
Tetrachloroethene	5	10 U	10 U	40 U	10 U	10 U	5 U
trans-1,2-Dichloroethene	5	0.4 J M	10 U	40 U	10 U	10 U	5 U
Trichloroethene	5	**45**	**46**	**79**	**85**	10 U	5 U
Vinyl chloride	2	**27**	**100**	**86**	**17**	10 U	5 U
Xylenes, Total		10 U	10 U	40 U	10 U	10 U	5 U
Total VOCs		157	390	1037	466	10	12

Notes

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B - The analyte was found in the method blank as well as the sample.

M - Manual integrated compound

* - Sample 4009-X is a duplicate sample from 4009-

TABLE 4-2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS (VOCS)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Monitoring Interval Units	NYSDEC GA Standard ug/L	4009-10 8/14/2007 Shallow ug/L	4009-10 10/10/2008 Shallow ug/L	4009-11 8/14/2007 Deep ug/L	4009-11 10/10/2008 Deep ug/L	4009-11A 8/14/2007 Shallow ug/L	4009-11A 10/10/2008 Shallow ug/L
VOCs							
1,1,1-Trichloroethane	5	10 U	5 U	10 U	5 U	10 U	5 U
1,1,2-Trichloro-1,2,2-trifluoroethane		10 U		10 U		10 U	
1,1,2-Trichloroethane	1	10 U	5 U	10 U	5 U	10 U	5 U
1,1-Dichloroethane	5	10 U	5 U	10 U	5 U	10 U	5 U
1,1-Dichloroethene	5	10 U	5 U	10 U	5 U	10 U	5 U
Acetone		10 U	10 U	10 U	7.8 J B	10 U	2.4 J B
Benzene	1	10 U	5 U	10 U	5 U	10 U	5 U
Carbon disulfide		10 U	5 U	10 U	5 U	10 U	5 U
Carbon tetrachloride	5	10 U	5 U	10 U	5 U	10 U	5 U
Chloroethane	5	10 U	5 U	10 U	5 U	10 U	5 U
cis-1,2-Dichloroethene	5	10 U	5 U	10 U	5 U	10 U	5 U
cis-1,3-Dichloropropene	0.4	10 U	5 U	10 U	5 U	10 U	5 U
Methyl tert-butyl ether	10	10 U		10 U		10 U	
Methylene Chloride	5	10 U	5 U	10 U	5 U	10 U	5 U
Tetrachloroethene	5	10 U	5 U	10 U	5 U	10 U	5 U
trans-1,2-Dichloroethene	5	10 U	5 U	10 U	5 U	10 U	5 U
Trichloroethene	5	10 U	5 U	10 U	5 U	10 U	5 U
Vinyl chloride	2	10 U	5 U	10 U	5 U	10 U	5 U
Xylenes, Total		10 U	5 U	10 U	5 U	10 U	5 U
Total VOCs		0	0	0	8	0	2

Notes

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M - Manual integrated compound

* - Sample 4009-X is a duplicate sample from 4009-

TABLE 4-2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS (VOCS)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Monitoring Interval Units	NYSDEC GA Standard ug/L	4009-12 8/15/2007 Deep ug/L	4009-12 12/12/2008 Deep ug/L	MW-X 12/12/2008 Deep ug/L	4009-12A 8/15/2007 Shallow ug/L	4009-12A 10/10/2008 Shallow ug/L	4009-13 8/15/2007 Deep ug/L
VOCs							
1,1,1-Trichloroethane	5	0.39 J M	**200**	**210**	**8 J**	4.1 J	10 U
1,1,2-Trichloro-1,2,2-trifluoroethane		10 U			0.37 J M		10 U
1,1,2-Trichloroethane	1	10 U	20 U	20 U	10 U	5 U	10 U
1,1-Dichloroethane	5	2.4 J	**10 J**	**11 J**	**7.4 J**	**10**	10 U
1,1-Dichloroethene	5	0.17 J M	**11 J**	**12 J**	1.6 J	2.1 J	10 U
Acetone		10 U	40 U	40 U	10 U	1.6 J	10 U
Benzene	1	10 U	20 U	20 U	10 U	5 U	10 U
Carbon disulfide		20 J N	20 U	20 U	10 U	5 U	10 U
Carbon tetrachloride	5	10 U	20 U	20 U	0.96 J	5 U	10 U
Chloroethane	5	10 U	20 U	20 U	10 U	5 U	10 U
cis-1,2-Dichloroethene	5	10 U	**48**	**54**	**17**	**18**	10 U
cis-1,3-Dichloropropene	0.4	**2.7 J**	20 U	20 U	10 U	5 U	10 U
Methyl tert-butyl ether	10	10 U			10 U		10 U
Methylene Chloride	5	10 U	20 U	20 U	10 U	5 U	10 U
Tetrachloroethene	5	10 U	20 U	20 U	10 U	5 U	10 U
trans-1,2-Dichloroethene	5	10 U	20 U	20 U	10 U	5 U	10 U
Trichloroethene	5	1.3 J	**43**	**46**	3.8 J	3.8 J	10 U
Vinyl chloride	2	10 U	20 U	20 U	10 U	5 U	10 U
Xylenes, Total		10 U	20 U	20 U	10 U	5 U	10 U
Total VOCs		27	312	333	39	40	0

Notes

- Concentration exceeds corresponding NYSDEC Class GA Standard.

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B - The analyte was found in the method blank as well as the sample.

M - Manual integrated compound

* - Sample 4009-X is a duplicate sample from 4009-

TABLE 4-2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS (VOCS)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Monitoring Interval Units	NYSDEC GA Standard ug/L	4009-13 10/10/2008 Deep ug/L	4009-13A 8/15/2007 Shallow ug/L	4009-13A 10/10/2008 Shallow ug/L	4009-14 8/15/2007 Deep ug/L	4009-14 10/9/2008 Deep ug/L	4009-15 8/15/2007 Deep ug/L
VOCs							
1,1,1-Trichloroethane	5	5 U	10 U	5 U	10 U	5 U	10 U
1,1,2-Trichloro-1,2,2-trifluoroethane			10 U		10 U		10 U
1,1,2-Trichloroethane	1	5 U	10 U	5 U	10 U	5 U	10 U
1,1-Dichloroethane	5	5 U	10 U	5 U	10 U	5 U	10 U
1,1-Dichloroethene	5	5 U	10 U	5 U	10 U	5 U	10 U
Acetone		3.6 J B	10 U	1.4 J	10 U	2.1 J B	10 U
Benzene	1	5 U	10 U	5 U	10 U	5 U	10 U
Carbon disulfide		5 U	10 U	5 U	10 U	5 U	10 U
Carbon tetrachloride	5	5 U	10 U	5 U	10 U	5 U	10 U
Chloroethane	5	5 U	10 U	5 U	10 U	5 U	10 U
cis-1,2-Dichloroethene	5	5 U	10 U	5 U	10 U	5 U	10 U
cis-1,3-Dichloropropene	0.4	5 U	10 U	5 U	10 U	5 U	10 U
Methyl tert-butyl ether	10		10 U		10 U		10 U
Methylene Chloride	5	5 U	10 U	5 U	10 U	5 U	10 U
Tetrachloroethene	5	5 U	10 U	5 U	10 U	5 U	10 U
trans-1,2-Dichloroethene	5	5 U	10 U	5 U	10 U	5 U	10 U
Trichloroethene	5	5 U	10 U	5 U	10 U	5 U	10 U
Vinyl chloride	2	5 U	10 U	5 U	10 U	5 U	10 U
Xylenes, Total		5 U	10 U	5 U	10 U	5 U	10 U
Total VOCs		4	0	1	0	2	0

Notes

- Concentration exceeds corresponding NYSDEC Class GA Standard.

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J - Compound detected below the reporting limit or Concentration is estimated for TICS.

B - The analyte was found in the method blank as well as the sample.

M - Manual integrated compound

* - Sample 4009-X is a duplicate sample from 4009-

TABLE 4-2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS (VOCS)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Monitoring Interval Units	NYSDEC GA Standard ug/L	4009-15 10/10/2008 Deep ug/L	Trip Blank 10/10/2008 - ug/L
VOCs			
1,1,1-Trichloroethane	5	5 U	5 U
1,1,2-Trichloro-1,2,2-trifluoroethane			
1,1,2-Trichloroethane	1	5 U	5 U
1,1-Dichloroethane	5	5 U	5 U
1,1-Dichloroethene	5	5 U	5 U
Acetone		2 J	1.4 J
Benzene	1	5 U	5 U
Carbon disulfide		5 U	5 U
Carbon tetrachloride	5	5 U	5 U
Chloroethane	5	5 U	5 U
cis-1,2-Dichloroethene	5	5 U	5 U
cis-1,3-Dichloropropene	0.4	5 U	5 U
Methyl tert-butyl ether	10		
Methylene Chloride	5	5 U	1.5 J
Tetrachloroethene	5	5 U	5 U
trans-1,2-Dichloroethene	5	5 U	5 U
Trichloroethene	5	5 U	5 U
Vinyl chloride	2	5 U	5 U
Xylenes, Total		5 U	5 U
Total VOCs		0	

Notes

- Concentration exceeds corresponding NYSDEC Class GA Standard.

U - The compound was not detected at the indicated concentration.

J - Compound detected below the reporting limit or Concentration is estimated for TICS.

B - The analyte was found in the method blank as well as the sample.

M - Manual integrated compound

* - Sample 4009-X is a duplicate sample from 4009-

TABLE 4-3
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS (METALS)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Monitoring Interval Units	NYSDEC GA Standard ug/L	4009-11A 10/10/2008 Deep ug/L	4009-11A(1) 10/10/2008 Deep ug/L	4009-12 8/15/2007 Deep ug/L	4009-12 10/10/2008 Deep ug/L	4009-12(1) 10/10/2008 Deep ug/L	4009-12A 8/15/2007 Shallow ug/L
Metals (Total)							
Aluminum		115 B	200 U	200 U	8360	456	200 U
Antimony		60.0 U	60.0 U	60.0 U	60.0 U	60.0 U	60.0 U
Arsenic	25	10.0 U	10.0 U	10.0 U	8.6 B	10.0 U	10.0 U
Barium	1000	81.2 B	79.6 B	24.9 B	117 B	72.8 B	51.2 B
Beryllium		5.0 U	5.0 U	5.0 U	0.40 B	5.0 U	0.29 B
Cadmium	5	0.6 B	0.4 B	5.0 U	0.5 B	5.0 U	5.0 U
Calcium		111000	106000	63900	150000	135000	125000
Chromium	50	1.6 B	10.0 U	10.0 U	16.5	10.0 U	10.0 U
Cobalt		4.6 B	3.5 B	50.0 U	29.6 B	2.3 B	50.0 U
Copper	200	3.3 B	2.0 B	3.1 B	28.9	1.6 B	3.2 B
Iron	300	**323**	67.6 B	**8940**	**59500**	**3890**	**590**
Lead	25	10.0 U	10.0 U	10.0 U	93.3	4.2 B	10.0 U
Magnesium		44100	42300	11400	25300	21500	23200
Manganese	300	**369**	**365**	247	**546**	54.6	**335**
Mercury	0.7	0.200 U	0.200 U	0.20 U	0.200 U	0.200 U	0.20 U
Nickel	100	14.0 B	13.9 B	1.7 B	21.0 B	2.1 B	1.7 B
Potassium		984 B	1060 B	4380 B	3890 B	2540 B	2160 B
Selenium	10	35.0 U	35.0 U	35.0 U	35.0 U	35.0 U	35.0 U
Silver	50	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Sodium	20000	**52700**	**50400**	**32400**	**104000**	**102000**	**93500**
Thallium		25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
Vanadium		50.0 U	50.0 U	0.84 B	10.8 B	50.0 U	0.85 B
Zinc		11.6 B	6.5 B	60.0 U	156	10.0 B	60.0 U

Notes
U - The compound was not detected at the indicated concentration.
B - Concentration greater than detection limit, but less than quantitation limit.
(1) - Sample results for dissolved metals.

TABLE 4-3
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS (METALS)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Monitoring Interval Units	NYSDEC GA Standard ug/L	4009-12A[1] 8/15/2007 Shallow ug/L	4009-12A 10/10/2008 Shallow ug/L	4009-12A[1] 10/10/2008 Shallow ug/L	4009-13A 8/15/2007 Shallow ug/L	4009-13A 10/10/2008 Shallow ug/L	4009-13A[1] 10/10/2008 Shallow ug/L
Metals (Total)							
Aluminum		67.2 B	200 U	200 U	200 U	200 U	200 U
Antimony		60.0 U	60.0 U	60.0 U	60.0 U	60.0 U	60.0 U
Arsenic	25	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Barium	1000	49.4 B	2.0 B	0.90 B	74.1 B	80.7 B	78.5 B
Beryllium		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cadmium	5	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Calcium		126000	3960 B	2170 B	155000	166000	154000
Chromium	50	10.0 U	2.1 B	10.0 U	10.0 U	10.0 U	10.0 U
Cobalt		50.0 U	50.0 U	50.0 U	50.0 U	1.3 B	1.4 B
Copper	200	2.0 B	25.0 U	25.0 U	3.8 B	25.0 U	25.0 U
Iron	300	**566**	**5480**	100 U	31.2 B	**435**	176
Lead	25	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Magnesium		23500	7770	9270	21200	22900	21600
Manganese	300	**337**	33.3	1.3 B	2.6 B	6.1 B	4.7 B
Mercury	0.7	0.20 U	0.200 U	0.200 U	0.20 U	0.200 U	0.200 U
Nickel	100	1.4 B	2.2 B	40.0 U	1.6 B	1.7 B	1.5 B
Potassium		2220 B	2080 B	2160 B	3080 B	3130 B	3170 B
Selenium	10	35.0 U	35.0 U	35.0 U	35.0 U	35.0 U	35.0 U
Silver	50	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Sodium	20000	**93300**	**94700**	**102000**	**116000**	**137000**	**129000**
Thallium		25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25.0 U
Vanadium		50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U
Zinc		60.0 U	5.2 B	60.0 U	60.0 U	4.6 B	60.0 U

Notes
U - The compound was not detected at the indicated concentratio
B - Concentration greater than detection limit, but less than quanti
(1) - Sample results for dissolved metals.

TABLE 4-3
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS (METALS)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

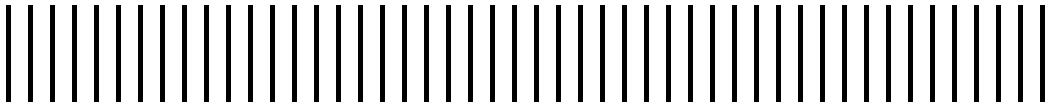
Sample ID Sampling Date Monitoring Interval Units	NYSDEC GA Standard ug/L	4009-15 8/15/2007 Deep ug/L	WELL 1-A EFF 8/27/2007 Pumping Well ug/L
Metals (Total)			
Aluminum		200 U	200 U
Antimony		60.0 U	60.0 U
Arsenic	25	10.0 U	10.0 U
Barium	1000	4.6 B	48.3 B
Beryllium		5.0 U	5.0 U
Cadmium	5	5.0 U	5.0 U
Calcium		5650	101000
Chromium	50	10.0 U	10.0 U
Cobalt		50.0 U	50.0 U
Copper	200	3.1 B	25.0 U
Iron	300	**638**	100 U
Lead	25	10.0 U	10.0 U
Magnesium		1520 B	15300
Manganese	300	8.6 B	99.1
Mercury	0.7	0.20 U	0.20 U
Nickel	100	1.6 B	1.6 B
Potassium		6160	1810 B
Selenium	10	35.0 U	35.0 U
Silver	50	10.0 U	10.0 U
Sodium	20000	8750	**65400**
Thallium		25.0 U	25.0 U
Vanadium		0.78 B	50.0 U
Zinc		4.6 B	60.0 U

Notes
U - The compound was not detected at the indicated concentratio
B - Concentration greater than detection limit, but less than quanti
(1) - Sample results for dissolved metals.

New York State Department of Environmental Conservation
Vestal Water Supply Quarterly Report and Annual Groundwater Monitoring Summary

Appendix A

Monthly Reports and System Operation and Maintenance Logs



0266352 / ALB

MALCOLM PIRNIE

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Vestal Well 1-1 Monthly Report
October 2008

SECTION I – SUMMARY OF ACTIVITIES

The system operated until October 7 when it was taken out of service by contractor to replace the well pump. Well was running at 99.3 GPM when taken out of service.

Non Routine activities by Richard Green during this period included demolition of pump house shed, modification of well prelube line, cutting and removing trees and trash and daily security check of property.

Routine system checks are recorded on attached log. Routine maintenance activities conducted during the month are outlined below.

SECTION II – MONTHLY OPERATIONS & MAINTENANCE

- Routine weekly inspection of site
- Pumps checked & lubricated
- Blower belts checked and adjusted
- Filters cleaned or replaced, as needed
- Cleaned up litter
- Mowed grass & trimmed brush

SECTION III – REPAIR WORK COMPLETED

- Well pump in process of being replaced by contractor

SECTION IV – REPAIR WORK NEEDED

- None

SECTION V – RECOMMENDATIONS

- None

VESTAL WELL 1-1 MONTHLY O & M LOG October 2008

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
TIME																															
WELL HOUSE																															
WELL PUMP PACKING	X	X	X	X		X	X																								
PRE LUBE LINE	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X
PUMP MOTOR OIL	X	X	X	X		X	X																								
PUMP VIBRATION / HEAT	X	X	X	X		X	X																								
CHEMICAL BUILDING																															
SUMP PUMP	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X
DISCHARGE VALVES	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X
FLOW METER (GPM)	99.3	99.3	99.3	99.3		99.3	99.3*																								
DIALER - ALARMS	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X
CHLORINE ROOM																															
GENERAL CONDITION	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X
TOWER PACKING INSP.	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X
MAIN PUMPHOUSE																															
BLOWER AND MOTOR	X	X	X	X		X	X																								
BLOWER AIR FILTERS	X	X	X	X		X	X																								
ALARM / CONTROL PANEL	X	X	X	X		X	X																								
CLEARWELL LEVEL	X	X	X	X		X	X																								
FLOAT & BYPASS LINE																															
H.S. PUMP PACKING	X	X	X	X		X	X																								
H.S. PUMP MOTOR OIL	X	X	X	X		X	X																								
PUMP VIBRATION / HEAT	X	X	X	X		X	X																								
SURGE RELIEF VALVE	X	X	X	X		X	X																								
OTHER*																															
GROUNDS	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X
INGROUND TANK LEVEL	X	X	X	X		X	X																								

*** Pump taken out of service for replacement on October 7, 2008**

Instead of routine O &M, ECI assisted MPI & Contractor with well replacement support including demolition, water line alterations & removal of vegetation

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Vestal Well 1-1 Monthly Report
November 2008

SECTION I – SUMMARY OF ACTIVITIES

The system was out of service the entire month. Dick Green checked out the site daily.

Non Routine work conducted in November included removing construction debris from the site generated by the demolition of the pump house shed. Installed a plywood cover over open well. The cover was bolted it in place for safety. Met with Dig Safe NY technicians who conducted underground utility surveys. Dug trench and hole for the Cathodix System, installed conduit and electric line and installed cap on prelube line.

Routine system checks are recorded on attached log. Routine maintenance activities conducted during the month are outlined below.

SECTION II – MONTHLY OPERATIONS & MAINTENANCE

- Routine inspection of site
- Cleaned up litter
- Shoveled snow, as needed

SECTION III – REPAIR WORK COMPLETED

- Assisted contractors with well pump and Cathodix replacement, as described above.

SECTION IV – REPAIR WORK NEEDED

- None

SECTION V – RECOMMENDATIONS

- None

VESTAL WELL 1-1 MONTHLY O & M LOG November 2008

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
TIME																															
WELL HOUSE																															
WELL PUMP PACKING																															
PRE LUBE LINE																															
PUMP MOTOR OIL																															
PUMP VIBRATION / HEAT																															
CHEMICAL BUILDING																															
SUMP PUMP																															
DISCHARGE VALVES																															
FLOW METER (GPM)																															
DIALER - ALARMS																															
CHLORINE ROOM																															
GENERAL CONDITION	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		
TOWER PACKING INSP.																															
MAIN PUMPHOUSE																															
BLOWER AND MOTOR	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		
BLOWER AIR FILTERS	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		
ALARM / CONTROL PANEL																															
CLEARWELL LEVEL																															
FLOAT & BYPASS LINE																															
H.S. PUMP PACKING																															
H.S. PUMP MOTOR OIL																															
PUMP VIBRATION / HEAT																															
SURGE RELIEF VALVE																															
OTHER*																															
GROUNDS	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		
INGROUND TANK LEVEL																															

*** Pump taken out of service for replacement on October 7, 2008**
Instead of routine O &M, ECI assisted MPI & Contractor with well replacement support including demolition and plumbing alterations.

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Vestal Well 1-1 Monthly Report
December 2008

SECTION I – SUMMARY OF ACTIVITIES

Dick Green checked site daily. The system was out of service the entire month awaiting the installation of new pump.

Routine system checks are recorded on attached log. Routine maintenance activities conducted during the month are outlined below.

SECTION II – MONTHLY OPERATIONS & MAINTENANCE

- Routine inspection of site
- Cleaned up litter
- Shoveled snow, as needed

SECTION III – REPAIR WORK COMPLETED

- None

SECTION IV – REPAIR WORK NEEDED

- None

SECTION V – RECOMMENDATIONS

- None

VESTAL WELL 1-1 MONTHLY O & M LOG December 2008

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
TIME																															
WELL HOUSE																															
WELL PUMP PACKING																															
PRE LUBE LINE																															
PUMP MOTOR OIL																															
PUMP VIBRATION / HEAT																															
CHEMICAL BUILDING																															
SUMP PUMP																															
DISCHARGE VALVES																															
FLOW METER (GPM)																															
DIALER - ALARMS																															
CHLORINE ROOM																															
GENERAL CONDITION	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X
TOWER PACKING INSP.																															
MAIN PUMPHOUSE																															
BLOWER AND MOTOR	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X
BLOWER AIR FILTERS	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X
ALARM / CONTROL PANEL																															
CLEARWELL LEVEL																															
FLOAT & BYPASS LINE																															
H.S. PUMP PACKING																															
H.S. PUMP MOTOR OIL																															
PUMP VIBRATION / HEAT																															
SURGE RELIEF VALVE																															
OTHER*																															
GROUNDS	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X
INGROUND TANK LEVEL																															

*** Pump taken out of service for replacement on October 7, 2008**
Instead of routine O &M, ECI assisted MPI & Contractor with well replacement support, as needed.

New York State Department of Environmental Conservation
Vestal Water Supply Quarterly Report and Annual Groundwater Monitoring Summary

Appendix B

Well Development Photo Log

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Photo 1: Removal of vertical line-shaft pump

Photo 2: Severe corrosion on pump bowl assembly

Photo 3: Deposits on line-shaft

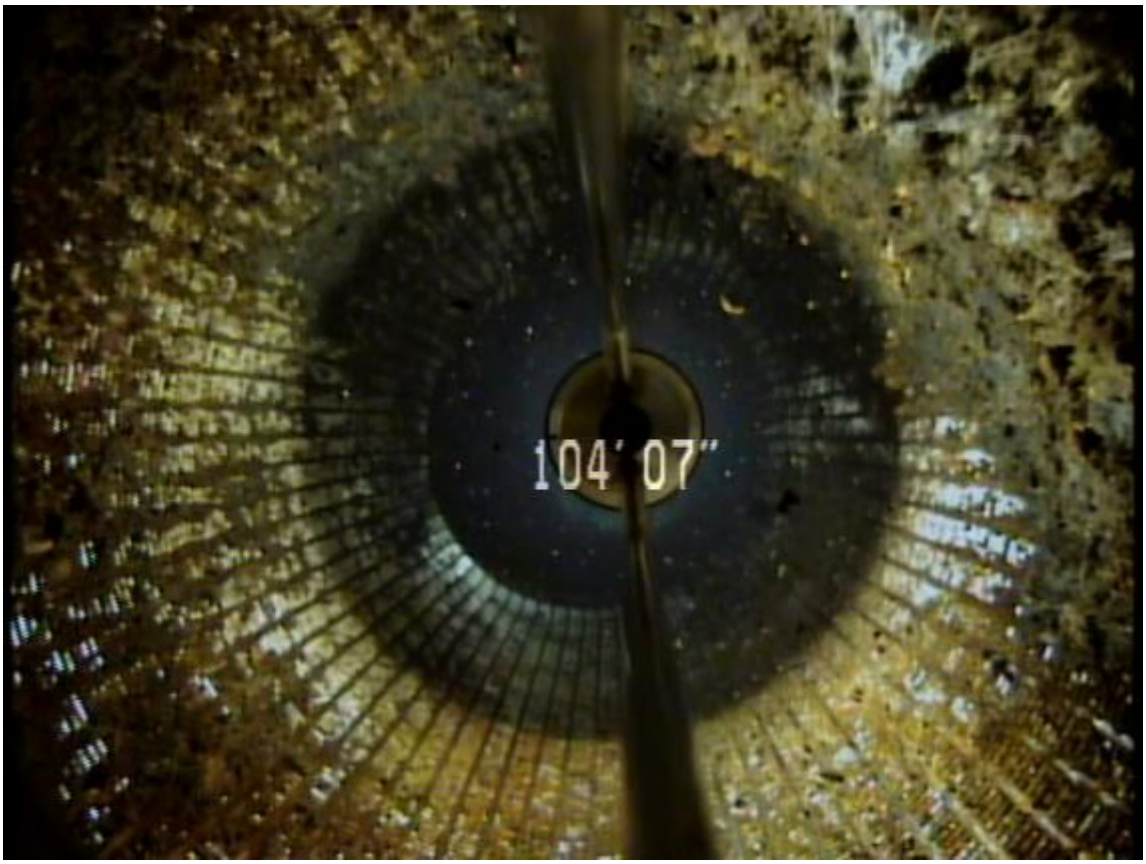


Photo 4: Image of well screen from pre-treatment down-well video

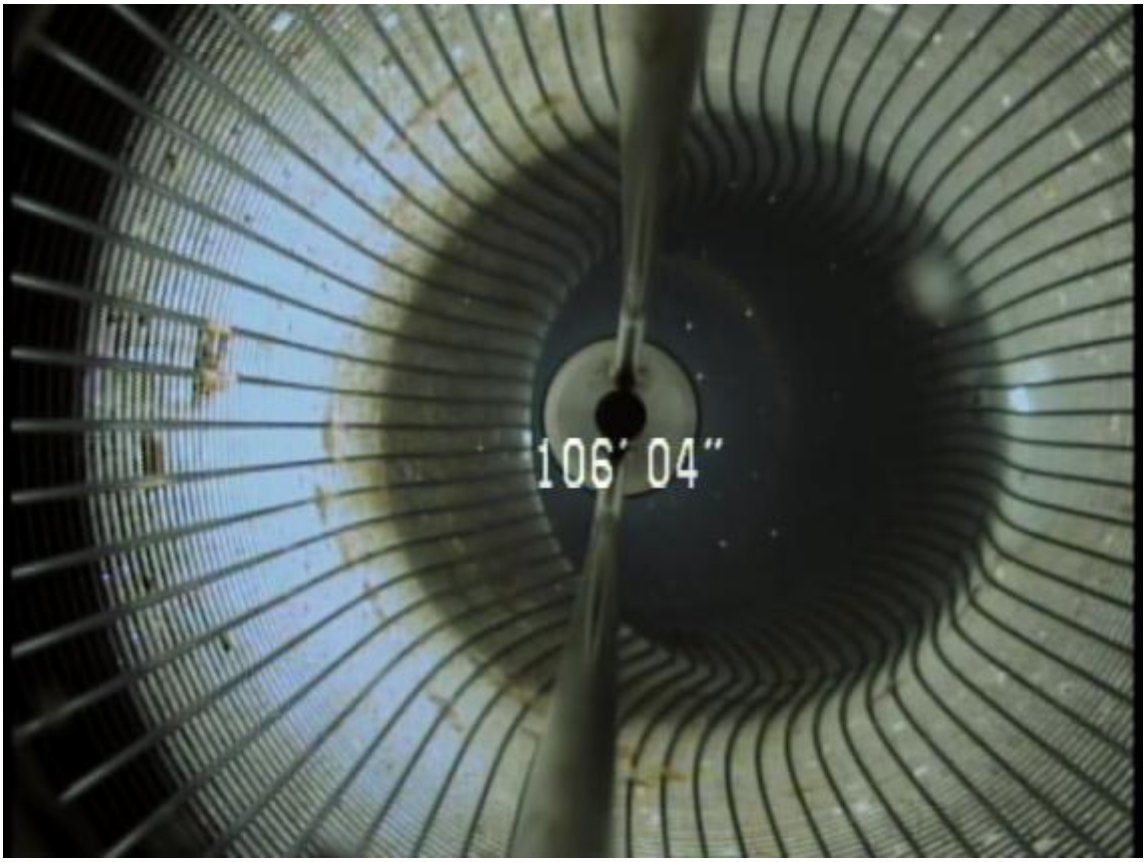


Photo 5: Image of bend in well screen from post-treatment down-well video

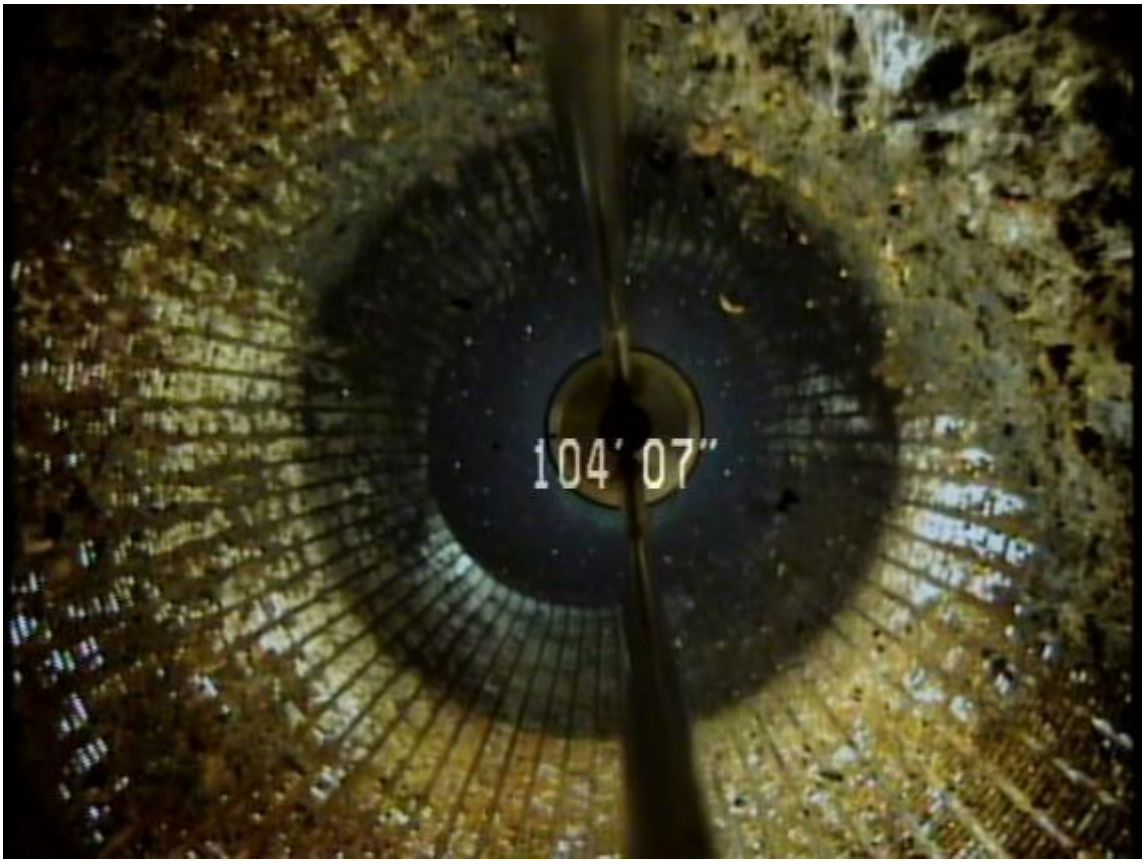
Photo 6: Wire brush assembly used to remove heavy buildup

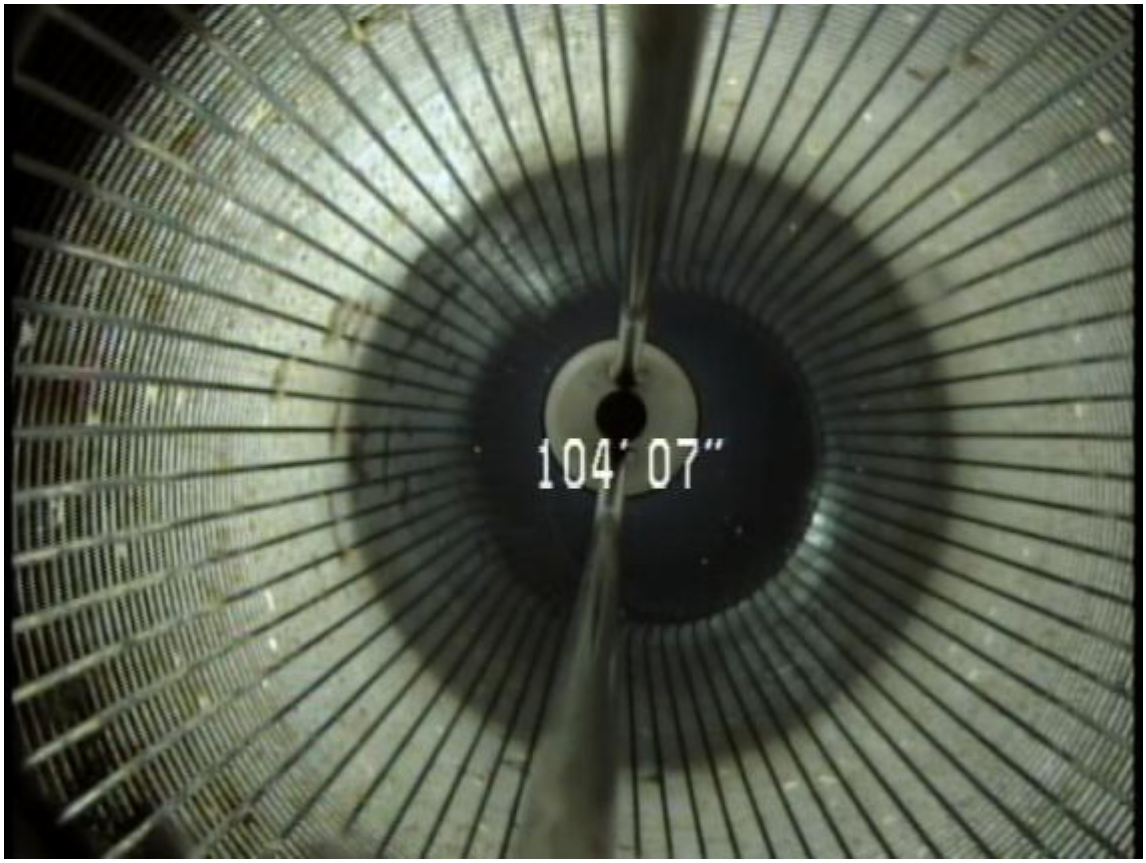
Photo 7: Expandable well packer

Photo 8: Aqua Freed® carbon dioxide injection

Photo 9: 12,000 gallon temporary storage container for well development water

Photo 10: Bag filtration system





Photos 11 and 12: Pre- and post-treatment well screen mages from down-well videos

Photo 13: Line–shaft pump motor support pad

Photo 14: Companion flange being welded to well casing

Photo 15: Fabrication of submersible pump discharge pipe

Photo 14: Caged-anode assembly

New York State Department of Environmental Conservation
Vestal Water Supply Quarterly Report and Annual Groundwater Monitoring Summary

Appendix C

Well Identification Summary

MALCOLM PIRNIE

APPENDIX C
WELL IDENTIFICATION SUMMARY
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE NO. 7-04-009A

Old Well ID	New Well ID	Coordinates*	
		Easting	Northing
S-8	4009-1	413364	4660154
EB-33	4009-2	413133	4660121
S-7	4009-3	413142	4660260
S-6	4009-4	413234	4660298
EB-31	4009-5	413126	4660311
S-1	4009-6	413001	4660085
S-2	4009-7	413035	4660235
S-11	4009-8	412951	4660163
EB-41	4009-9	413058	4660402
EB-42	4009-10	413110	4660446
1-32	4009-11	412845	4660404
1-32A	4009-11A	412846	4660387
1-29	4009-12	412743	4660293
1-29A	4009-12A	412741	4660294
1-30	4009-13	412737	4660116
1-30A	4009-13A	412738	4660117
1-23	4009-14	412608	4660065
1-24	4009-15	412582	4660290
1-20	4009-16	412417	4660188
1-20A	4009-16A	412415	4660193
Piezometer - between levee and tree line	4009-17	412431	4660077
Well - west of well house	4009-18	412324	4660137
Well - south of well house	4009-19	412327	4660120
Piezometer -northernmost in fire training area	4009-20	412288	4660117
Piezometer - westernmost in fire training area	4009-21	412284	4660117

Notes:
* -GPS survey conducted on 8/28/2007 in NAD 83 coordinate system.

New York State Department of Environmental Conservation
Vestal Water Supply Quarterly Report and Annual Groundwater Monitoring Summary

Appendix D

Groundwater Monitoring Well Inspection Forms

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MALCOLM PIRNIE

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Vestal Water Supply - PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/8/08 INSPECTOR: JW

WELL DESIGNATION: 4009-1

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]	
Approximate Stickup Height	3 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	3 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [X] Other ____
Integrity of Surface Seal/Apron	Describe: ____		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: ____
Well ID. Visible?	Yes [ ]	No [X]	Describe: ____
Lock Present and Functional?	Yes [X]	No [ ]	Describe: ____
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: ____

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ]	No [X]	Describe: ____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [ ]	Steel [ ]	Stainless Steel [X]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: ____

Downhole

Odor	Yes [ ]	No [X]	Describe: ____
PID Reading	0 ppm		
Depth to Water (to top of casing)	7.79 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	19.65 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Soft		

Additional Comments:

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Vested Water Supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/3/03 INSPECTOR: JW

WELL DESIGNATION: 4009-2

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	_____ inches	N/A [X]	
Approximate Stickup Height	2.5 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	6 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: Good		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: _____
Well ID. Visible?	Yes [ ]	No [X]	Describe: _____
Lock Present and Functional?	Yes [X]	No [ ]	Describe: _____
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: _____

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ]	No [X]	Describe: _____
Well Casing Diameter	4 inches		
Well Casing Material	PVC [ ]	Steel [ ]	Stainless Steel [X]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [ ] None [X]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: _____

Downhole

Odor	Yes [ ]	No [X]	Describe: _____
PID Reading	_____ ppm		
Depth to Water (to top of casing)	19.79 feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	37.57 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: _____		

Additional Comments:

_____

_____

_____

_____

_____

_____

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Vestal Water Supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/5/05 INSPECTOR: JN

WELL DESIGNATION: 4609-3

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	___ inches	N/A [ ]	
Approximate Stickup Height	4' feet	N/A [ ]	
Integrity of Protective Casing	Describe: good		
Protective Casing Material	Steel [ ]	Stainless Steel [✓]	Other box shaped
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: good		
Surface Drainage	Away from Wellhead [✓]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [✓] Describe:	
Well ID. Visible?	Yes [✓]	No [ ] Describe:	
Lock Present and Functional?	Yes [✓]	No [ ] Describe:	
Photograph Taken? Photo #	Yes [ ]	No [✓] Describe:	

Inner Appearance

Integrity of Well Casing	Describe: good		
Integrity of Cap Seal	Describe: good		
Surface Water in Casing?	Yes [ ]	No [✓] Describe:	
Well Casing Diameter	2" inches		
Well Casing Material	PVC [ ]	Steel [✓]	Stainless Steel [✓]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [✓] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [✓]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [✓] Describe:	

Downhole

Odor	Yes [ ]	No [✓] Describe:	
PID Reading	___ ppm		
Depth to Water (to top of casing)	18.59 feet (nearest 0.01)	Depth to LNAPL	___ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	30.35 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: soft		

Additional Comments:

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Vestal Water Supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/8/08 INSPECTOR: JW

WELL DESIGNATION: 4009-4

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	_____ inches	N/A [X]	
Approximate Stickup Height	0.5 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	3 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: Good		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: _____
Well ID. Visible?	Yes [ ]	No [X]	Describe: _____
Lock Present and Functional?	Yes [✓]	No [ ]	Describe: _____
Photograph Taken? Photo #	Yes [ ]	No [✓]	Describe: _____

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [✓]	No [ ]	Describe: _____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [ ]	Steel [✓]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [✓] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [✓]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [✓]	Describe: _____

Downhole

Odor	Yes [ ]	No [✓]	Describe: _____
PID Reading	_____ ppm		
Depth to Water (to top of casing)	139.2 feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	143.9 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Soft		

Additional Comments:

_____

_____

_____

_____

_____

_____

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Vestal Water Supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/8/08 INSPECTOR: JW

WELL DESIGNATION: 4007-5

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]	
Approximate Stickup Height	1.5 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	6 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other ____
Integrity of Surface Seal/Apron	Describe: Broken Concrete, frost heave		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: ____
Well ID. Visible?	Yes [ ]	No [X]	Describe: ____
Lock Present and Functional?	Yes [X]	No [ ]	Describe: ____
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: ____

Inner Appearance

Integrity of Well Casing	Describe: OK		
Integrity of Cap Seal	Describe: OK		
Surface Water in Casing?	Yes [ ]	No [X]	Describe: ____
Well Casing Diameter	4 inches		
Well Casing Material	PVC [ ]	Steel [ ]	Stainless Steel [X]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: ____

Downhole

Odor	Yes [ ]	No [X]	Describe: ____
PID Reading	— ppm		
Depth to Water (to top of casing)	20.79 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	50.40 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Soft.		

Additional Comments:

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Vestal water supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/8/03 INSPECTOR: JW

WELL DESIGNATION: 4009-6

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]	
Approximate Stickup Height	2 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Fair Casing tilted		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [X] Other ____
Integrity of Surface Seal/Apron	Describe: ____		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: ____
Well ID. Visible?	Yes [ ]	No [X]	Describe: ____
Lock Present and Functional?	Yes [X]	No [ ]	Describe: ____
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: ____

Inner Appearance

Integrity of Well Casing	Describe: Ok		
Integrity of Cap Seal	Describe: Ok		
Surface Water in Casing?	Yes [ ]	No [X]	Describe: ____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [ ]	Steel [ ]	Stainless Steel [X]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: ____

Downhole

Odor	Yes [ ]	No [X]	Describe: ____
PID Reading	~ ppm		
Depth to Water (to top of casing)	21.19 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	32.33 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Hard		

Additional Comments:

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Vestal Water Supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/8/08 INSPECTOR: JW

WELL DESIGNATION: 4009-7

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]	
Approximate Stickup Height	3.0 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [X] Other ____
Integrity of Surface Seal/Apron	Describe:		
Surface Drainage	Away from Wellhead [ ]	Toward Wellhead [X]	
Bollards Present?	Yes [ ]	No [X]	Describe: ____
Well ID. Visible?	Yes [ ]	No [X]	Describe: ____
Lock Present and Functional?	Yes [ ]	No [ ]	Describe: NO LOCK
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: ____

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ]	No [X]	Describe: ____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [ ]	Steel [ ]	Stainless Steel [X]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: ____

Downhole

Odor	Yes [ ]	No [X]	Describe: ____
PID Reading	— ppm		
Depth to Water (to top of casing)	21.11 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	32.18 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: ____		

Additional Comments:

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Crystal Water Supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/8/08 INSPECTOR: JW

WELL DESIGNATION: 4009-8

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]	
Approximate Stickup Height	3.5 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other ____
Integrity of Surface Seal/Apron	Describe: Good		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: ____
Well ID. Visible?	Yes [ ]	No [X]	Describe: ____
Lock Present and Functional?	Yes [X]	No [ ]	Describe: ____
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: ____

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ]	No [X]	Describe: ____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: ____

Downhole

Odor	Yes [ ]	No [X]	Describe: ____
PID Reading	— ppm		
Depth to Water (to top of casing)	21.95 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	42.75 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: ____		

Additional Comments:

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MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Vestal Water Supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/8/08 INSPECTOR: JW

WELL DESIGNATION: 4009-9

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	12 inches	N/A [ ]	
Approximate Stickup Height	____ feet	N/A [X]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	— inches		
Weep Hole in Protective Casing	Yes [X]	No [ ]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other ____
Integrity of Surface Seal/Apron	Describe: Good		
Surface Drainage	Away from Wellhead [ ]	Toward Wellhead [X]	
Bollards Present?	Yes [ ]	No [X] Describe:	____
Well ID. Visible?	Yes [ ]	No [X] Describe:	____
Lock Present and Functional?	Yes [X]	No [ ] Describe:	____
Photograph Taken? Photo #	Yes [ ]	No [X] Describe:	____

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ]	No [X] Describe:	____
Well Casing Diameter	4 inches		
Well Casing Material	PVC [ ]	Steel [ ]	Stainless Steel [X]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X] Describe:	____

Downhole

Odor	Yes [ ]	No [X] Describe:	____
PID Reading	-- ppm		
Depth to Water (to top of casing)	23.18 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	27.27 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Soft.		

Additional Comments:

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MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Vestal Water Supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/8/08 INSPECTOR: J W

WELL DESIGNATION: 4009-10

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	12 inches	N/A [ ]	
Approximate Stickup Height	____ feet	N/A [X]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	____ inches		
Weep Hole in Protective Casing	Yes [X]	No [ ]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other ____
Integrity of Surface Seal/Apron	Describe: Good		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: ____
Well ID. Visible?	Yes [ ]	No [X]	Describe: ____
Lock Present and Functional?	Yes [X]	No [ ]	Describe: ____
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: ____

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ]	No [X]	Describe: ____
Well Casing Diameter	4 inches		
Well Casing Material	PVC [ ]	Steel [ ]	Stainless Steel [X]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: ____

Downhole

Odor	Yes [ ]	No [X]	Describe: ____
PID Reading	____ ppm		
Depth to Water (to top of casing)	29.15 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	42.60 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Soft.		

Additional Comments:

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Vestal Water Supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/8/03 INSPECTOR: JW

WELL DESIGNATION: 4009-11

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	8 inches	N/A [ ]	
Approximate Stickup Height	_____ feet	N/A [X]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	— inches		
Weep Hole in Protective Casing	Yes [X]	No [ ]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: Good		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: _____
Well ID. Visible?	Yes [ ]	No [X]	Describe: _____
Lock Present and Functional?	Yes [X]	No [ ]	Describe: _____
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: _____

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ]	No [X]	Describe: _____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [ ]	Steel [X]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: _____

Downhole

Odor	Yes [ ]	No [X]	Describe: _____
PID Reading	— ppm		
Depth to Water (to top of casing)	29.38 feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	150.66 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: SOFT		

Additional Comments:

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MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Vestal Water Supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/8/08 INSPECTOR: JW

WELL DESIGNATION: 4009-11A

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	8 inches	N/A [ ]	
Approximate Stickup Height	_____ feet	N/A [X]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	— inches		
Weep Hole in Protective Casing	Yes [X]	No [ ]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: Good		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: _____
Well ID. Visible?	Yes [ ]	No [X]	Describe: _____
Lock Present and Functional?	Yes [X]	No [ ]	Describe: _____
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: _____

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ]	No [X]	Describe: _____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [ ]	Steel [X]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: _____

Downhole

Odor	Yes [ ]	No [X]	Describe: _____
PID Reading	— ppm		
Depth to Water (to top of casing)	20.70 feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	34.55 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Hard		

Additional Comments:

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Vestal Water Supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/9/08 INSPECTOR: _____

WELL DESIGNATION: 407-12

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	8 inches	N/A [ ]	
Approximate Stickup Height	_____ feet	N/A [X]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	— inches		
Weep Hole in Protective Casing	Yes [X]	No [ ]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: Good		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: _____
Well ID. Visible?	Yes [ ]	No [X]	Describe: _____
Lock Present and Functional?	Yes [X]	No [ ]	Describe: _____
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: _____

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ]	No [X]	Describe: _____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: _____

Downhole

Odor	Yes [ ]	No [X]	Describe: _____
PID Reading	— ppm		
Depth to Water (to top of casing)	21.93 feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	112.21 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: _____		

Additional Comments:

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MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Vestal Water Supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/8/03 INSPECTOR: _____

WELL DESIGNATION: 4009-12A

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	8 inches	N/A [ ]	
Approximate Stickup Height	_____ feet	N/A [X]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [ ]	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	_____ inches		
Weep Hole in Protective Casing	Yes [X]	No [ ]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: Good		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: _____
Well ID. Visible?	Yes [ ]	No [X]	Describe: _____
Lock Present and Functional?	Yes [X]	No [ ]	Describe: _____
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: _____

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ]	No [X]	Describe: _____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: _____

Downhole

Odor	Yes [ ]	No [X]	Describe: _____
PID Reading	_____ ppm		
Depth to Water (to top of casing)	23.40 feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	59.92 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Soft		

Additional Comments:

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MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Vestal Water Supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/8/08 INSPECTOR: JW.

WELL DESIGNATION: 4009-13

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	8 inches	N/A [ ]	
Approximate Stickup Height	_____ feet	N/A [X]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	— inches		
Weep Hole in Protective Casing	Yes [X]	No [ ]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: Good		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: _____
Well ID. Visible?	Yes [ ]	No [X]	Describe: _____
Lock Present and Functional?	Yes [X]	No [ ]	Describe: _____
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: _____

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ]	No [X]	Describe: _____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [ ]	Steel [X]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: _____

Downhole

Odor	Yes [ ]	No [X]	Describe: _____
PID Reading	~ ppm		
Depth to Water (to top of casing)	14.71 feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	113.95 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Soft.		

Additional Comments:

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MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Vestal Water Supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/8/08 INSPECTOR: JW

WELL DESIGNATION: 4009 - 13A

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	8 inches	N/A [ ]	
Approximate Stickup Height	_____ feet	N/A [X]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [-]	Stainless Steel [-]	Other _____
Protective Casing Width or Dia.	— inches		
Weep Hole in Protective Casing	Yes [-]	No [-]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: Good		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X] Describe:	_____
Well ID. Visible?	Yes [ ]	No [X] Describe:	_____
Lock Present and Functional?	Yes [X]	No [ ] Describe:	_____
Photograph Taken? Photo #	Yes [ ]	No [X] Describe:	_____

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ]	No [X] Describe:	_____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X] Describe:	_____

Downhole

Odor	Yes [ ]	No [X] Describe:	_____
PID Reading	— ppm		
Depth to Water (to top of casing)	14.23 feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	28.79 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Soft.		

Additional Comments:

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MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Vestal Water Supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/8/08 INSPECTOR: JW

WELL DESIGNATION: 4009-14

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	_____ inches	N/A [X]	
Approximate Stickup Height	3.5 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: Good		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: _____
Well ID. Visible?	Yes [ ]	No [X]	Describe: _____
Lock Present and Functional?	Yes [X]	No [ ]	Describe: New lock installed
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: _____

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ]	No [X]	Describe: _____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: _____

Downhole

Odor	Yes [ ]	No [X]	Describe: _____
PID Reading	_____ ppm		
Depth to Water (to top of casing)	19.10 feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	[X] 135.31 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Soft		

Additional Comments:

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MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Veshre Water Supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/8/08 INSPECTOR: JW

WELL DESIGNATION: 4009-15

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]	
Approximate Stickup Height	3.0 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [X] Other ____
Integrity of Surface Seal/Apron	Describe: CAN NOT See		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X] Describe:	
Well ID. Visible?	Yes [ ]	No [X] Describe:	
Lock Present and Functional?	Yes [X]	No [ ] Describe:	
Photograph Taken? Photo #	Yes [ ]	No [X] Describe:	

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ]	No [X] Describe:	
Well Casing Diameter	2 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X] Describe:	

Downhole

Odor	Yes [ ]	No [X] Describe:	
PID Reading	— ppm		
Depth to Water (to top of casing)	25.21 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	43.50 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Soft.		

Additional Comments:

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Vestal Water Supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/8/03 INSPECTOR: GW

WELL DESIGNATION: 4009-16

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	_____ inches	N/A [X]	
Approximate Stickup Height	3.5 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: Good		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: _____
Well ID. Visible?	Yes [ ]	No [X]	Describe: _____
Lock Present and Functional?	Yes [X]	No [ ]	Describe: Installed new lock.
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: _____

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: None - Installed new Gripper cap/expan plug.		
Surface Water in Casing?	Yes [ ]	No [X]	Describe: _____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: _____

Downhole

Odor	Yes [ ]	No [X]	Describe: _____
PID Reading	— ppm		
Depth to Water (to top of casing)	25.41 feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	49.10 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Soft		

Additional Comments:

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Vestal Water Supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/8/03 INSPECTOR: JW

WELL DESIGNATION: 4009-16A

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	_____ inches	N/A [X]	
Approximate Stickup Height	3.5 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: Good		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: _____
Well ID. Visible?	Yes [ ]	No [X]	Describe: _____
Lock Present and Functional?	Yes [X]	No [ ]	Describe: _____
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: _____

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ]	No [X]	Describe: _____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: _____

Downhole

Odor	Yes [ ]	No [X]	Describe: _____
PID Reading	— ppm		
Depth to Water (to top of casing)	25.34 feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	149.90 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Soft		

Additional Comments:

_____

_____

_____

_____

_____

_____

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Veteran Water Supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/8/08 INSPECTOR: SW

WELL DESIGNATION: 4XX9-17

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	_____ inches	N/A [X]	
Approximate Stickup Height	_____ feet	N/A [X]	
Integrity of Protective Casing	Describe: None		
Protective Casing Material	Steel [ ] NA	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	— inches		
Weep Hole in Protective Casing	Yes [ ] NA	No [ ]	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [X] Other _____
Integrity of Surface Seal/Apron	Describe: _____		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: _____
Well ID. Visible?	Yes [ ]	No [X]	Describe: _____
Lock Present and Functional?	Yes [ ]	No [X]	Describe: _____
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: _____

Inner Appearance

Integrity of Well Casing	Describe: OK		
Integrity of Cap Seal	Describe: OK		
Surface Water in Casing?	Yes [ ] NA	No [ ]	Describe: _____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [ ]	Steel [X]	Stainless Steel [ ]
Inner Cap	Threaded [X]	Slip [ ]	Expansion Plug [ ] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [ ]	None [X]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: _____

Downhole

Odor	Yes [ ]	No [X]	Describe: _____
PID Reading	— ppm		
Depth to Water (to top of casing)	18.81 feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	41.54 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Soft		

Additional Comments:

_____

_____

_____

_____

_____

_____

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Vestal Water Supply PROJECT NUMBER: 02.66352

DATE OF INSPECTION: 10/8/03 INSPECTOR: JW.

WELL DESIGNATION: 4009-18

WELL LOCATION: Near Town of Vestal pump house/Fire training center.

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]	
Approximate Stickup Height	3.5 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other ____
Integrity of Surface Seal/Apron	Describe: Broken concrete		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: ____
Well ID. Visible?	Yes [ ]	No [X]	Describe: ____
Lock Present and Functional?	Yes [X]	No [ ]	Describe: ____
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: ____

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ]	No [X]	Describe: ____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [X]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: ____

Downhole

Odor	Yes [ ]	No [X]	Describe: ____
PID Reading	- ppm		
Depth to Water (to top of casing)	33.32 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	129.75 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: V. Soft.		

Additional Comments:

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Vestal Water Supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/8/08 INSPECTOR: JW

WELL DESIGNATION: 4009-19

WELL LOCATION: Town Vestal Property / Fire training center

Outward Appearance

Flushmount Diameter	___ inches	N/A [X]	
Approximate Stickup Height	3.5 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ___
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other ___
Integrity of Surface Seal/Apron	Describe: Difficult to tell - buried under soil		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe:
Well ID. Visible?	Yes [ ]	No [X]	Describe:
Lock Present and Functional?	Yes [X]	No [ ]	Describe: Had to cut lock - installed new
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe:

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ]	No [X]	Describe:
Well Casing Diameter	2 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe:

Downhole

Odor	Yes [ ]	No [X]	Describe:
PID Reading	— ppm		
Depth to Water (to top of casing)	23.52 feet (nearest 0.01)	Depth to LNAPL	___ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	64.39 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Soft.		

Additional Comments:

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: 4009-20 PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/8/03 INSPECTOR: JW

WELL DESIGNATION: 4009-20

WELL LOCATION: Town Vegetal property

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]	
Approximate Stickup Height	____ feet	N/A [X]	
Integrity of Protective Casing	Describe: None		
Protective Casing Material	Steel [ ]	Stainless Steel [ ]	Other N/A
Protective Casing Width or Dia.	— inches		
Weep Hole in Protective Casing	Yes [ ] N/A	No [ ]	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [X] Other ____
Integrity of Surface Seal/Apron	Describe:		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe:
Well ID. Visible?	Yes [ ]	No [X]	Describe:
Lock Present and Functional?	Yes [ ]	No [X]	Describe:
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe:

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ] N/A	No [ ]	Describe:
Well Casing Diameter	2 inches		
Well Casing Material	PVC [ ]	Steel [X]	Stainless Steel [ ]
Inner Cap	Threaded [X]	Slip [ ]	Expansion Plug [ ] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [ ]	None [X]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe:

Downhole

Odor	Yes [ ]	No [X]	Describe:
PID Reading	— ppm		
Depth to Water (to top of casing)	21.44 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	41.81 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Silt		

Additional Comments:

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Vestal Water Supply PROJECT NUMBER: 0266352

DATE OF INSPECTION: 10/3/08 INSPECTOR: _____

WELL DESIGNATION: 4009-21

WELL LOCATION: Town of Vestal property / Fire training center

Outward Appearance

Flushmount Diameter	_____ inches	N/A [X]	
Approximate Stickup Height	_____ feet	N/A [X]	
Integrity of Protective Casing	Describe: NA		
Protective Casing Material	Steel [ ] NA	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	N/A inches		
Weep Hole in Protective Casing	Yes [ ] NA	No [ ]	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [X] Other _____
Integrity of Surface Seal/Apron	Describe: N/A		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: _____
Well ID. Visible?	Yes [ ]	No [X]	Describe: _____
Lock Present and Functional?	Yes [ ]	No [X]	Describe: _____
Photograph Taken? Photo #	Yes [ ]	No [X]	Describe: _____

Inner Appearance

Integrity of Well Casing	Describe: None		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ] NA	No [ ]	Describe: _____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [ ]	Steel [X]	Stainless Steel [ ]
Inner Cap	Threaded [X]	Slip [ ]	Expansion Plug [ ] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [ ]	None [X]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: _____

Downhole

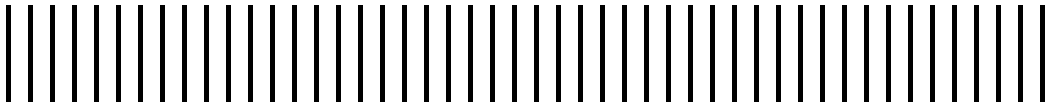
Odor	Yes [ ]	No [X]	Describe: _____
PID Reading	~ ppm		
Depth to Water (to top of casing)	21.59 feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	115.15 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Soft.		

Additional Comments:

New York State Department of Environmental Conservation
Vestal Water Supply Quarterly Report and Annual Groundwater Monitoring Summary

Appendix E

Water Level Data Forms



0266352 / ALB

MALCOLM PIRNIE

GROUNDWATER LEVEL DATA FORM

PROJECT NAME: Vestal Water Supply
PROJECT NUMBER: 0266352

DATE: 10/8/2008
PERSONNEL: JRW (MPI), JN (Aztech)

NEW WELL ID	OLD WELL ID	Date	Headspace VOCs (ppm)	Depth to LNAPL (feet)	Depth to Water (feet)	Reference Point
4009-1	S-8	10/8/2008	NM	-	7.79	TOC
4009-2	EB-33	10/8/2008	NM	-	19.79	TOC
4009-3	S-7	10/8/2008	NM	-	18.59	TOC
4009-4	S-6	10/8/2008	NM	-	13.82	TOC
4009-5	EB-31	10/8/2008	NM	-	20.79	TOC
4009-6	S-1	10/8/2008	NM	-	21.19	TOC
4009-7	S-2	10/8/2008	NM	-	21.11	TOC
4009-8	S-11	10/8/2008	NM	-	21.95	TOC
4009-9	EB-41	10/8/2008	NM	-	23.18	TOC
4009-10	EB-42	10/8/2008	NM	-	29.15	TOC
4009-11	1-32	10/8/2008	NM	-	29.38	TOC
4009-11A	1-32A	10/8/2008	NM	-	20.70	TOC
4009-12	1-29	10/8/2008	NM	-	21.93	TOC
4009-12A	1-29A	10/8/2008	NM	-	22.40	TOC
4009-13	1-30	10/8/2008	NM	-	14.71	TOC
4009-13A	1-30A	10/8/2008	NM	-	14.23	TOC
4009-14	1-23	10/8/2008	NM	-	19.10	TOC
4009-15	1-24	10/8/2008	NM	-	25.21	TOC
4009-16	1-20	10/8/2008	NM	-	25.41	TOC
4009-16A	1-20A	10/8/2008	NM	-	25.34	TOC
4009-17	Piezo-levee*	10/8/2008	NM	-	18.81	TOC
4009-18	well-west well house*	10/8/2008	NM	-	33.32	TOC
4009-19	well-south well house*	10/8/2008	NM	-	23.52	TOC
4009-20	Piezo-north*	10/8/2008	NM	-	21.44	TOC
4009-21	Piezo-west*	10/8/2008	NM	-	21.59	TOC

Notes:

* - Could not identify well location from site map. Old Well ID based on field description of well location.

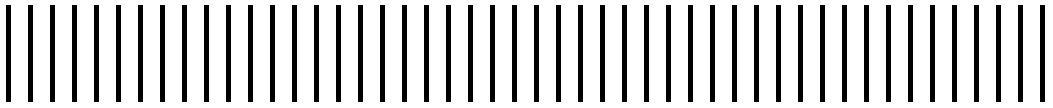
NM - Not measured

TOC - Top of casing

New York State Department of Environmental Conservation
Vestal Water Supply Quarterly Report and Annual Groundwater Monitoring Summary

Appendix F

Groundwater Sampling Purge Logs



0266352 / ALB

MALCOLM PIRNIE

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-1 **DATE:** 10/9/05

PROJECT NAME: Vestal Water Supply

PROJECT NUMBER:

SAMPLERS: JW/JW

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: 2"

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

Well I.D.	Vol. Gal./ft.
1"	0.04
(2")	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$v = 0.0408 (B)^2 \times (A-C) = D$

$v = 0.0408 ($ Inner cap on numbers (Removed after) $)^2 \times ($ _____ - _____ $) =$ _____ gal.

PARAMETER	ACCUMULATED VOLUME PURGED													
Time	7:16	7:20	7:25	7:30	7:35	7:40	7:42	7:52	8:00	8:05	8:10			
Gallons				3/4g.				2 1/2g.			3 1/2g.			
Depth to Water	8.20	8.25	8.71	8.77	8.94	9.34	9.38	9.44	9.62	9.71	9.80			
pH	6.80	9.32	9.09	9.21	9.96	10.30	10.27	10.29	10.32	10.38	10.44			
Conductivity (mohm/cm)	0.00	0.62	0.62	0.61	0.62	0.61	0.62	0.62	0.62	0.61	0.61			
Turbidity (ntu)	556	252	261	275	236	372	291	286	295	300	305			
Dissolved Oxygen (mg/l)	4.98	1.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Temperature (°C)	14.80	15.77	15.94	16.00	16.00	15.97	15.92	15.93	15.83	15.84	15.84			
Salinity	0.7	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03			
TDS	0.00	0.40	0.40	0.39	0.40	0.40	0.40	0.40	0.40	0.39	0.40			
REDOX (mV)	59	-47	-38	-47	-78	-91	-91	-93	-92	-95	-97			

Notes: Start Purging @ 7:15am
Sampled @ 8:10am
3 1/2g. Removed

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-2 DATE: 10/9/08

PROJECT NAME: Vestal Water Supply

PROJECT NUMBER:

SAMPLERS: JN/JW

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: 4"

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

$v = 0.0408 (B)^2 \times (A-C) = D$

v = 0.0408 ( )² x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
(4")	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED													
Time	8:20	8:25	8:31	8:37	8:43	8:50	8:56	9:01	9:07	9:12	9:19			
Gallons			1/2g.		1 1/2g		2g.				3 1/4g			
Depth to Water	19.61	20.39	20.51	20.63	20.79	20.87	20.92	21.00	21.01	21.08	21.11			
pH	8.59	8.66	8.74	8.95	9.09	9.37	9.39	9.52	9.63	9.65	9.70			
Conductivity (mohm/cm)	1.14	1.14	1.14	1.14	1.14	1.13	1.12	1.12	1.12	1.12	1.12			
Turbidity (ntu)	144	123	116	119	131	229	146	151	157	158	153			
Dissolved Oxygen (mg/l)	3.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Temperature (°C)	13.03	12.61	12.57	12.59	12.57	12.57	12.61	12.67	12.76	12.79	12.86			
Salinity	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05			
TDS	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7			
REDOX (mV)	-21	-21	-25	-34	-45	-59	-64	-67	-70	-71	-73			

Notes: Start Purging @ 8:20am

- Sampled @ 9:20am
- Purged 3 1/4 g.

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-3 DATE: 10/9/08

PROJECT NAME: Vestal Water Supply

PROJECT NUMBER: 0266352

SAMPLERS: JW

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$v = 0.0408\ (B)^2 \times (A-C) = D$

v = 0.0408 ( )^2 x (-) = _____ gal.

PARAMETER	ACCUMULATED VOLUME PURGED													
Time	1500	1515	1526	1530	1535	1540								
Gallons	0					3.5								
Depth to Water	18.96	19.48	19.40	19.23	19.23	19.23								
pH	7.21	7.62	7.66	7.63	7.60	7.57								
Conductivity (mohm/cm)	0.897	1.27	1.37	1.40	1.40	1.40								
Turbidity (ntu)	273	78.5	57.3	61.9	66.9	59.9								
Dissolved Oxygen (mg/l)	2.98	.69	0.51	0.53	0.55	0.52								
Temperature (°C)	15.96	14.27	14.12	15.62	15.50	15.33								
Salinity	0.1	0.1	0.1	0.1	0.1	0.1								
TDS	.58	0.8	0.9	0.9	0.9	0.9								
REDOX (mV)	7	-76	-83	-82	-79	-76								

Notes: 1500 - initiate purge.

1540 - Finish Purge, collect samples.

- Purged 3.5 gallons.

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-4 DATE: 10/9/08

PROJECT NAME: Vestal Water Supply

PROJECT NUMBER:

SAMPLERS: JW/JW

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: 2"

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

$v = 0.0408 (B)^2 \times (A-C) = D$

v = 0.0408 ( )² x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
(2")	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

Limited access

PARAMETER	ACCUMULATED VOLUME PURGED													
Time	1:52	1:58	2:03	2:08	2:14	2:19	2:25	2:30	2:35	2:41	2:49	2:52	2:59	3:05
Gallons					1½			2¼						4g.
Depth to Water														
pH	8.70	9.37	9.41	9.43	9.44	9.54	9.53	10.54	10.61	10.38	10.60	10.63	10.66	10.68
Conductivity (mohm/cm)	0.29	0.27	0.27	0.27	0.27	0.27	0.26	1.24	1.50	1.21	1.58	1.59	1.58	1.59
Turbidity (ntu)	191°	133°	136°	148°	133°	136°	144°	153°	158°	139°	130°	124°	130°	129°
Dissolved Oxygen (mg/l)	3.67	1.58	1.42	1.25	1.21	1.01	0.80	0.00	0.0	0.57	0.00	0.00	0.00	0.00
Temperature (°C)	15.00	14.26	13.99	13.98	14.09	13.87	13.94	13.52	14.42	14.40	14.39	14.30	14.67	14.59
Salinity	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.26	0.97	0.05	0.07	0.07	0.07	0.07
TDS	0.19	0.18	0.18	0.18	0.18	0.18	0.19	0.8	1.0	0.6	1.0	1.0	1.0	1.0
REDOX (mV)	-29	-52	-53	-53	-54	-59	-57	-106	-109	-99	-111	-112	-113	-114

Notes: Start Purging @ 1:52pm
- Sample @ 3:05pm
- Purged 4g.

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

(Page 2)

WELL NUMBER: 4009-4 DATE: 10/9/08

PROJECT NAME: Vestal Water Supply

PROJECT NUMBER:

SAMPLERS: JW/JW

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: 2"

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

v = 0.0408 $(B)^2$ x (A-C) = D

v = 0.0408 ( )^2 x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
(2")	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED													
Time	6:15	6:20												
Gallons	4½													
Depth to Water	21.31	21.31												
pH	14.12	14.19												
Conductivity (mohm/cm)	0.29	0.29												
Turbidity (ntu)	149.0	152.?												
Dissolved Oxygen (mg/l)	0.00	0.00												
Temperature (°C)	13.41	13.43												
Salinity	0.01	0.01												
TDS	0.18	0.18												
REDOX (mV)	-251	-255												

Notes: (Continued from Page 1)

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-5 DATE: 10/9/06

PROJECT NAME: Vestal Water Supply

PROJECT NUMBER:

SAMPLERS: JW/JW

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: 4"

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

$v = 0.0408 (B)^2 \times (A-C) = D$

v = 0.0408 ( )^2 x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
(4")	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED													
Time	11:15	11:20	11:26	11:33	11:40	11:46	11:50	11:56	12:02	12:08	12:12	12:19		
Gallons				½ g.		1 g.				2½ g.		2½ g.		
Depth to Water	21.50	21.40	21.58	22.00	22.45	22.49	22.54	22.70	22.76	22.81	22.83	22.90		
pH	7.80	7.71	7.64	7.64	7.65	7.76	8.03	7.98	8.11	8.32	8.40	8.42		
Conductivity (mohm/cm)	0.85	0.85	0.84	0.85	0.85	0.83	0.83	0.84	0.84	0.83	0.84	0.84		
Turbidity (ntu)	195°	184°	194°	141°	171°	152°	144°	139°	148°	135°	129°	130°		
Dissolved Oxygen (mg/l)	3.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Temperature (°C)	15.56	15.18	14.89	14.82	14.83	14.93	14.99	14.89	14.92	14.99	15.14	15.06		
Salinity	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04		
TDS	0.56	0.54	0.55	0.55	0.55	0.54	0.54	0.54	0.54	0.54	0.54	0.54		
REDOX (mV)	17	13	16	16	16	11	-0	2	-4	-13	-16	-17		

Notes: Start Purging @ 11:15am
- Sample @ 12:20pm
- Purged 2½ g.

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009 – 6 DATE: 10/9/08

PROJECT NAME: Vestal Water Supply

PROJECT NUMBER:

SAMPLERS: JN/JN

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: 2"

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

v = 0.0408 $(B)^2$ x (A-C) = D

v = 0.0408 ( )^2 x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED													
Time	9:50	9:55	10:02	10:06	10:13	10:18	10:23	10:26	10:33	10:39	10:44			
Gallons			½ g.					1½ g.			2½ g.			
Depth to Water	21.60	21.70	21.73	21.74	21.79	21.80	21.81	21.84	21.85	21.88	21.89			
pH	9.40	9.32	9.10	8.92	8.91	8.83	8.82	8.85	8.85	8.85	8.87			
Conductivity (mohm/cm)	1.13	1.11	1.10	1.09	1.09	1.10	1.10	1.11	1.10	1.11	1.10			
Turbidity (ntu)	392.0	326.0	176.0	135.0	137.0	154.0	162.0	120.0	118.0	120.0	119.0			
Dissolved Oxygen (mg/l)	1.60	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Temperature (°C)	13.40	12.87	12.81	12.80	12.82	12.86	12.87	12.82	12.92	12.96	12.97			
Salinity	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05			
TDS	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7			
REDOX (mV)	-60	-55	-45	-38	-37	-39	-43	-30	-39	-37	-36			

Notes: Start Purging @ 9:50 am
- Sample @ 10:48 am
- Purged 2½ g.

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

Pg 1 of 2

WELL NUMBER: 4009-7 DATE: 10/9/08

PROJECT NAME: Vestal Water Supply

PROJECT NUMBER: 0266352

SAMPLERS: J.W.

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

$v = 0.0408 (B)^2 \times (A-C) = D$

v = 0.0408 ( )² x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED													
Time	1030	1035	1040	1045	1050	1100	1105	1110	1115	1120	1125	1130	1135	1140
Gallons	0													
Depth to Water														
pH	6.90	8.19	8.18	8.17	8.02	8.03	8.05	8.03	7.99	7.96	7.91	7.89	7.83	7.81
Conductivity (mohm/cm)	9.86	13.0	12.9	13.8	13.9	14.1	13.8	14.0	13.9	13.8	13.9	13.8	13.8	13.8
Turbidity (ntu)	206	156	760	273	748	88.3	36.3	45.3	23.6	42.8	40.8	42.5	35.6	19.8
Dissolved Oxygen (mg/l)	2.96	0.44	0.31	0.36	0.31	0.35	0.39	0.44	0.47	0.44	0.33	0.35	0.31	0.28
Temperature (°C)	16.38	15.92	15.96	16.12	16.80	16.54	16.38	16.15	16.01	16.24	16.06	16.16	16.12	16.08
Salinity	0.6	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
TDS	6.3	8	8	9	9	9	9	9	8	9	9	9	8	9
REDOX (mV)	57	-153	-152	-149	-146	-135	-130	-124	-118	-110	-105	-102	-98	-95
Shake bubbles off probe					X					X				

Notes: 1030 - Initiate Purge

1150 - Finish purge, collect samples. purged ≈ 6.2 gallons.

- Bubbles form on probes cause NTU to increase, False high.
- Unable to monitor water level due to limited well access.

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

Pg 2 of 2

WELL NUMBER: 4009-7 DATE: 10/9/08

PROJECT NAME: Vestal Water Supply

PROJECT NUMBER: 026632

SAMPLERS: JW.

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

$v = 0.0408 (B)^2 \times (A-C) = D$

v = 0.0408 ( )^2 x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED														
Time	1145	1150													
Gallons	6.0	6.2													
Depth to Water															
pH	7.80	7.76													
Conductivity (mohm/cm)	13.7	13.6													
Turbidity (ntu)	21.1	20.6													
Dissolved Oxygen (mg/l)	0.28	0.25													
Temperature (°C)	16.33	16.45													
Salinity	0.8	0.8													
TDS	8	8													
REDOX (mV)	-93	-92													

Notes:

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-S DATE: 10/9/06

PROJECT NAME: Vestal Water Supply

PROJECT NUMBER:

SAMPLERS: JN/SW

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: 2"

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

$v = 0.0408 (B)^2 \times (A-C) = D$

v = 0.0408 ( )² x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
(2")	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED												
Time	3:20	3:25	3:31	3:36	3:44	3:50	3:56	4:03	4:09	4:15	4:22	4:30	4:39
Gallons			3½				2 9.			3 9.			4½
Depth to Water	22.16	22.08	22.08	22.09	22.09	22.09	22.09	22.09	22.09	22.09	22.08	22.08	22.08
pH	9.18	9.59	9.70	9.77	9.86	10.00	10.28	10.43	10.57	10.63	10.63	10.62	10.62
Conductivity (mohm/cm)	1.09	1.06	1.07	1.06	1.08	1.08	1.09	1.07	1.08	1.08	1.08	1.07	1.08
Turbidity (ntu)	277.0	151.0	139.0	132.0	134.0	135.0	149.0	131.0	139.0	149.0	121.0	125.0	121.0
Dissolved Oxygen (mg/l)	3.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Temperature (°C)	15.16	14.55	14.10	14.33	13.96	14.03	13.84	13.56	13.63	13.63	13.76	13.68	13.64
Salinity	0.05	0.05	0.05	0.05	0.06	0.05	0.05	0.05	0.06	0.06	0.05	0.05	0.05
TDS	0.7	0.7	0.7	0.7	0.7	0.5	0.7	0.7	0.7	0.7	0.7	0.7	0.7
REDOX (mV)	-54	-67	-72	-75	-80	-87	-96	-104	-110	-113	-114	-112	-112

Notes: Start Purging @ 3:20pm
- Sample @ 4:40pm
- Purged 4½ g.

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

Pg 1 of 2

WELL NUMBER: 4009-9 DATE: 10/9/08

PROJECT NAME: Vestal Water Supply

PROJECT NUMBER: 0266352

SAMPLERS: J.W.

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

v = 0.0408 $(B)^2$ x (A-C) = D

v = 0.0408 ( )^2 x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED													
Time	1640	1645	1650	1655	1700	1705	1710	1715	1720	1725	1730	1735	1740	1745
Gallons	0													3.5
Depth to Water	23.30	23.70	23.75	23.78	23.81	23.81	23.81	23.82	23.82	23.82	23.82	23.82	23.82	23.82
pH	7.21	6.54	6.46	6.64	6.77	6.82	6.86	6.96	7.04	7.19	7.26	7.34	7.39	7.42
Conductivity (mohm/cm)	1.86	1.76	1.76	1.75	1.76	1.76	1.77	1.76	1.76	1.75	1.64	1.70	1.73	1.76
Turbidity (ntu)	536	299	282	310	209	191	160	142	126	118	148	119	89.5	76.8
Dissolved Oxygen (mg/l)	6.35	1.57	1.18	1.29	0.66	0.60	0.53	0.49	0.43	0.80	0.48	0.43	0.44	0.43
Temperature (°C)	16.71	15.38	15.20	15.58	15.06	14.94	14.89	14.89	14.80	14.91	14.96	14.75	14.62	14.61
Salinity	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
TDS	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.1	1.1	1.1
REDOX (mV)	44	61	62	44	32	30	27	22	18	12	9	5	1	-1
Dump Flowcell				X					X					
To flush sediment														

Notes: 1640 - Initiate purge

1805 - Finish Purge, collect samples

- Purged = 4.5 gallons

⊗ Water rusty color

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

Pg 2 of 2

WELL NUMBER: ~~4009-2~~ 4009-9 DATE: ~~10/8/08~~ 10/9/08

PROJECT NAME: Vestal Water Supply

PROJECT NUMBER: 026352

SAMPLERS: JW; JN (Aztech)

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$v = 0.0408 (B)^2 \times (A-C) = D$

v = 0.0408 ( )^2 x (-) = _____ gal.

PARAMETER	ACCUMULATED VOLUME PURGED													
Time	1750	1755	1800	1805										
Gallons	3.5													
Depth to Water	23.82	23.82	23.82	23.82										
pH	7.44	7.46	7.48	7.51										
Conductivity (mohm/cm)	1.78	1.75	1.74	1.74										
Turbidity (ntu)	55.8	84.5	89.8	88.0										
Dissolved Oxygen (mg/l)	0.38	0.30	0.28	0.25										
Temperature (°C)	14.57	14.46	14.41	14.41										
Salinity	0.1	0.1	0.1	0.1										
TDS	1.1	1.1	1.1	1.1										
REDOX (mV)	-1	-2	-2	-4										

Notes:

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

Pg 1 of 2

WELL NUMBER: 4009-10 DATE: 10/10/08

PROJECT NAME: Vestal Water Supply

PROJECT NUMBER: 0266352

SAMPLERS: JW

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: 4

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

v = 0.0408 (B)^2 x (A-C) = D

v = 0.0408 ( )^2 x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED													
Time	0805	0810	0815	0820	0825	0830	0835	0840	0845	0850	0855	0900	0905	0910
Gallons	0													3.5
Depth to Water	29.34	29.34	29.34	29.34	29.34	29.34	29.34	29.34	29.34	29.34	29.34	29.34	29.34	29.34
pH	6.45	7.13	7.29	7.41	7.39	7.41	7.46	7.47	7.52	7.59	7.63	7.65	7.66	7.69
Conductivity (mohm/cm)	2.56	2.54	2.54	2.49	2.56	2.57	2.56	2.57	2.57	2.58	2.58	2.57	2.58	2.58
Turbidity (ntu)	452	280	999	195	185	157	147	118	71.5	66.8	138	65.5	47.2	42.1
Dissolved Oxygen (mg/l)	2.77	3.52	3.74	14.43	3.33	2.96	2.87	2.88	2.90	3.12	3.26	3.23	3.74	3.57
Temperature (°C)	12.20	12.35	12.34	12.56	12.57	12.67	12.66	12.59	12.72	12.71	12.78	12.75	12.82	12.81
Salinity	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
TDS	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.6	1.7	1.6
REDOX (mV)	162	108	98	93	90	89	87	84	82	78	74	72	69	67
Clean flow cell			X											
Bubbles on Filmwell											X	X		

Notes: 0805 initial purge.

0935 - Finish purge, collect samples

- Purged ~ 5 gallons

- Purge water has rusty color.

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

Pg 2 of 2

WELL NUMBER: 4009-10 DATE: 10/10/08

PROJECT NAME: Vestal Water Supply

PROJECT NUMBER: 0266352

SAMPLERS: JW

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

$v = 0.0408 (B)^2 \times (A-C) = D$

v = 0.0408 ( )² x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED													
Time	0915	0920	0725	0930	0935									
Gallons	3.5		4.0		5.0									
Depth to Water	29.34	29.34	29.34	29.34	29.34									
pH	7.70	7.72	7.73	7.73	7.74									
Conductivity (mohm/cm)	2.58	2.56	2.57	2.53	2.56									
Turbidity (ntu)	42.4	34.9	36.6	33.2	32.4									
Dissolved Oxygen (mg/l)	3.73	3.82	4.06	4.25	4.35									
Temperature (°C)	12.85	12.95	13.00	13.14	13.26									
Salinity	0.1	0.1	0.1	0.1	0.1									
TDS	1.7	1.6	1.6	1.7	1.6									
REDOX (mV)	67	66	67	65	64									

Notes:

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009 – 11 DATE: 10/10/05

PROJECT NAME: Vestal Water Supply

PROJECT NUMBER:

SAMPLERS: JN | JW

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: 2"

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

v = 0.0408 $(B)^2$ x (A-C) = D

v = 0.0408 ( )^2 x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED							
Time	1:55	2:00	2:05	2:10	2:15	2:20	2:25	2:30
Gallons				1/2 g.			1 g.	1 1/4 g
Depth to Water	29.44	29.46	29.42	29.41	29.43	29.44	29.44	29.44
pH	(Meter not working)							
Conductivity (mohm/cm)	1.60	1.68	1.68	1.69	1.69	1.69	1.69	1.68
Turbidity (ntu)	96.0	54.7	44.1	48.2	55.9	59.8	57.7	56.3
Dissolved Oxygen (mg/l)	2.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Temperature (°C)	16.52	15.22	14.99	14.94	14.96	14.97	15.05	15.04
Salinity	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
TDS	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1
REDOX (mV)	-174	-203	-207	-208	-207	-207	-206	-207

Notes: Started Purging @ 1:55pm
– Sample @
– Purged 1 1/4 g

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-11A **DATE:** 10/10/06

PROJECT NAME: Vestal Water Supply

PROJECT NUMBER:

SAMPLERS: JN/JW

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: 2"

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

$v = 0.0408 (B)^2 \times (A-C) = D$

v = 0.0408 ( )² x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
(2")	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED													
Time	2:50	2:55	3:01	3:06	3:11	3:17	3:23	3:28						
Gallons						1g.								
Depth to Water	21.55	22.65	23.55	24.21	24.42	24.44	24.45	24.46						
pH	Meter pH → Not working properly													
Conductivity (mohm/cm)	1.16	1.14	1.15	1.12	1.10	1.03	1.03	1.06						
Turbidity (ntu)	583.0	189.0	152.0	106.0	111.0	49.9	51.0	52.6						
Dissolved Oxygen (mg/l)	3.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Temperature (°C)	15.09	14.32	14.35	14.56	14.57	14.51	14.28	14.67						
Salinity	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05						
TDS	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.7						
REDOX (mV)	80	76	78	82	86	94	96	93						

Notes: Start Purging @ 2:50pm
- Sample @ 3:35pm
- Purged 1½ g.

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-13 DATE: 10/10/08

PROJECT NAME: Vestal Water Supply

PROJECT NUMBER:

SAMPLERS: JN/JW

A: Total Casing and Screen Length:

B: Casing Internal Diameter: 2"

C: Water Level Below Top of Casing:

D: Volume of Water in Casing:

$v = 0.0408 (B)^2 \times (A-C) = D$

$v = 0.0408 (\quad)^2 \times (\quad - \quad) =$ ______ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
(2") circled	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED													
Time	9:34	9:39	9:44	9:50	9:55	10:02	10:07	10:12	10:19	10:24	10:30	10:36	10:40	
Gallons			½g.			1½g.			2½g.				3g.	
Depth to Water	15.35	16.30	16.84	16.93	17.09	17.09	17.10	17.09	17.12	17.13	17.14	17.16	17.17	
pH	12.65	14.23	12.92	14.34	(meter - recalibrated and still reading about								14.50 ↑)	
Conductivity (mohm/cm)	0.50	0.50	0.56	0.55	0.59	0.60	0.60	0.61	0.61	0.60	0.60	0.61	0.61	
Turbidity (ntu)	106.0	122.0	74.8	50.5	17.5	13.3	9.1	17.9	28.3	35.4	15.4	14.3	14.4	
Dissolved Oxygen (mg/l)	5.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Temperature (°C)	14.10	13.96	13.86	13.77	13.64	13.64	13.56	13.63	13.59	13.66	13.66	13.64	13.68	
Salinity	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	
TDS	0.33	0.32	0.33	0.36	0.38	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	
REDOX (mV)	-120	-171	-133	-179	~~-192~~	-205	-209	-209	-210	-216	-216	-219	-222	
					-197									

Notes: Start Purging @ 9:34 am

- Sample @ 10:41 am *
- Purged 3g.

*Checked meter w/ Test solution after and pH was reading 4.31 when supposed to read 4.01

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

Dup 4009-X

WELL NUMBER: 4009-12 DATE: 10/10/08

PROJECT NAME: Vestal Water Supply

PROJECT NUMBER: 0266362

SAMPLERS: JW.

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$v = 0.0408 (B)^2 \times (A-C) = D$

$v = 0.0408 (\quad)^2 \times (\quad - \quad) =$ _____ gal.

PARAMETER	ACCUMULATED VOLUME PURGED													
Time	1415	1420	1425	1430	1435	1440	1445	1450	1455					
Gallons														
Depth to Water	—	—	22.17	22.17	22.17	22.17	22.17	22.17	22.17					
pH	10.04	9.64	8.75	8.53	8.43	8.34	8.24	8.24	8.27					
Conductivity (mohm/cm)	.596	0.825	1.39	1.42	1.43	1.44	1.46	1.46	1.47					
Turbidity (ntu)	584	588	199	143	136	121	105	96.4	115					
Dissolved Oxygen (mg/l)	4.41	1.36	1.31	1.29	1.40	1.38	1.42	1.46	1.45					
Temperature (°C)	16.60	13.62	13.74	13.80	13.95	13.65	13.58	13.75	13.70					
Salinity	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1					
TDS	.39	0.55	0.9	0.9	0.9	0.9	0.9	0.9	0.9					
REDOX (mV)	-128	-108	-52	-37	-29	-22	-16	-14	-15					
Clear Flowcell		X												

Notes: 1415 - initiate purge

1455 - Finish Purge, collect sample, collect duplicate 4009-X

- Purged ≈ 3.0 gallons

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

MS/MSD

WELL NUMBER: 4009-12A **DATE:** 10/16/08

PROJECT NAME: ~~0266~~ Vestal Water Supply

PROJECT NUMBER: 0266352

SAMPLERS: JW.

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

$v = 0.0408 (B)^2 \times (A-C) = D$

v = 0.0408 ( )² x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED													
Time	1035	1040	1045	1050	1055	1100	1105	1110						
Gallons	0													
Depth to Water	23.05	23.02	22.97	22.95	22.95	22.95	22.95	22.95						
pH	11.65	11.94	12.07	12.14	12.18	12.27	12.29	12.33						
Conductivity (mohm/cm)	0.651	.623	.613	0.609	0.620	.613	.612	.613						
Turbidity (ntu)	73.1	66.9	66.2	60.5	273	181	176	182						
Dissolved Oxygen (mg/l)	1.60	0.40	0.0	0.0	0.0	0	0	0						
Temperature (°C)	12.11	12.04	12.05	12.08	12.08	12.11	12.13	12.17						
Salinity	0	0	0	0	0.0	0	0	0						
TDS	0.41	0.40	0.39	0.39	0.39	0.39	.39	.39						
REDOX (mV)	-134	-152	-166	-172	-176	-181	-183	-187						

Notes: 1035 - Initiate purge

1110 - Finish Purge, collect samples, collect MS/MSD

purge water has Grey/black color. may be slight sheen.

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-13A DATE: 10/10/05

PROJECT NAME: Vestal Water Supply

PROJECT NUMBER:

SAMPLERS: JN/JW

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: 2"

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

v = 0.0408 $(B)^2$ x (A-C) = D

v = 0.0408 ( )^2 x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
(2")	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED													
Time	8:10	8:15	8:20	8:25	8:30	8:37	8:43	8:49	8:57	9:05	9:11	9:16		
Gallons				3 1/4g.			1 3/4g.			3g.		3 1/2g.		
Depth to Water	14.40	14.41	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40		
pH	11.02	11.20	10.63	10.31	10.13	9.91	9.68	9.54	9.62	9.60	9.55	9.58		
Conductivity (mohm/cm)	1.62	1.69	1.70	1.70	1.70	1.70	1.70	1.71	1.71	1.71	1.71	1.71		
Turbidity (ntu)	-5.0	210.2	98.3	42.6	89.6	18.5	42.3	60.7	20.4	11.5	4.2	[illegible]	4.4	
Dissolved Oxygen (mg/l)	6.42	1.42	1.47	1.51	1.63	1.71	1.68	1.60	1.70	1.72	1.66	1.69		
Temperature (°C)	13.10	13.42	13.40	13.56	13.49	13.47	13.46	13.55	13.56	13.58	13.57	13.57		
Salinity	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08		
TDS	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1		
REDOX (mV)	-65	-47	-20	-10	-2	7	9	11	19	20	22	23		

Notes: Start Purging @ 8:10am
- Sample @ 9:20am
- Purged 3 1/2g.

*Recalculated Meter this morning before this well *

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

(page 1)

WELL NUMBER: 4009-14 DATE: 10/9/08

PROJECT NAME: Vestal Water Supply

PROJECT NUMBER:

SAMPLERS: JW/JW

Well I.D.	Vol. Gal./ft.
1"	0.04
2" (circled)	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

A: Total Casing and Screen Length: ________

B: Casing Internal Diameter: 2"

C: Water Level Below Top of Casing: ________

D: Volume of Water in Casing: ________

$v = 0.0408\,(B)^2 \times (A-C) = D$

$v = 0.0408\,(\quad)^2 \times (\quad - \quad) =$ ________ gal.

Emptied water meter to refill.

PARAMETER	ACCUMULATED VOLUME PURGED										53			
Time	5:00	5:05	5:11	5:16	5:21	5:26	5:31	5:36	5:41	5:47	5:48	5:59	6:04	6:10
Gallons			½ g.			1¼ g.			2¼ g.		3 g.			
Depth to Water	19.81	20.80	21.19	21.28	21.38	21.44	21.33	21.32	21.32	21.32	21.38	21.36	21.33	21.34
pH	10.81	12.46	12.87	13.05	13.26	13.37	13.53	13.64	13.76	13.83	14.00	12.77	14.03	14.06
Conductivity (mohm/cm)	0.27	0.26	0.25	0.25	0.26	0.26	0.26	0.26	0.26	0.26	0.27	0.27	0.27	0.27
Turbidity (ntu)	291.0	285.0	235.0	209.0	213.0	198.0	189.0	188.0	193.9	178.0	171.0	184.0	151.0	155.0
Dissolved Oxygen (mg/l)	3.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.17	0.00	0.00
Temperature (°C)	15.57	14.54	14.17	14.23	14.09	14.13	14.01	14.04	13.87	13.83	13.64	13.79	13.66	13.66
Salinity	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
TDS	0.19	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.18	0.18	0.18	0.18
REDOX (mV)	-134	-187	-205	-213	-222	-226	-233	-239	-244	-248	-251	-212	-256	-261

Notes: Start Purging @ 5:00pm
- Sample @ 6:25PM
- Purged 5g.

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-15 DATE: 10/10/08

PROJECT NAME: Vestal Water Supply

PROJECT NUMBER:

SAMPLERS: JW/JN

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: 2"

C: Water Level Below Top of Casing: _____

D: Volume of Water in Casing: _____

v = 0.0408 $(B)^2$ x (A-C) = D

v = 0.0408 ( )^2 x (-) = _____ gal.

Well I.D.	Vol. Gal./ft.
1"	0.04
(2")	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

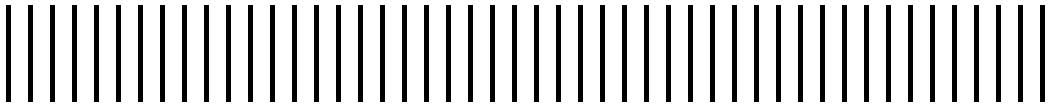
PARAMETER	ACCUMULATED VOLUME PURGED													
Time	11:10	11:15	11:20	11:25	11:31	11:37	11:43	11:48	11:53	11:59	12:04	12:10		
Gallons						19.				2½9.		39.		
Depth to Water	25.38	25.39	25.39	25.40	25.39	25.40	25.39	25.39	25.36	25.38	25.38	25.36		
pH	(Not working on meter)													→
Conductivity (mohm/cm)	0.24	0.16	0.14	0.14	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.14		
Turbidity (ntu)	69.4	310.1	243	41.5	53.8	78.1	61.3	30.4	25.6	20.6	20.4	21.3		
Dissolved Oxygen (mg/l)	11.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Temperature (°C)	13.09	12.54	12.59	12.64	12.64	12.53	12.76	12.76	12.79	12.39	12.43	12.32		
Salinity	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		
TDS	0.16	0.11	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09		
REDOX (mV)	39	-131	-184	-199	-201	-205	-213	-219	-226	-229	-228	-229		

Notes: Start Purging @ 11:10am
- Sample @ 12:12pm
- Purged 39.

New York State Department of Environmental Conservation
Vestal Water Supply Quarterly Report and Annual Groundwater Monitoring Summary

Appendix G

Analytical Data Packages



0266352 / ALB

MALCOLM PIRNIE

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 220-6881-1

SDG Number: 220-6881

Job Description: NYSDEC Standby - Vestal Water Supply

For:
Malcolm Pirnie, Inc.
43 British American Boulevard
1st Floor
Latham, NY 12110

Attention: Mr. Jeremy Wyckoff

Approved for release.
Cheryl Cascella
10/27/2008 2:10 PM

Designee for
Johanna Dubauskas
Project Manager I
johanna.dubauskas@testamericainc.com
10/27/2008

TestAmerica Connecticut Certifications and Approvals: CTDOH PH-047, MADEP CT023, RIDOH A43, NYDOH 10602, NY NELAP 10602, NHDES 2528, NJDEP CT410, ME DOH CT023, UT DOH 2032614458

TestAmerica Laboratories, Inc.
TestAmerica Connecticut 128 Long Hill Cross Road, Shelton, CT 06484
Tel (203) 929-8140 Fax (203) 929-8142 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

Case Narrative for Job: 220-6881-1

Client: MPI
Date: October 24, 2008

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Lawrence Decker
Laboratory Director

October 24, 2008
Date

Job Narrative
220-J6881-1

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC/MS VOA
Method(s) 8260B: The sample was run twice.First run had surrogate outside control limit, second run had 1,1,1-trichloroethane slightly over the calibration range. No more volume left for diluted run.

No other analytical or quality issues were noted.

FORMULAS FOR NYSDEC SAMPLE CALCULATIONS

Volatiles

(Ax)(IS)(DF)
(AIS)(RRF)(V)(% solids) = C

(AX)(IS)(VT)(1000)(DF)
(AIS)(RRF)(VA)(V)(% solids) = C (for medium level soils)

SemiVolatiles

(AX)(IS)(VE)(DF)(GPC factor is 2 if needed)
(AIS)(RRF)(volume injected)(V)(% solids) = C

Pesticides

(AX)(VE)(DF)
(RRF)(V)(% solids)(volume injected) = C

PCBs for compound/retention time

(AX)(VE)(DF)
(RRF of compound at the stated retention time)(V)(% solids)(volume injected) = C

DRO/CTETPH

(AX)(VE)(DF)
(RRF)(V)(% solids)(volume injected) = C

AX = area of the target Ion
AIS = Area of Internal standard
C = concentration as ug/L or ug/Kg
DF = dilution
IS = Internal standard concentration (ng)
RRF = average RF (from initial cal except CLP methods from continuing cal)
V = sample volume for liquids in mls or sample weight for solids in grams
VA = volume of aliquot for medium level soils
VE = volume of concentrated extract
VT = volume of methanol for volatile medium level soils

SAMPLE SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-6881-1	4009-7	Water	10/09/2008 1150	10/11/2008 1040
220-6881-2	4009-3	Water	10/09/2008 1540	10/11/2008 1040
220-6881-3	4009-9	Water	10/09/2008 1805	10/11/2008 1040
220-6881-4	4009-10	Water	10/10/2008 0935	10/11/2008 1040
220-6881-5	4009-12	Water	10/10/2008 1455	10/11/2008 1040
220-6881-6	4009-12A	Water	10/10/2008 1110	10/11/2008 1040
220-6881-7	MW-X	Water	10/10/2008 1520	10/11/2008 1040
220-6881-8	4009-11A	Water	10/10/2008 1535	10/11/2008 1040
220-6881-9	4009-11	Water	10/10/2008 1431	10/11/2008 1040
220-6881-10	4009-13A	Water	10/10/2008 0920	10/11/2008 1040
220-6881-11	4009-14	Water	10/09/2008 1825	10/11/2008 1040
220-6881-12	4009-6	Water	10/09/2008 1045	10/11/2008 1040
220-6881-13	4009-5	Water	10/09/2008 1220	10/11/2008 1040
220-6881-14	4009-13	Water	10/10/2008 1041	10/11/2008 1040
220-6881-15	4009-2	Water	10/09/2008 0920	10/11/2008 1040
220-6881-16	4009-4	Water	10/09/2008 1505	10/11/2008 1040
220-6881-17	4009-1	Water	10/09/2008 0810	10/11/2008 1040
220-6881-18	4009-8	Water	10/09/2008 1640	10/11/2008 1040
220-6881-19TB	TRIP BLANK	Water	10/10/2008 0000	10/11/2008 1040
220-6881-20	4009-15	Water	10/10/2008 1212	10/11/2008 1040

METHOD SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL CT	SW846 8260B	
Purge and Trap	TAL CT		SW846 5030B
ILM05.3 Metals	TAL BUF	ILM05.3 ILM05.3	

Lab References:

TAL BUF = TestAmerica Buffalo

TAL CT = TestAmerica Connecticut

Method References:

ILM05.3 = U.S. Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Method	Analyst	Analyst ID
SW846 8260B	Kostrzewska, Barbara	BK

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Client Sample ID: 4009-7

Lab Sample ID: 220-6881-1
Client Matrix: Water

Date Sampled: 10/09/2008 1150
Date Received: 10/11/2008 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 2.0
Date Analyzed: 10/21/2008 0231
Date Prepared: 10/21/2008 0231

Analysis Batch: 220-21276

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9128.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	2.8	J	2.1	20
Benzene	10	U	1.5	10
Bromodichloromethane	10	U	0.96	10
Bromoform	10	U	0.92	10
Bromomethane	10	U	4.2	10
Methyl Ethyl Ketone	20	U	2.2	20
Carbon disulfide	10	U	1.8	10
Carbon tetrachloride	10	U	2.1	10
Chlorobenzene	10	U	1.4	10
Chloroethane	10	U	2.1	10
Chloroform	10	U	1.3	10
Chloromethane	10	U *	2.2	10
Dibromochloromethane	10	U	1.1	10
1,1-Dichloroethane	20		2.1	10
1,2-Dichloroethane	10	U	1.4	10
1,1-Dichloroethene	4.4	J	1.7	10
1,2-Dichloropropane	10	U	1.4	10
cis-1,3-Dichloropropene	10	U	0.56	10
trans-1,3-Dichloropropene	10	U	1.1	10
Ethylbenzene	10	U	1.7	10
2-Hexanone	20	U	2.2	20
Methylene Chloride	10	U	1.6	10
methyl isobutyl ketone	20	U	0.76	20
Styrene	10	U	1.3	10
1,1,2,2-Tetrachloroethane	10	U	1.6	10
Tetrachloroethene	10	U	1.6	10
Toluene	10	U	1.4	10
1,1,1-Trichloroethane	7.2	J	1.4	10
1,1,2-Trichloroethane	10	U	1.3	10
Trichloroethene	46		1.2	10
Vinyl chloride	100		2.0	10
Xylenes, Total	10	U	4.5	10
cis-1,2-Dichloroethene	130		2.0	10
trans-1,2-Dichloroethene	10	U	1.5	10

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109	53 - 125
4-Bromofluorobenzene	81	73 - 127
Dibromofluoromethane	113	54 - 137
Toluene-d8 (Surr)	100	63 - 121

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Client Sample ID: 4009-3

Lab Sample ID: 220-6881-2
Client Matrix: Water

Date Sampled: 10/09/2008 1540
Date Received: 10/11/2008 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 10
Date Analyzed: 10/21/2008 0257
Date Prepared: 10/21/2008 0257

Analysis Batch: 220-21276

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9129.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	100	U	10	100
Benzene	50	U	7.4	50
Bromodichloromethane	50	U	4.8	50
Bromoform	50	U	4.6	50
Bromomethane	50	U	21	50
Methyl Ethyl Ketone	100	U	11	100
Carbon disulfide	50	U	9.0	50
Carbon tetrachloride	50	U	11	50
Chlorobenzene	50	U	7.2	50
Chloroethane	50	U	11	50
Chloroform	50	U	6.7	50
Chloromethane	50	U *	11	50
Dibromochloromethane	50	U	5.5	50
1,1-Dichloroethane	39	J	10	50
1,2-Dichloroethane	50	U	7.2	50
1,1-Dichloroethene	50	U	8.3	50
1,2-Dichloropropane	50	U	7.1	50
cis-1,3-Dichloropropene	50	U	2.8	50
trans-1,3-Dichloropropene	50	U	5.7	50
Ethylbenzene	50	U	8.7	50
2-Hexanone	100	U	11	100
Methylene Chloride	50	U	7.8	50
methyl isobutyl ketone	100	U	3.8	100
Styrene	50	U	6.4	50
1,1,2,2-Tetrachloroethane	50	U	8.1	50
Tetrachloroethene	50	U	8.1	50
Toluene	50	U	7.2	50
1,1,1-Trichloroethane	810		6.9	50
1,1,2-Trichloroethane	50	U	6.5	50
Trichloroethene	13	J	6.2	50
Vinyl chloride	63		9.9	50
Xylenes, Total	50	U	23	50
cis-1,2-Dichloroethene	37	J	9.9	50
trans-1,2-Dichloroethene	50	U	7.6	50

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	114	53 - 125
4-Bromofluorobenzene	83	73 - 127
Dibromofluoromethane	120	54 - 137
Toluene-d8 (Surr)	101	63 - 121

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Client Sample ID: 4009-9

Lab Sample ID: 220-6881-3
Client Matrix: Water

Date Sampled: 10/09/2008 1805
Date Received: 10/11/2008 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 10/14/2008 2009
Date Prepared: 10/14/2008 2009

Analysis Batch: 220-21048

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: W9826.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U *	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	12		0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	103	53 - 125
4-Bromofluorobenzene	78	73 - 127
Dibromofluoromethane	108	54 - 137
Toluene-d8 (Surr)	87	63 - 121

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Client Sample ID: 4009-10

Lab Sample ID: 220-6881-4
Client Matrix: Water

Date Sampled: 10/10/2008 0935
Date Received: 10/11/2008 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 10/14/2008 2035
Date Prepared: 10/14/2008 2035

Analysis Batch: 220-21048

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: W9827.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U *	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	119	53 - 125
4-Bromofluorobenzene	91	73 - 127
Dibromofluoromethane	124	54 - 137
Toluene-d8 (Surr)	98	63 - 121

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Client Sample ID: 4009-12

Lab Sample ID: 220-6881-5
Client Matrix: Water

Date Sampled: 10/10/2008 1455
Date Received: 10/11/2008 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 4.0
Date Analyzed: 10/21/2008 0326
Date Prepared: 10/21/2008 0326

Analysis Batch: 220-21276

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9130.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	40	U	4.1	40
Benzene	20	U	3.0	20
Bromodichloromethane	20	U	1.9	20
Bromoform	20	U	1.8	20
Bromomethane	20	U	8.5	20
Methyl Ethyl Ketone	40	U	4.4	40
Carbon disulfide	20	U	3.6	20
Carbon tetrachloride	20	U	4.3	20
Chlorobenzene	20	U	2.9	20
Chloroethane	20	U	4.2	20
Chloroform	20	U	2.7	20
Chloromethane	20	U *	4.4	20
Dibromochloromethane	20	U	2.2	20
1,1-Dichloroethane	10	J	4.1	20
1,2-Dichloroethane	20	U	2.9	20
1,1-Dichloroethene	11	J	3.3	20
1,2-Dichloropropane	20	U	2.8	20
cis-1,3-Dichloropropene	20	U	1.1	20
trans-1,3-Dichloropropene	20	U	2.3	20
Ethylbenzene	20	U	3.5	20
2-Hexanone	40	U	4.4	40
Methylene Chloride	20	U	3.1	20
methyl isobutyl ketone	40	U	1.5	40
Styrene	20	U	2.6	20
1,1,2,2-Tetrachloroethane	20	U	3.2	20
Tetrachloroethene	20	U	3.2	20
Toluene	20	U	2.9	20
1,1,1-Trichloroethane	200		2.8	20
1,1,2-Trichloroethane	20	U	2.6	20
Trichloroethene	43		2.5	20
Vinyl chloride	20	U	4.0	20
Xylenes, Total	20	U	9.1	20
cis-1,2-Dichloroethene	48		4.0	20
trans-1,2-Dichloroethene	20	U	3.0	20

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	111	53 - 125
4-Bromofluorobenzene	79	73 - 127
Dibromofluoromethane	116	54 - 137
Toluene-d8 (Surr)	95	63 - 121

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Client Sample ID: 4009-12A

Lab Sample ID: 220-6881-6
Client Matrix: Water

Date Sampled: 10/10/2008 1110
Date Received: 10/11/2008 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 10/21/2008 0018
Date Prepared: 10/21/2008 0018

Analysis Batch: 220-21276

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9123.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	1.6	J	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U *	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	10		1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	2.1	J	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	4.1	J	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	3.8	J	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	18		0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	120	53 - 125
4-Bromofluorobenzene	84	73 - 127
Dibromofluoromethane	118	54 - 137
Toluene-d8 (Surr)	100	63 - 121

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Client Sample ID: MW-X

Lab Sample ID: 220-6881-7
Client Matrix: Water

Date Sampled: 10/10/2008 1520
Date Received: 10/11/2008 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 4.0
Date Analyzed: 10/21/2008 0353
Date Prepared: 10/21/2008 0353

Analysis Batch: 220-21276

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9131.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	40	U	4.1	40
Benzene	20	U	3.0	20
Bromodichloromethane	20	U	1.9	20
Bromoform	20	U	1.8	20
Bromomethane	20	U	8.5	20
Methyl Ethyl Ketone	40	U	4.4	40
Carbon disulfide	20	U	3.6	20
Carbon tetrachloride	20	U	4.3	20
Chlorobenzene	20	U	2.9	20
Chloroethane	20	U	4.2	20
Chloroform	20	U	2.7	20
Chloromethane	20	U *	4.4	20
Dibromochloromethane	20	U	2.2	20
1,1-Dichloroethane	11	J	4.1	20
1,2-Dichloroethane	20	U	2.9	20
1,1-Dichloroethene	12	J	3.3	20
1,2-Dichloropropane	20	U	2.8	20
cis-1,3-Dichloropropene	20	U	1.1	20
trans-1,3-Dichloropropene	20	U	2.3	20
Ethylbenzene	20	U	3.5	20
2-Hexanone	40	U	4.4	40
Methylene Chloride	20	U	3.1	20
methyl isobutyl ketone	40	U	1.5	40
Styrene	20	U	2.6	20
1,1,2,2-Tetrachloroethane	20	U	3.2	20
Tetrachloroethene	20	U	3.2	20
Toluene	20	U	2.9	20
1,1,1-Trichloroethane	210		2.8	20
1,1,2-Trichloroethane	20	U	2.6	20
Trichloroethene	46		2.5	20
Vinyl chloride	20	U	4.0	20
Xylenes, Total	20	U	9.1	20
cis-1,2-Dichloroethene	54		4.0	20
trans-1,2-Dichloroethene	20	U	3.0	20

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	115	53 - 125
4-Bromofluorobenzene	80	73 - 127
Dibromofluoromethane	120	54 - 137
Toluene-d8 (Surr)	99	63 - 121

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Client Sample ID: 4009-11A

Lab Sample ID: 220-6881-8
Client Matrix: Water

Date Sampled: 10/10/2008 1535
Date Received: 10/11/2008 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 10/19/2008 2229
Date Prepared: 10/19/2008 2229

Analysis Batch: 220-21168

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9069.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	2.4	J B	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	106	53 - 125
4-Bromofluorobenzene	88	73 - 127
Dibromofluoromethane	110	54 - 137
Toluene-d8 (Surr)	103	63 - 121

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Client Sample ID: 4009-11

Lab Sample ID: 220-6881-9
Client Matrix: Water

Date Sampled: 10/10/2008 1431
Date Received: 10/11/2008 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 10/20/2008 0042
Date Prepared: 10/20/2008 0042

Analysis Batch: 220-21168

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9074.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	7.8	J B	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	112	53 - 125
4-Bromofluorobenzene	84	73 - 127
Dibromofluoromethane	112	54 - 137
Toluene-d8 (Surr)	100	63 - 121

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Client Sample ID: 4009-13A

Lab Sample ID: 220-6881-10
Client Matrix: Water

Date Sampled: 10/10/2008 0920
Date Received: 10/11/2008 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 10/14/2008 2250
Date Prepared: 10/14/2008 2250

Analysis Batch: 220-21048

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: W9832.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	1.4	J	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U *	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	123	53 - 125
4-Bromofluorobenzene	94	73 - 127
Dibromofluoromethane	133	54 - 137
Toluene-d8 (Surr)	97	63 - 121

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Client Sample ID: 4009-14

Lab Sample ID: 220-6881-11
Client Matrix: Water

Date Sampled: 10/09/2008 1825
Date Received: 10/11/2008 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 10/20/2008 0013
Date Prepared: 10/20/2008 0013

Analysis Batch: 220-21168

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9073.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	2.1	J B	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	107	53 - 125
4-Bromofluorobenzene	82	73 - 127
Dibromofluoromethane	108	54 - 137
Toluene-d8 (Surr)	97	63 - 121

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Client Sample ID: 4009-6

Lab Sample ID: 220-6881-12
Client Matrix: Water

Date Sampled: 10/09/2008 1045
Date Received: 10/11/2008 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 10/19/2008 2347
Date Prepared: 10/19/2008 2347

Analysis Batch: 220-21168

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9072.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	3.1	J B	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	108	53 - 125
4-Bromofluorobenzene	85	73 - 127
Dibromofluoromethane	109	54 - 137
Toluene-d8 (Surr)	101	63 - 121

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Client Sample ID: 4009-5

Lab Sample ID: 220-6881-13
Client Matrix: Water

Date Sampled: 10/09/2008 1220
Date Received: 10/11/2008 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 10/15/2008 0010
Date Prepared: 10/15/2008 0010

Analysis Batch: 220-21048

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: W9835.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	3.7	J	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	2.4	J	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U *	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	63		0.62	5.0
Vinyl chloride	12		0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	20		0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	119	53 - 125
4-Bromofluorobenzene	81	73 - 127
Dibromofluoromethane	121	54 - 137
Toluene-d8 (Surr)	89	63 - 121

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Client Sample ID: 4009-13

Lab Sample ID: 220-6881-14
Client Matrix: Water

Date Sampled: 10/10/2008 1041
Date Received: 10/11/2008 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 10/20/2008 0135
Date Prepared: 10/20/2008 0135

Analysis Batch: 220-21168

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9076.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	3.6	J B	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109	53 - 125
4-Bromofluorobenzene	80	73 - 127
Dibromofluoromethane	111	54 - 137
Toluene-d8 (Surr)	97	63 - 121

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Client Sample ID: 4009-2

Lab Sample ID: 220-6881-15
Client Matrix: Water

Date Sampled: 10/09/2008 0920
Date Received: 10/11/2008 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 10/21/2008 1838
Date Prepared: 10/21/2008 1838

Analysis Batch: 220-21243

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9153.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	1.0	J B	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	3.3	J	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	2.5	J	0.62	5.0
Vinyl chloride	15		0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	34		0.99	5.0
trans-1,2-Dichloroethene	1.0	J	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	112	53 - 125
4-Bromofluorobenzene	78	73 - 127
Dibromofluoromethane	117	54 - 137
Toluene-d8 (Surr)	98	63 - 121

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Client Sample ID: 4009-4

Lab Sample ID: 220-6881-16
Client Matrix: Water

Date Sampled: 10/09/2008 1505
Date Received: 10/11/2008 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 10/20/2008 0108
Date Prepared: 10/20/2008 0108

Analysis Batch: 220-21168

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9075.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	3.7	J B	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	8.5		0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	13		0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	112	53 - 125
4-Bromofluorobenzene	84	73 - 127
Dibromofluoromethane	114	54 - 137
Toluene-d8 (Surr)	101	63 - 121

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Client Sample ID: 4009-1

Lab Sample ID: 220-6881-17
Client Matrix: Water

Date Sampled: 10/09/2008 0810
Date Received: 10/11/2008 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 10/21/2008 0446
Date Prepared: 10/21/2008 0446

Analysis Batch: 220-21276

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9133.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	1.1	J	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U *	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	6.7		1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	1.6	J	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	2.1	J	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	3.0	J	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	117	53 - 125
4-Bromofluorobenzene	78	73 - 127
Dibromofluoromethane	120	54 - 137
Toluene-d8 (Surr)	96	63 - 121

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Client Sample ID: 4009-8

Lab Sample ID: 220-6881-18
Client Matrix: Water

Date Sampled: 10/09/2008 1640
Date Received: 10/11/2008 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 2.0
Date Analyzed: 10/20/2008 1129
Date Prepared: 10/20/2008 1129

Analysis Batch: 220-21271

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9096.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	3.5	J	2.1	20
Benzene	10	U	1.5	10
Bromodichloromethane	10	U	0.96	10
Bromoform	10	U	0.92	10
Bromomethane	10	U	4.2	10
Methyl Ethyl Ketone	20	U	2.2	20
Carbon disulfide	10	U	1.8	10
Carbon tetrachloride	10	U	2.1	10
Chlorobenzene	10	U	1.4	10
Chloroethane	10	U	2.1	10
Chloroform	10	U	1.3	10
Chloromethane	10	U	2.2	10
Dibromochloromethane	10	U	1.1	10
1,1-Dichloroethane	16		2.1	10
1,2-Dichloroethane	10	U	1.4	10
1,1-Dichloroethene	4.3	J	1.7	10
1,2-Dichloropropane	10	U	1.4	10
cis-1,3-Dichloropropene	10	U	0.56	10
trans-1,3-Dichloropropene	10	U	1.1	10
Ethylbenzene	10	U	1.7	10
2-Hexanone	20	U	2.2	20
Methylene Chloride	10	U	1.6	10
methyl isobutyl ketone	20	U	0.76	20
Styrene	10	U	1.3	10
1,1,2,2-Tetrachloroethane	10	U	1.6	10
Tetrachloroethene	10	U	1.6	10
Toluene	10	U	1.4	10
1,1,1-Trichloroethane	130		1.4	10
1,1,2-Trichloroethane	10	U	1.3	10
Trichloroethene	85		1.2	10
Vinyl chloride	17		2.0	10
Xylenes, Total	10	U	4.5	10
cis-1,2-Dichloroethene	130		2.0	10
trans-1,2-Dichloroethene	10	U	1.5	10

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	107	53 - 125
4-Bromofluorobenzene	83	73 - 127
Dibromofluoromethane	109	54 - 137
Toluene-d8 (Surr)	101	63 - 121

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 220-6881-19TB
Client Matrix: Water

Date Sampled: 10/10/2008 0000
Date Received: 10/11/2008 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 10/21/2008 0512
Date Prepared: 10/21/2008 0512

Analysis Batch: 220-21276

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9134.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	1.4	J	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U *	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	1.5	J	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	120	53 - 125
4-Bromofluorobenzene	80	73 - 127
Dibromofluoromethane	123	54 - 137
Toluene-d8 (Surr)	99	63 - 121

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Client Sample ID: 4009-15

Lab Sample ID: 220-6881-20
Client Matrix: Water

Date Sampled: 10/10/2008 1212
Date Received: 10/11/2008 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 10/20/2008 1744
Date Prepared: 10/20/2008 1744

Analysis Batch: 220-21271

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9110.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	2.0	J	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110	53 - 125
4-Bromofluorobenzene	82	73 - 127
Dibromofluoromethane	115	54 - 137
Toluene-d8 (Surr)	99	63 - 121

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DBFM %Rec	12DCE %Rec	TOL %Rec	BFB %Rec
220-6881-1	4009-7	113	109	100	81
220-6881-2	4009-3	120	114	101	83
220-6881-3	4009-9	108	103	87	78
220-6881-4	4009-10	124	119	98	91
220-6881-5	4009-12	116	111	95	79
220-6881-6	4009-12A	118	120	100	84
220-6881-7	MW-X	120	115	99	80
220-6881-8	4009-11A	110	106	103	88
220-6881-9	4009-11	112	112	100	84
220-6881-10	4009-13A	133	123	97	94
220-6881-11	4009-14	108	107	97	82
220-6881-12	4009-6	109	108	101	85
220-6881-13	4009-5	121	119	89	81
220-6881-14	4009-13	111	109	97	80
220-6881-15	4009-2	117	112	98	78
220-6881-16	4009-4	114	112	101	84
220-6881-17	4009-1	120	117	96	78
220-6881-18	4009-8	109	107	101	83
220-6881-19	TRIP BLANK	123	120	99	80
220-6881-20	4009-15	115	110	99	82
MB 220-21048/3		108	108	84	80
MB 220-21168/3		96	96	100	87
MB 220-21243/3		110	109	100	83
MB 220-21271/3		102	104	97	82
MB 220-21276/3		109	109	98	82
LCS 220-21048/2		106	103	85	75
LCS 220-21168/2		97	94	105	93
LCS 220-21243/2		101	97	100	82
LCS 220-21271/2		98	97	99	83

Surrogate	Acceptance Limits
DBFM = Dibromofluoromethane	54-137
12DCE = 1,2-Dichloroethane-d4 (Surr)	53-125
TOL = Toluene-d8 (Surr)	63-121
BFB = 4-Bromofluorobenzene	73-127

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DBFM %Rec	12DCE %Rec	TOL %Rec	BFB %Rec
LCS 220-21276/2		105	101	99	81
MSB 220-21271/7		93	88	104	92
MSB 220-21276/6		99	98	99	79
220-6881-6 MS	4009-12A MS	95	91	96	81
220-6901-C-4 MS		93	87	103	92
220-6881-6 MSD	4009-12A MSD	97	93	100	86
220-6901-C-4 MSD		93	89	104	94

Surrogate	Acceptance Limits
DBFM = Dibromofluoromethane	54-137
12DCE = 1,2-Dichloroethane-d4 (Surr)	53-125
TOL = Toluene-d8 (Surr)	63-121
BFB = 4-Bromofluorobenzene	73-127

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Method Blank - Batch: 220-21048

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-21048/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/14/2008 1539
Date Prepared: 10/14/2008 1539

Analysis Batch: 220-21048
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: W9816.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	10	U	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	108	53 - 125
4-Bromofluorobenzene	80	73 - 127
Dibromofluoromethane	108	54 - 137
Toluene-d8 (Surr)	84	63 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Lab Control Spike - Batch: 220-21048

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-21048/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/14/2008 1446
Date Prepared: 10/14/2008 1446

Analysis Batch: 220-21048
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: W9814.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	10.0	9.97	100	18 - 263	J
Benzene	10.0	9.44	94	68 - 126	
Bromodichloromethane	10.0	9.29	93	67 - 118	
Bromoform	10.0	8.34	83	63 - 115	
Bromomethane	10.0	8.88	89	27 - 171	
Methyl Ethyl Ketone	10.0	10.2	102	30 - 222	
Carbon disulfide	10.0	7.69	77	44 - 142	
Carbon tetrachloride	10.0	11.1	111	56 - 131	
Chlorobenzene	10.0	8.00	80	71 - 114	
Chloroethane	10.0	11.4	114	53 - 167	
Chloroform	10.0	11.1	111	70 - 124	
Chloromethane	10.0	9.29	93	43 - 134	
Dibromochloromethane	10.0	9.26	93	65 - 114	
1,1-Dichloroethane	10.0	9.67	97	67 - 121	
1,2-Dichloroethane	10.0	10.8	108	68 - 124	
1,1-Dichloroethene	10.0	9.49	95	57 - 137	
1,2-Dichloropropane	10.0	8.66	87	69 - 122	
cis-1,3-Dichloropropene	10.0	8.49	85	60 - 122	
trans-1,3-Dichloropropene	10.0	8.58	86	55 - 126	
Ethylbenzene	10.0	8.23	82	71 - 115	
2-Hexanone	10.0	7.27	73	54 - 179	J
Methylene Chloride	10.0	9.87	99	61 - 129	
methyl isobutyl ketone	10.0	7.93	79	61 - 140	J
Styrene	10.0	6.65	66	69 - 112	*
1,1,2,2-Tetrachloroethane	10.0	8.15	81	66 - 129	
Tetrachloroethene	10.0	8.62	86	62 - 118	
Toluene	10.0	7.88	79	70 - 116	
1,1,1-Trichloroethane	10.0	11.1	111	60 - 128	
1,1,2-Trichloroethane	10.0	10.1	101	70 - 119	
Trichloroethene	10.0	9.43	94	58 - 125	
Vinyl chloride	10.0	8.25	83	51 - 139	
Xylenes, Total	30.0	23.0	77	66 - 118	
cis-1,2-Dichloroethene	10.0	8.88	89	65 - 120	
trans-1,2-Dichloroethene	10.0	9.48	95	57 - 129	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	103	53 - 125
4-Bromofluorobenzene	75	73 - 127
Dibromofluoromethane	106	54 - 137
Toluene-d8 (Surr)	85	63 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Method Blank - Batch: 220-21168

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-21168/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/19/2008 2044
Date Prepared: 10/19/2008 2044

Analysis Batch: 220-21168
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9065.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	1.4	J	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96	53 - 125
4-Bromofluorobenzene	87	73 - 127
Dibromofluoromethane	96	54 - 137
Toluene-d8 (Surr)	100	63 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Lab Control Spike - Batch: 220-21168

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-21168/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/19/2008 1930
Date Prepared: 10/19/2008 1930

Analysis Batch: 220-21168
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9063.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	10.0	14.3	143	18 - 263	
Benzene	10.0	9.58	96	68 - 126	
Bromodichloromethane	10.0	10.1	101	67 - 118	
Bromoform	10.0	9.67	97	63 - 115	
Bromomethane	10.0	11.8	118	27 - 171	
Methyl Ethyl Ketone	10.0	12.6	126	30 - 222	
Carbon disulfide	10.0	7.46	75	44 - 142	
Carbon tetrachloride	10.0	10.5	105	56 - 131	
Chlorobenzene	10.0	9.61	96	71 - 114	
Chloroethane	10.0	13.9	139	53 - 167	
Chloroform	10.0	10.5	105	70 - 124	
Chloromethane	10.0	12.6	126	43 - 134	
Dibromochloromethane	10.0	9.99	100	65 - 114	
1,1-Dichloroethane	10.0	9.47	95	67 - 121	
1,2-Dichloroethane	10.0	9.81	98	68 - 124	
1,1-Dichloroethene	10.0	8.93	89	57 - 137	
1,2-Dichloropropane	10.0	9.79	98	69 - 122	
cis-1,3-Dichloropropene	10.0	9.05	91	60 - 122	
trans-1,3-Dichloropropene	10.0	9.69	97	55 - 126	
Ethylbenzene	10.0	10.4	104	71 - 115	
2-Hexanone	10.0	9.20	92	54 - 179	J
Methylene Chloride	10.0	8.96	90	61 - 129	
methyl isobutyl ketone	10.0	11.1	111	61 - 140	
Styrene	10.0	8.45	85	69 - 112	
1,1,2,2-Tetrachloroethane	10.0	10.0	100	66 - 129	
Tetrachloroethene	10.0	9.56	96	62 - 118	
Toluene	10.0	10.5	105	70 - 116	
1,1,1-Trichloroethane	10.0	10.2	102	60 - 128	
1,1,2-Trichloroethane	10.0	10.1	101	70 - 119	
Trichloroethene	10.0	10.1	101	58 - 125	
Vinyl chloride	10.0	11.2	112	51 - 139	
Xylenes, Total	30.0	28.1	94	66 - 118	
cis-1,2-Dichloroethene	10.0	9.69	97	65 - 120	
trans-1,2-Dichloroethene	10.0	9.10	91	57 - 129	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94	53 - 125
4-Bromofluorobenzene	93	73 - 127
Dibromofluoromethane	97	54 - 137
Toluene-d8 (Surr)	105	63 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Method Blank - Batch: 220-21243

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-21243/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/21/2008 1812
Date Prepared: 10/21/2008 1812

Analysis Batch: 220-21243
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9152.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	1.3	J	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109	53 - 125
4-Bromofluorobenzene	83	73 - 127
Dibromofluoromethane	110	54 - 137
Toluene-d8 (Surr)	100	63 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Lab Control Spike - Batch: 220-21243

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-21243/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/21/2008 1719
Date Prepared: 10/21/2008 1719

Analysis Batch: 220-21243
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9150.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	10.0	14.0	140	18 - 263	
Benzene	10.0	9.59	96	68 - 126	
Bromodichloromethane	10.0	10.1	101	67 - 118	
Bromoform	10.0	9.57	96	63 - 115	
Bromomethane	10.0	9.98	100	27 - 171	
Methyl Ethyl Ketone	10.0	11.4	114	30 - 222	
Carbon disulfide	10.0	7.18	72	44 - 142	
Carbon tetrachloride	10.0	9.74	97	56 - 131	
Chlorobenzene	10.0	9.78	98	71 - 114	
Chloroethane	10.0	11.1	111	53 - 167	
Chloroform	10.0	10.9	109	70 - 124	
Chloromethane	10.0	12.6	126	43 - 134	
Dibromochloromethane	10.0	9.60	96	65 - 114	
1,1-Dichloroethane	10.0	9.64	96	67 - 121	
1,2-Dichloroethane	10.0	10.1	101	68 - 124	
1,1-Dichloroethene	10.0	9.19	92	57 - 137	
1,2-Dichloropropane	10.0	9.75	98	69 - 122	
cis-1,3-Dichloropropene	10.0	7.87	79	60 - 122	
trans-1,3-Dichloropropene	10.0	8.82	88	55 - 126	
Ethylbenzene	10.0	10.4	104	71 - 115	
2-Hexanone	10.0	7.81	78	54 - 179	J
Methylene Chloride	10.0	9.65	97	61 - 129	
methyl isobutyl ketone	10.0	9.67	97	61 - 140	J
Styrene	10.0	7.87	79	69 - 112	
1,1,2,2-Tetrachloroethane	10.0	9.85	98	66 - 129	
Tetrachloroethene	10.0	9.21	92	62 - 118	
Toluene	10.0	10.3	103	70 - 116	
1,1,1-Trichloroethane	10.0	9.80	98	60 - 128	
1,1,2-Trichloroethane	10.0	10.5	105	70 - 119	
Trichloroethene	10.0	9.85	99	58 - 125	
Vinyl chloride	10.0	11.1	111	51 - 139	
Xylenes, Total	30.0	26.4	88	66 - 118	
cis-1,2-Dichloroethene	10.0	9.11	91	65 - 120	
trans-1,2-Dichloroethene	10.0	9.04	90	57 - 129	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97	53 - 125
4-Bromofluorobenzene	82	73 - 127
Dibromofluoromethane	101	54 - 137
Toluene-d8 (Surr)	100	63 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Method Blank - Batch: 220-21271

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-21271/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/20/2008 1103
Date Prepared: 10/20/2008 1103

Analysis Batch: 220-21271
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9095.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	10	U	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	104	53 - 125
4-Bromofluorobenzene	82	73 - 127
Dibromofluoromethane	102	54 - 137
Toluene-d8 (Surr)	97	63 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Lab Control Spike - Batch: 220-21271

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-21271/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/20/2008 1010
Date Prepared: 10/20/2008 1010

Analysis Batch: 220-21271
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9093.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	10.0	12.9	129	18 - 263	
Benzene	10.0	8.76	88	68 - 126	
Bromodichloromethane	10.0	9.72	97	67 - 118	
Bromoform	10.0	8.97	90	63 - 115	
Bromomethane	10.0	10.1	101	27 - 171	
Methyl Ethyl Ketone	10.0	11.5	115	30 - 222	
Carbon disulfide	10.0	6.73	67	44 - 142	
Carbon tetrachloride	10.0	9.41	94	56 - 131	
Chlorobenzene	10.0	8.92	89	71 - 114	
Chloroethane	10.0	10.6	106	53 - 167	
Chloroform	10.0	10.1	101	70 - 124	
Chloromethane	10.0	11.8	118	43 - 134	
Dibromochloromethane	10.0	9.00	90	65 - 114	
1,1-Dichloroethane	10.0	8.94	89	67 - 121	
1,2-Dichloroethane	10.0	9.37	94	68 - 124	
1,1-Dichloroethene	10.0	8.25	82	57 - 137	
1,2-Dichloropropane	10.0	9.06	91	69 - 122	
cis-1,3-Dichloropropene	10.0	7.75	77	60 - 122	
trans-1,3-Dichloropropene	10.0	8.36	84	55 - 126	
Ethylbenzene	10.0	9.47	95	71 - 115	
2-Hexanone	10.0	7.63	76	54 - 179	J
Methylene Chloride	10.0	8.04	80	61 - 129	
methyl isobutyl ketone	10.0	9.66	97	61 - 140	J
Styrene	10.0	7.36	74	69 - 112	
1,1,2,2-Tetrachloroethane	10.0	9.11	91	66 - 129	
Tetrachloroethene	10.0	8.69	87	62 - 118	
Toluene	10.0	9.47	95	70 - 116	
1,1,1-Trichloroethane	10.0	9.40	94	60 - 128	
1,1,2-Trichloroethane	10.0	9.69	97	70 - 119	
Trichloroethene	10.0	9.17	92	58 - 125	
Vinyl chloride	10.0	10.9	109	51 - 139	
Xylenes, Total	30.0	24.7	82	66 - 118	
cis-1,2-Dichloroethene	10.0	8.61	86	65 - 120	
trans-1,2-Dichloroethene	10.0	8.23	82	57 - 129	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97	53 - 125
4-Bromofluorobenzene	83	73 - 127
Dibromofluoromethane	98	54 - 137
Toluene-d8 (Surr)	99	63 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Matrix Spike Blank - Batch: 220-21271

Method: 8260B
Preparation: 5030B

Lab Sample ID: MSB 220-21271/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/20/2008 1249
Date Prepared: 10/20/2008 1249

Analysis Batch: 220-21271
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9099.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	20.0	19.0	95	18 - 263	
Benzene	20.0	16.2	81	68 - 126	
Bromodichloromethane	20.0	16.5	83	67 - 118	
Bromoform	20.0	17.3	87	63 - 115	
Bromomethane	20.0	17.7	89	27 - 171	
Methyl Ethyl Ketone	20.0	20.6	103	30 - 222	
Carbon disulfide	20.0	15.0	75	44 - 142	
Carbon tetrachloride	20.0	15.7	78	56 - 131	
Chlorobenzene	20.0	16.4	82	71 - 114	
Chloroethane	20.0	16.7	83	53 - 167	
Chloroform	20.0	15.9	80	70 - 124	
Chloromethane	20.0	18.9	94	43 - 134	
Dibromochloromethane	20.0	17.0	85	65 - 114	
1,1-Dichloroethane	20.0	15.9	80	67 - 121	
1,2-Dichloroethane	20.0	16.2	81	68 - 124	
1,1-Dichloroethene	20.0	15.2	76	57 - 137	
1,2-Dichloropropane	20.0	16.8	84	69 - 122	
cis-1,3-Dichloropropene	20.0	15.9	79	60 - 122	
trans-1,3-Dichloropropene	20.0	16.1	81	55 - 126	
Ethylbenzene	20.0	18.3	92	71 - 115	
2-Hexanone	20.0	18.5	92	54 - 179	
Methylene Chloride	20.0	15.4	77	61 - 129	
methyl isobutyl ketone	20.0	18.0	90	61 - 140	
Styrene	20.0	15.8	79	69 - 112	
1,1,2,2-Tetrachloroethane	20.0	18.0	90	66 - 129	
Tetrachloroethene	20.0	15.9	79	62 - 118	
Toluene	20.0	17.9	89	70 - 116	
1,1,1-Trichloroethane	20.0	15.8	79	60 - 128	
1,1,2-Trichloroethane	20.0	17.4	87	70 - 119	
Trichloroethene	20.0	16.6	83	58 - 125	
Vinyl chloride	20.0	17.8	89	51 - 139	
Xylenes, Total	60.0	48.1	80	66 - 118	
cis-1,2-Dichloroethene	20.0	16.8	84	65 - 120	
trans-1,2-Dichloroethene	20.0	16.2	81	57 - 129	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	88	53 - 125
4-Bromofluorobenzene	92	73 - 127
Dibromofluoromethane	93	54 - 137
Toluene-d8 (Surr)	104	63 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 220-21271

Method: 8260B
Preparation: 5030B

MS Lab Sample ID: 220-6901-C-4 MS
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/20/2008 1317
Date Prepared: 10/20/2008 1317

Analysis Batch: 220-21271
Prep Batch: N/A

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9100.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

MSD Lab Sample ID: 220-6901-C-4 MSD
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/20/2008 1345
Date Prepared: 10/20/2008 1345

Analysis Batch: 220-21271
Prep Batch: N/A

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9101.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acetone	83	80	18 - 263	3	20		
Benzene	81	80	68 - 126	2	20		
Bromodichloromethane	79	78	67 - 118	1	20		
Bromoform	83	83	63 - 115	0	20		
Bromomethane	92	91	27 - 171	1	20		
Methyl Ethyl Ketone	97	98	30 - 222	2	20		
Carbon disulfide	76	75	44 - 142	2	20		
Carbon tetrachloride	78	76	56 - 131	2	20		
Chlorobenzene	79	78	71 - 114	1	20		
Chloroethane	80	79	53 - 167	1	20		
Chloroform	77	77	70 - 124	1	20		
Chloromethane	90	91	43 - 134	1	20		
Dibromochloromethane	81	82	65 - 114	2	20		
1,1-Dichloroethane	78	77	67 - 121	2	20		
1,2-Dichloroethane	78	78	68 - 124	0	20		
1,1-Dichloroethene	78	75	57 - 137	4	20		
1,2-Dichloropropane	81	81	69 - 122	0	20		
cis-1,3-Dichloropropene	73	73	60 - 122	1	20		
trans-1,3-Dichloropropene	79	79	55 - 126	1	20		
Ethylbenzene	92	91	71 - 115	1	20		
2-Hexanone	92	94	54 - 179	3	20		
Methylene Chloride	73	75	61 - 129	2	20		
methyl isobutyl ketone	88	90	61 - 140	3	20		
Styrene	78	77	69 - 112	1	20		
1,1,2,2-Tetrachloroethane	85	89	66 - 129	4	20		
Tetrachloroethene	80	77	62 - 118	5	20		
Toluene	89	86	70 - 116	3	20		
1,1,1-Trichloroethane	79	76	60 - 128	4	20		
1,1,2-Trichloroethane	82	84	70 - 119	2	20		
Trichloroethene	81	80	58 - 125	2	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 220-21271

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	220-6901-C-4 MS	Analysis Batch: 220-21271	Instrument ID: HP 6890/5973 GC/MS
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: V9100.D
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	10/20/2008 1317		Final Weight/Volume: 5 mL
Date Prepared:	10/20/2008 1317		

MSD Lab Sample ID:	220-6901-C-4 MSD	Analysis Batch: 220-21271	Instrument ID: HP 6890/5973 GC/MS
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: V9101.D
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	10/20/2008 1345		Final Weight/Volume: 5 mL
Date Prepared:	10/20/2008 1345		

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Vinyl chloride	86	79	51 - 139	8	20		
Xylenes, Total	79	78	66 - 118	1	20		
cis-1,2-Dichloroethene	83	82	65 - 120	1	20		
trans-1,2-Dichloroethene	80	79	57 - 129	1	20		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	87	89	53 - 125
4-Bromofluorobenzene	92	94	73 - 127
Dibromofluoromethane	93	93	54 - 137
Toluene-d8 (Surr)	103	104	63 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Matrix Spike/
Matrix Spike Duplicate Data Report - Batch: 220-21271

Method: 8260B
Preparation: 5030B

MS Lab Sample ID: 220-6901-C-4 MS
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/20/2008 1317
Date Prepared: 10/20/2008 1317

Units: ug/L

MSD Lab Sample ID: 220-6901-C-4 MSD
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/20/2008 1345
Date Prepared: 10/20/2008 1345

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Acetone	2.4	J	20.0	20.0	18.9	18.4
Benzene	5.0	U	20.0	20.0	16.2	15.9
Bromodichloromethane	5.0	U	20.0	20.0	15.8	15.7
Bromoform	5.0	U	20.0	20.0	16.7	16.7
Bromomethane	5.0	U	20.0	20.0	18.3	18.2
Methyl Ethyl Ketone	10	U	20.0	20.0	19.3	19.6
Carbon disulfide	5.0	U	20.0	20.0	15.3	15.0
Carbon tetrachloride	5.0	U	20.0	20.0	15.5	15.2
Chlorobenzene	5.0	U	20.0	20.0	15.8	15.7
Chloroethane	5.0	U	20.0	20.0	16.0	15.7
Chloroform	0.75	J	20.0	20.0	16.2	16.1
Chloromethane	5.0	U	20.0	20.0	18.0	18.1
Dibromochloromethane	5.0	U	20.0	20.0	16.1	16.4
1,1-Dichloroethane	5.0	U	20.0	20.0	15.7	15.4
1,2-Dichloroethane	5.0	U	20.0	20.0	15.7	15.6
1,1-Dichloroethene	5.0	U	20.0	20.0	15.6	14.9
1,2-Dichloropropane	5.0	U	20.0	20.0	16.3	16.3
cis-1,3-Dichloropropene	5.0	U	20.0	20.0	14.6	14.7
trans-1,3-Dichloropropene	5.0	U	20.0	20.0	15.7	15.8
Ethylbenzene	5.0	U	20.0	20.0	18.4	18.3
2-Hexanone	10	U	20.0	20.0	18.4	18.9
Methylene Chloride	5.0	U	20.0	20.0	14.7	15.0
methyl isobutyl ketone	10	U	20.0	20.0	17.6	18.1
Styrene	5.0	U	20.0	20.0	15.5	15.4
1,1,2,2-Tetrachloroethane	5.0	U	20.0	20.0	17.0	17.7
Tetrachloroethene	5.0	U	20.0	20.0	16.0	15.3
Toluene	5.0	U	20.0	20.0	17.8	17.3
1,1,1-Trichloroethane	5.0	U	20.0	20.0	15.7	15.1
1,1,2-Trichloroethane	5.0	U	20.0	20.0	16.5	16.8
Trichloroethene	5.0	U	20.0	20.0	16.3	16.0
Vinyl chloride	5.0	U	20.0	20.0	17.1	15.8
Xylenes, Total	5.0	U	60.0	60.0	47.4	47.1
cis-1,2-Dichloroethene	5.0	U	20.0	20.0	16.5	16.3
trans-1,2-Dichloroethene	5.0	U	20.0	20.0	16.0	15.9

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Method Blank - Batch: 220-21276

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-21276/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/20/2008 2259
Date Prepared: 10/20/2008 2259

Analysis Batch: 220-21276
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9120.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	10	U	1.0	10
Benzene	5.0	U	0.74	5.0
Bromodichloromethane	5.0	U	0.48	5.0
Bromoform	5.0	U	0.46	5.0
Bromomethane	5.0	U	2.1	5.0
Methyl Ethyl Ketone	10	U	1.1	10
Carbon disulfide	5.0	U	0.90	5.0
Carbon tetrachloride	5.0	U	1.1	5.0
Chlorobenzene	5.0	U	0.72	5.0
Chloroethane	5.0	U	1.1	5.0
Chloroform	5.0	U	0.67	5.0
Chloromethane	5.0	U	1.1	5.0
Dibromochloromethane	5.0	U	0.55	5.0
1,1-Dichloroethane	5.0	U	1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	5.0	U	0.83	5.0
1,2-Dichloropropane	5.0	U	0.71	5.0
cis-1,3-Dichloropropene	5.0	U	0.28	5.0
trans-1,3-Dichloropropene	5.0	U	0.57	5.0
Ethylbenzene	5.0	U	0.87	5.0
2-Hexanone	10	U	1.1	10
Methylene Chloride	5.0	U	0.78	5.0
methyl isobutyl ketone	10	U	0.38	10
Styrene	5.0	U	0.64	5.0
1,1,2,2-Tetrachloroethane	5.0	U	0.81	5.0
Tetrachloroethene	5.0	U	0.81	5.0
Toluene	5.0	U	0.72	5.0
1,1,1-Trichloroethane	5.0	U	0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0	U	0.62	5.0
Vinyl chloride	5.0	U	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	5.0	U	0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109	53 - 125
4-Bromofluorobenzene	82	73 - 127
Dibromofluoromethane	109	54 - 137
Toluene-d8 (Surr)	98	63 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Lab Control Spike - Batch: 220-21276

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-21276/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/20/2008 2151
Date Prepared: 10/20/2008 2151

Analysis Batch: 220-21276
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9118.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	10.0	13.8	138	18 - 263	
Benzene	10.0	9.88	99	68 - 126	
Bromodichloromethane	10.0	10.8	108	67 - 118	
Bromoform	10.0	9.77	98	63 - 115	
Bromomethane	10.0	13.0	130	27 - 171	
Methyl Ethyl Ketone	10.0	11.2	112	30 - 222	
Carbon disulfide	10.0	8.02	80	44 - 142	
Carbon tetrachloride	10.0	11.0	110	56 - 131	
Chlorobenzene	10.0	10.1	101	71 - 114	
Chloroethane	10.0	16.4	164	53 - 167	
Chloroform	10.0	11.2	112	70 - 124	
Chloromethane	10.0	13.6	136	43 - 134	*
Dibromochloromethane	10.0	10.1	101	65 - 114	
1,1-Dichloroethane	10.0	10.1	101	67 - 121	
1,2-Dichloroethane	10.0	10.7	107	68 - 124	
1,1-Dichloroethene	10.0	9.61	96	57 - 137	
1,2-Dichloropropane	10.0	10.0	100	69 - 122	
cis-1,3-Dichloropropene	10.0	8.12	81	60 - 122	
trans-1,3-Dichloropropene	10.0	8.99	90	55 - 126	
Ethylbenzene	10.0	10.5	105	71 - 115	
2-Hexanone	10.0	7.96	80	54 - 179	J
Methylene Chloride	10.0	9.91	99	61 - 129	
methyl isobutyl ketone	10.0	9.62	96	61 - 140	J
Styrene	10.0	7.72	77	69 - 112	
1,1,2,2-Tetrachloroethane	10.0	10.2	102	66 - 129	
Tetrachloroethene	10.0	9.56	96	62 - 118	
Toluene	10.0	10.5	105	70 - 116	
1,1,1-Trichloroethane	10.0	11.1	111	60 - 128	
1,1,2-Trichloroethane	10.0	11.0	110	70 - 119	
Trichloroethene	10.0	10.4	104	58 - 125	
Vinyl chloride	10.0	12.5	125	51 - 139	
Xylenes, Total	30.0	26.8	89	66 - 118	
cis-1,2-Dichloroethene	10.0	8.99	90	65 - 120	
trans-1,2-Dichloroethene	10.0	9.14	91	57 - 129	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101	53 - 125
4-Bromofluorobenzene	81	73 - 127
Dibromofluoromethane	105	54 - 137
Toluene-d8 (Surr)	99	63 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Matrix Spike Blank - Batch: 220-21276

Method: 8260B
Preparation: 5030B

Lab Sample ID: MSB 220-21276/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/21/2008 0045
Date Prepared: 10/21/2008 0045

Analysis Batch: 220-21276
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9124.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	20.0	18.2	91	18 - 263	
Benzene	20.0	18.7	94	68 - 126	
Bromodichloromethane	20.0	19.5	98	67 - 118	
Bromoform	20.0	19.4	97	63 - 115	
Bromomethane	20.0	16.2	81	27 - 171	
Methyl Ethyl Ketone	20.0	19.8	99	30 - 222	
Carbon disulfide	20.0	19.3	97	44 - 142	
Carbon tetrachloride	20.0	19.6	98	56 - 131	
Chlorobenzene	20.0	18.5	92	71 - 114	
Chloroethane	20.0	26.2	131	53 - 167	
Chloroform	20.0	19.0	95	70 - 124	
Chloromethane	20.0	18.4	92	43 - 134	
Dibromochloromethane	20.0	19.0	95	65 - 114	
1,1-Dichloroethane	20.0	19.0	95	67 - 121	
1,2-Dichloroethane	20.0	19.9	100	68 - 124	
1,1-Dichloroethene	20.0	18.3	91	57 - 137	
1,2-Dichloropropane	20.0	18.3	91	69 - 122	
cis-1,3-Dichloropropene	20.0	15.8	79	60 - 122	
trans-1,3-Dichloropropene	20.0	16.6	83	55 - 126	
Ethylbenzene	20.0	21.1	105	71 - 115	
2-Hexanone	20.0	16.2	81	54 - 179	
Methylene Chloride	20.0	18.5	92	61 - 129	
methyl isobutyl ketone	20.0	16.1	80	61 - 140	
Styrene	20.0	16.9	84	69 - 112	
1,1,2,2-Tetrachloroethane	20.0	19.0	95	66 - 129	
Tetrachloroethene	20.0	18.0	90	62 - 118	
Toluene	20.0	19.9	100	70 - 116	
1,1,1-Trichloroethane	20.0	19.7	99	60 - 128	
1,1,2-Trichloroethane	20.0	19.5	98	70 - 119	
Trichloroethene	20.0	19.6	98	58 - 125	
Vinyl chloride	20.0	18.0	90	51 - 139	
Xylenes, Total	60.0	50.8	85	66 - 118	
cis-1,2-Dichloroethene	20.0	17.7	88	65 - 120	
trans-1,2-Dichloroethene	20.0	18.1	91	57 - 129	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98	53 - 125
4-Bromofluorobenzene	79	73 - 127
Dibromofluoromethane	99	54 - 137
Toluene-d8 (Surr)	99	63 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 220-21276

Method: 8260B
Preparation: 5030B

MS Lab Sample ID: 220-6881-6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/21/2008 0111
Date Prepared: 10/21/2008 0111

Analysis Batch: 220-21276
Prep Batch: N/A

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9125.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

MSD Lab Sample ID: 220-6881-6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/21/2008 0138
Date Prepared: 10/21/2008 0138

Analysis Batch: 220-21276
Prep Batch: N/A

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V9126.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acetone	83	90	18 - 263	7	20		
Benzene	96	93	68 - 126	3	20		
Bromodichloromethane	100	96	67 - 118	4	20		
Bromoform	99	95	63 - 115	5	20		
Bromomethane	88	81	27 - 171	8	20		
Methyl Ethyl Ketone	100	100	30 - 222	0	20		
Carbon disulfide	99	97	44 - 142	2	20		
Carbon tetrachloride	99	98	56 - 131	1	20		
Chlorobenzene	97	93	71 - 114	4	20		
Chloroethane	123	125	53 - 167	1	20		
Chloroform	98	94	70 - 124	4	20		
Chloromethane	89	88	43 - 134	2	20		
Dibromochloromethane	100	96	65 - 114	5	20		
1,1-Dichloroethane	91	86	67 - 121	4	20		
1,2-Dichloroethane	99	95	68 - 124	5	20		
1,1-Dichloroethene	91	89	57 - 137	2	20		
1,2-Dichloropropane	96	94	69 - 122	2	20		
cis-1,3-Dichloropropene	76	74	60 - 122	2	20		
trans-1,3-Dichloropropene	89	86	55 - 126	3	20		
Ethylbenzene	108	104	71 - 115	4	20		
2-Hexanone	86	88	54 - 179	2	20		
Methylene Chloride	96	92	61 - 129	4	20		
methyl isobutyl ketone	84	84	61 - 140	1	20		
Styrene	90	86	69 - 112	4	20		
1,1,2,2-Tetrachloroethane	97	95	66 - 129	2	20		
Tetrachloroethene	91	91	62 - 118	1	20		
Toluene	105	101	70 - 116	4	20		
1,1,1-Trichloroethane	96	93	60 - 128	3	20		
1,1,2-Trichloroethane	99	97	70 - 119	2	20		
Trichloroethene	97	95	58 - 125	2	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 220-21276

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	220-6881-6	Analysis Batch: 220-21276	Instrument ID: HP 6890/5973 GC/MS
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: V9125.D
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	10/21/2008 0111		Final Weight/Volume: 5 mL
Date Prepared:	10/21/2008 0111		

MSD Lab Sample ID:	220-6881-6	Analysis Batch: 220-21276	Instrument ID: HP 6890/5973 GC/MS
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: V9126.D
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	10/21/2008 0138		Final Weight/Volume: 5 mL
Date Prepared:	10/21/2008 0138		

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Vinyl chloride	92	92	51 - 139	0	20		
Xylenes, Total	90	87	66 - 118	4	20		
cis-1,2-Dichloroethene	97	90	65 - 120	4	20		
trans-1,2-Dichloroethene	94	93	57 - 129	2	20		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	91	93	53 - 125
4-Bromofluorobenzene	81	86	73 - 127
Dibromofluoromethane	95	97	54 - 137
Toluene-d8 (Surr)	96	100	63 - 121

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Matrix Spike/
Matrix Spike Duplicate Data Report - Batch: 220-21276

Method: 8260B
Preparation: 5030B

MS Lab Sample ID: 220-6881-6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/21/2008 0111
Date Prepared: 10/21/2008 0111

Units: ug/L

MSD Lab Sample ID: 220-6881-6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 10/21/2008 0138
Date Prepared: 10/21/2008 0138

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Acetone	1.6	J	20.0	20.0	18.1	19.5
Benzene	5.0	U	20.0	20.0	19.2	18.6
Bromodichloromethane	5.0	U	20.0	20.0	20.1	19.2
Bromoform	5.0	U	20.0	20.0	19.9	19.0
Bromomethane	5.0	U	20.0	20.0	17.6	16.3
Methyl Ethyl Ketone	10	U	20.0	20.0	20.0	20.0
Carbon disulfide	5.0	U	20.0	20.0	19.7	19.3
Carbon tetrachloride	5.0	U	20.0	20.0	19.8	19.5
Chlorobenzene	5.0	U	20.0	20.0	19.3	18.6
Chloroethane	5.0	U	20.0	20.0	24.7	25.1
Chloroform	5.0	U	20.0	20.0	19.5	18.7
Chloromethane	5.0	U	20.0	20.0	17.8	17.5
Dibromochloromethane	5.0	U	20.0	20.0	20.1	19.2
1,1-Dichloroethane	10		20.0	20.0	28.6	27.4
1,2-Dichloroethane	5.0	U	20.0	20.0	19.9	18.9
1,1-Dichloroethene	2.1	J	20.0	20.0	20.4	20.0
1,2-Dichloropropane	5.0	U	20.0	20.0	19.2	18.8
cis-1,3-Dichloropropene	5.0	U	20.0	20.0	15.2	14.9
trans-1,3-Dichloropropene	5.0	U	20.0	20.0	17.8	17.3
Ethylbenzene	5.0	U	20.0	20.0	21.7	20.8
2-Hexanone	10	U	20.0	20.0	17.1	17.6
Methylene Chloride	5.0	U	20.0	20.0	19.2	18.4
methyl isobutyl ketone	10	U	20.0	20.0	16.9	16.8
Styrene	5.0	U	20.0	20.0	17.9	17.2
1,1,2,2-Tetrachloroethane	5.0	U	20.0	20.0	19.3	19.0
Tetrachloroethene	5.0	U	20.0	20.0	18.2	18.1
Toluene	5.0	U	20.0	20.0	20.9	20.1
1,1,1-Trichloroethane	4.1	J	20.0	20.0	23.3	22.6
1,1,2-Trichloroethane	5.0	U	20.0	20.0	19.8	19.4
Trichloroethene	3.8	J	20.0	20.0	23.3	22.9
Vinyl chloride	5.0	U	20.0	20.0	18.4	18.4
Xylenes, Total	5.0	U	60.0	60.0	54.1	52.1
cis-1,2-Dichloroethene	18		20.0	20.0	37.1	35.6
trans-1,2-Dichloroethene	5.0	U	20.0	20.0	18.8	18.5

Calculations are performed before rounding to avoid round-off errors in calculated results.

DATA REPORTING QUALIFIERS

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	J	Indicates an estimated value.
	*	LCS or LCSD exceeds the control limits
	B	The analyte was found in an associated blank, as well as in the sample.

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:220-21048					
LCS 220-21048/2	Lab Control Spike	T	Water	8260B	
MB 220-21048/3	Method Blank	T	Water	8260B	
220-6881-3	4009-9	T	Water	8260B	
220-6881-4	4009-10	T	Water	8260B	
220-6881-10	4009-13A	T	Water	8260B	
220-6881-13	4009-5	T	Water	8260B	
Analysis Batch:220-21168					
LCS 220-21168/2	Lab Control Spike	T	Water	8260B	
MB 220-21168/3	Method Blank	T	Water	8260B	
220-6881-8	4009-11A	T	Water	8260B	
220-6881-9	4009-11	T	Water	8260B	
220-6881-11	4009-14	T	Water	8260B	
220-6881-12	4009-6	T	Water	8260B	
220-6881-14	4009-13	T	Water	8260B	
220-6881-16	4009-4	T	Water	8260B	
Analysis Batch:220-21243					
LCS 220-21243/2	Lab Control Spike	T	Water	8260B	
MB 220-21243/3	Method Blank	T	Water	8260B	
220-6881-15	4009-2	T	Water	8260B	
Analysis Batch:220-21271					
LCS 220-21271/2	Lab Control Spike	T	Water	8260B	
MSB 220-21271/7	Matrix Spike Blank	T	Water	8260B	
MB 220-21271/3	Method Blank	T	Water	8260B	
220-6881-18	4009-8	T	Water	8260B	
220-6881-20	4009-15	T	Water	8260B	
220-6901-C-4 MS	Matrix Spike	T	Water	8260B	
220-6901-C-4 MSD	Matrix Spike Duplicate	T	Water	8260B	
Analysis Batch:220-21276					
LCS 220-21276/2	Lab Control Spike	T	Water	8260B	
MSB 220-21276/6	Matrix Spike Blank	T	Water	8260B	
MB 220-21276/3	Method Blank	T	Water	8260B	
220-6881-1	4009-7	T	Water	8260B	
220-6881-2	4009-3	T	Water	8260B	
220-6881-5	4009-12	T	Water	8260B	
220-6881-6	4009-12A	T	Water	8260B	
220-6881-6MS	Matrix Spike	T	Water	8260B	
220-6881-6MSD	Matrix Spike Duplicate	T	Water	8260B	
220-6881-7	MW-X	T	Water	8260B	
220-6881-17	4009-1	T	Water	8260B	
220-6881-19TB	TRIP BLANK	T	Water	8260B	

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
Sdg Number: 220-6881

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch

Report Basis
T = Total

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
SDG: 220-6881

Laboratory Chronicle

Lab ID: 220-6881-1 **Client ID: 4009-7**

Sample Date/Time: 10/09/2008 11:50 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-B-1		220-21276		10/21/2008 02:31	2	TAL CT	BK
A:8260B	220-6881-B-1		220-21276		10/21/2008 02:31	2	TAL CT	BK

Lab ID: 220-6881-2 **Client ID: 4009-3**

Sample Date/Time: 10/09/2008 15:40 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-B-2		220-21276		10/21/2008 02:57	10	TAL CT	BK
A:8260B	220-6881-B-2		220-21276		10/21/2008 02:57	10	TAL CT	BK

Lab ID: 220-6881-3 **Client ID: 4009-9**

Sample Date/Time: 10/09/2008 18:05 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-A-3		220-21048		10/14/2008 20:09	1	TAL CT	BK
A:8260B	220-6881-A-3		220-21048		10/14/2008 20:09	1	TAL CT	BK

Lab ID: 220-6881-4 **Client ID: 4009-10**

Sample Date/Time: 10/10/2008 09:35 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-A-4		220-21048		10/14/2008 20:35	1	TAL CT	BK
A:8260B	220-6881-A-4		220-21048		10/14/2008 20:35	1	TAL CT	BK

Lab ID: 220-6881-5 **Client ID: 4009-12**

Sample Date/Time: 10/10/2008 14:55 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-B-5		220-21276		10/21/2008 03:26	4	TAL CT	BK
A:8260B	220-6881-B-5		220-21276		10/21/2008 03:26	4	TAL CT	BK

Lab ID: 220-6881-6 **Client ID: 4009-12A**

Sample Date/Time: 10/10/2008 11:10 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-I-6		220-21276		10/21/2008 00:18	1	TAL CT	BK
A:8260B	220-6881-I-6		220-21276		10/21/2008 00:18	1	TAL CT	BK

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
SDG: 220-6881

Laboratory Chronicle

Lab ID: 220-6881-6 MS **Client ID: 4009-12A**

Sample Date/Time: 10/10/2008 11:10 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-K-6 MS		220-21276		10/21/2008 01:11	1	TAL CT	BK
A:8260B	220-6881-K-6 MS		220-21276		10/21/2008 01:11	1	TAL CT	BK

Lab ID: 220-6881-6 MSD **Client ID: 4009-12A**

Sample Date/Time: 10/10/2008 11:10 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-L-6 MSD		220-21276		10/21/2008 01:38	1	TAL CT	BK
A:8260B	220-6881-L-6 MSD		220-21276		10/21/2008 01:38	1	TAL CT	BK

Lab ID: 220-6881-7 **Client ID: MW-X**

Sample Date/Time: 10/10/2008 15:20 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-B-7		220-21276		10/21/2008 03:53	4	TAL CT	BK
A:8260B	220-6881-B-7		220-21276		10/21/2008 03:53	4	TAL CT	BK

Lab ID: 220-6881-8 **Client ID: 4009-11A**

Sample Date/Time: 10/10/2008 15:35 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-B-8		220-21168		10/19/2008 22:29	1	TAL CT	BK
A:8260B	220-6881-B-8		220-21168		10/19/2008 22:29	1	TAL CT	BK

Lab ID: 220-6881-9 **Client ID: 4009-11**

Sample Date/Time: 10/10/2008 14:31 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-B-9		220-21168		10/20/2008 00:42	1	TAL CT	BK
A:8260B	220-6881-B-9		220-21168		10/20/2008 00:42	1	TAL CT	BK

Lab ID: 220-6881-10 **Client ID: 4009-13A**

Sample Date/Time: 10/10/2008 09:20 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-A-10		220-21048		10/14/2008 22:50	1	TAL CT	BK
A:8260B	220-6881-A-10		220-21048		10/14/2008 22:50	1	TAL CT	BK

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
SDG: 220-6881

Laboratory Chronicle

Lab ID: 220-6881-11 **Client ID: 4009-14**

Sample Date/Time: 10/09/2008 18:25 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-B-11		220-21168		10/20/2008 00:13	1	TAL CT	BK
A:8260B	220-6881-B-11		220-21168		10/20/2008 00:13	1	TAL CT	BK

Lab ID: 220-6881-12 **Client ID: 4009-6**

Sample Date/Time: 10/09/2008 10:45 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-A-12		220-21168		10/19/2008 23:47	1	TAL CT	BK
A:8260B	220-6881-A-12		220-21168		10/19/2008 23:47	1	TAL CT	BK

Lab ID: 220-6881-13 **Client ID: 4009-5**

Sample Date/Time: 10/09/2008 12:20 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-B-13		220-21048		10/15/2008 00:10	1	TAL CT	BK
A:8260B	220-6881-B-13		220-21048		10/15/2008 00:10	1	TAL CT	BK

Lab ID: 220-6881-14 **Client ID: 4009-13**

Sample Date/Time: 10/10/2008 10:41 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-B-14		220-21168		10/20/2008 01:35	1	TAL CT	BK
A:8260B	220-6881-B-14		220-21168		10/20/2008 01:35	1	TAL CT	BK

Lab ID: 220-6881-15 **Client ID: 4009-2**

Sample Date/Time: 10/09/2008 09:20 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-B-15		220-21243		10/21/2008 18:38	1	TAL CT	BK
A:8260B	220-6881-B-15		220-21243		10/21/2008 18:38	1	TAL CT	BK

Lab ID: 220-6881-16 **Client ID: 4009-4**

Sample Date/Time: 10/09/2008 15:05 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-B-16		220-21168		10/20/2008 01:08	1	TAL CT	BK
A:8260B	220-6881-B-16		220-21168		10/20/2008 01:08	1	TAL CT	BK

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
SDG: 220-6881

Laboratory Chronicle

Lab ID: 220-6881-17 **Client ID: 4009-1**

Sample Date/Time: 10/09/2008 08:10 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-A-17		220-21276		10/21/2008 04:46	1	TAL CT	BK
A:8260B	220-6881-A-17		220-21276		10/21/2008 04:46	1	TAL CT	BK

Lab ID: 220-6881-18 **Client ID: 4009-8**

Sample Date/Time: 10/09/2008 16:40 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-A-18		220-21271		10/20/2008 11:29	2	TAL CT	BK
A:8260B	220-6881-A-18		220-21271		10/20/2008 11:29	2	TAL CT	BK

Lab ID: 220-6881-19 **Client ID: TRIP BLANK**

Sample Date/Time: 10/10/2008 00:00 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-B-19		220-21276		10/21/2008 05:12	1	TAL CT	BK
A:8260B	220-6881-B-19		220-21276		10/21/2008 05:12	1	TAL CT	BK

Lab ID: 220-6881-20 **Client ID: 4009-15**

Sample Date/Time: 10/10/2008 12:12 Received Date/Time: 10/11/2008 10:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6881-A-20		220-21271		10/20/2008 17:44	1	TAL CT	BK
A:8260B	220-6881-A-20		220-21271		10/20/2008 17:44	1	TAL CT	BK

Lab ID: MB **Client ID: N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MB 220-21048/3		220-21048		10/14/2008 15:39	1	TAL CT	BK
A:8260B	MB 220-21048/3		220-21048		10/14/2008 15:39	1	TAL CT	BK
P:5030B	MB 220-21168/3		220-21168		10/19/2008 20:44	1	TAL CT	BK
A:8260B	MB 220-21168/3		220-21168		10/19/2008 20:44	1	TAL CT	BK
P:5030B	MB 220-21271/3		220-21271		10/20/2008 11:03	1	TAL CT	BK
A:8260B	MB 220-21271/3		220-21271		10/20/2008 11:03	1	TAL CT	BK
P:5030B	MB 220-21276/3		220-21276		10/20/2008 22:59	1	TAL CT	BK
A:8260B	MB 220-21276/3		220-21276		10/20/2008 22:59	1	TAL CT	BK
P:5030B	MB 220-21243/3		220-21243		10/21/2008 18:12	1	TAL CT	BK
A:8260B	MB 220-21243/3		220-21243		10/21/2008 18:12	1	TAL CT	BK

Client: Malcolm Pirnie, Inc.

Job Number: 220-6881-1
SDG: 220-6881

Laboratory Chronicle

Lab ID: LCS **Client ID: N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCS 220-21048/2		220-21048		10/14/2008 14:46	1	TAL CT	BK
A:8260B	LCS 220-21048/2		220-21048		10/14/2008 14:46	1	TAL CT	BK
P:5030B	LCS 220-21168/2		220-21168		10/19/2008 19:30	1	TAL CT	BK
A:8260B	LCS 220-21168/2		220-21168		10/19/2008 19:30	1	TAL CT	BK
P:5030B	LCS 220-21271/2		220-21271		10/20/2008 10:10	1	TAL CT	BK
A:8260B	LCS 220-21271/2		220-21271		10/20/2008 10:10	1	TAL CT	BK
P:5030B	LCS 220-21276/2		220-21276		10/20/2008 21:51	1	TAL CT	BK
A:8260B	LCS 220-21276/2		220-21276		10/20/2008 21:51	1	TAL CT	BK
P:5030B	LCS 220-21243/2		220-21243		10/21/2008 17:19	1	TAL CT	BK
A:8260B	LCS 220-21243/2		220-21243		10/21/2008 17:19	1	TAL CT	BK

Lab ID: MSB **Client ID: N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MSB 220-21271/7		220-21271		10/20/2008 12:49	1	TAL CT	BK
A:8260B	MSB 220-21271/7		220-21271		10/20/2008 12:49	1	TAL CT	BK
P:5030B	MSB 220-21276/6		220-21276		10/21/2008 00:45	1	TAL CT	BK
A:8260B	MSB 220-21276/6		220-21276		10/21/2008 00:45	1	TAL CT	BK

Lab ID: MS **Client ID: N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6901-C-4 MS		220-21271		10/20/2008 13:17	1	TAL CT	BK
A:8260B	220-6901-C-4 MS		220-21271		10/20/2008 13:17	1	TAL CT	BK

Lab ID: MSD **Client ID: N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-6901-C-4 MSD		220-21271		10/20/2008 13:45	1	TAL CT	BK
A:8260B	220-6901-C-4 MSD		220-21271		10/20/2008 13:45	1	TAL CT	BK

Lab References:
TAL CT = TestAmerica Connecticut

Chain of Custody Record

Connecticut
128 Long Hill Cross Road
Shelton, CT 06484
Tel: 203-929-8140
Fax: 203-929-8142

R34T
92A

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-0015 (0508)

Client	Project Manager	Date	Chain of Custody Number
Malcolm Pirnie, INC	Jeremy Wyckoff	10/10/08	015042
Address	**Telephone Number (Area Code)/Fax Number/e-mail address**	**Field Telephone Number**	**Page 1 of 2**
43 British American Blvd	518-782-2100/0500/ jwyckoff@pirnie.com	607-434-3926	
City / State / Zip Code	**Site Contact / Lab Contact**		
LATHAM NY 12110	J. Wyckoff / J. Dubnuskas		
Project Name and Location (State)	**Sample Disposal** ☒ Disposal By Lab ☐ Return To Client ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)		
NYSDEC Vestal Water Supply, Vestal, NY.			
Contract/Purchase Order/Project No.			
0266352			

Field Sample I.D. (Containers for each sample may be combined on one line)	Collection Date	Collection Time	Matrix: Aqueous	Solid	Other	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Other	Analysis: VOCs	metals (dissolved)	metals (total)	Comments
4009-7 (1)	10/9/08	1150	X						2				X			
4009-3 (2)	10/9/08	1540	X						2				X			
4009-9 (3)	10/9/08	1805	X						2				X			
4009-10 (4)	10/10/08	0935	X						2				X			
4009-12 (5)	10/10/08	1455	X					2	2				X	X	X	
4009-12A +MS/MSD (6)	10/10/08	1110	X					6	6				X	X	X	
RBW-X (7)	10/10/08	1520	X						2				X			
4009-11A (8)	10/10/08	1535	X					2	2				X	X	X	
4009-11 (9)	10/10/08	1431	X						2							
4009-13A (10)	10/10/08	0920	X					2	2				X	X	X	

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Turn Around Time Required (business days) Report / EDD Requirements
☐ 24 Hours ☐ 48 Hours ☐ 5 Days ☒ 10 Days ☐ 15 Days ☐ Other ____

State Regulatory QC Requirements

1. Relinquished By	Date 10/14/08	Time 1645	1. Received By	Date 10/11/08	Time 1040
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Received By	Date	Time	Cooler Temps 5.2°C	Passed Rad. Screen (Lab Use Only) ☑ Yes ☐ No	

Comments

10/27/2008

DISTRIBUTION: WHITE - Stays with the Samples; CANARY - Returned to Client with Report; PINK - Field

220-6881

Chain of Custody Record

Connecticut
128 Long Hill Cross Road
Shelton, CT 06484
Tel: 203-929-8140
Fax: 203-929-8142

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-0015 (1007)

Client	Project Manager	Date	Chain of Custody Number
Malcolm Pirnie, Inc	Jeremy Wyckoff	10/10/08	011607
Address	**Telephone Number (Area Code)/Fax Number/e-mail address**	**Field Telephone Number**	**Page 2 of 2**
43 British American Blvd	518-782-2100/0500 / jwyckoff@pirnie.com	607-434-3926	
City / State / Zip Code	**Site Contact**	**Lab Contact**	
Latham / NY / 12110	J. Wyckoff	J. Dubnuskas	
Project Name and Location (State)	**Sample Disposal** ☒ Disposal By Lab ☐ Return To Client ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)		
NYSDEC - Vestal Water Supply			
Contract/Purchase Order/Project No.			
0266352			

Field Sample I.D. (Containers for each sample may be combined on one line)	Collection Date	Collection Time	Matrix: Aqueous	Matrix: Solid	Matrix: Other	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Other	Analysis: VOCs	Metals (Dissolved)	Metals (Total)	Comments
4009-14 (11)	10/9/08	1825	X						2				X			
4009-6 (12)	10/9/08	1045	X						2				X			
4009-5 (13)	10/9/08	1220	X						2				X			
4009-13 (14)	10/10/08	1041	X						2				X			
4009-2 (15)	10/9/08	0920	X						2				X			
4009-4 (16)	10/9/08	1505	X						2				X			
4009-1 (17)	10/9/08	0810	X						2				X			
4009-8 (18)	10/9/08	1640	X						2				X			
Trip Blank (19)	10/10/08	—	X						2				X			
4009-15 (20)	10/10/08	12:12	X						2				X			

Turn Around Time Required (business days) Report / EDD Requirements
☐ 24 Hours ☐ 48 Hours ☐ 5 Days ☒ 10 Days ☐ 15 Days ☐ Other ____

State Regulatory QC Requirements

1. Relinquished By	Date	Time	1. Received By	Date	Time
[signature]	10/10/08	1645	K Blackjun	10/11/08	1040
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Received By	Date	Time	Cooler Temps	Passed Rad Screen (Lab Use Only)	
			5.2°	☑ Yes ☐ No	

Comments

220-6881

DISTRIBUTION: WHITE - Stays with the Samples; CANARY - Returned to Client with Report; PINK - Field Copy

10/27/2008

TESTAMERICA CONNECTICUT
PRESERVATIVE RECORD

Job Number:

Client:

Client Project:

Lab Number	Preservative	pH	Adjustment (mLs)	pH after Adjustment	Preservative Lot Number	Chlorine Residual	Initials	Date
220-6881-5	HNO_3	<2	NA	NA	NA	NA	TD	10/11/08
-5		<2						
-6		<2						
-6		<2						
-6		<2						
-6		<2						
-6		<2						
-6		<2						
-8		<2						
-8		<2						
-10		<2						
220-6881-10	HNO_3	<2	NA	NA	NA	NA	TD	10/11/08

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10/27/2008

220-6881

mp1 / vestal water Supply

TestAmerica - Connecticut
Internal Chain-of-Custody

Trip Blank: #19

QC: #6 Air: —

FB: —

Soil: — Water: #1-20

Date Received: 10/11/08

Sample #s: 1-20

Locations: R34T

Laboratory Sample #	Relinquished by	Accepted by	Date	Time	Reason	Relinquished by	Accepted by	Date	Time
20	ILB	[signature]	10/14	17:30	VOA	[signature]			
8,11,12,14,16,18	ILB	[signature]	10/16	18:00	VOA	[signature]			
1,2,3,6,7,14,15,17,19,20	ILB	[signature]	10/20	15:30	VOA	[signature]			
6	ILB	[signature]	10/20/08	23:10	VOA	return			

SUBCONTRACTED DATA

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job#: A08-C809

Project#: NY9A8398
SDG#: 6881
Site Name: TestAmerica Connecticut
Task: NYSDEC Standby - Vestal

Ms. Johanna Dubauskas
128 Long Hill Cross Road
Shelton, CT 06484

TestAmerica Laboratories Inc.

Sally J. Hoffman
Project Manager

Project Manager

10/22/2008

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Buffalo
Current Certifications

As of 7/16/2008

STATE	Program	Cert # / Lab ID
Arkansas	SDWA, CWA, RCRA, SOIL	88-0686
California*	NELAP CWA, RCRA	01169CA
Connecticut	SDWA, CWA, RCRA, SOIL	PH-0568
Florida*	NELAP CWA, RCRA	E87672
Georgia*	SDWA,NELAP CWA, RCRA	956
Illinois*	NELAP SDWA, CWA, RCRA	200003
Iowa	SW/CS	374
Kansas*	NELAP SDWA, CWA, RCRA	E-10187
Kentucky	SDWA	90029
Kentucky UST	UST	30
Louisiana*	NELAP CWA, RCRA	2031
Maine	SDWA, CWA	NY0044
Maryland	SDWA	294
Massachusetts	SDWA, CWA	M-NY044
Michigan	SDWA	9937
Minnesota	SDWA,CWA, RCRA	036-999-337
New Hampshire*	NELAP SDWA, CWA	233701
New Jersey*	NELAP,SDWA, CWA, RCRA,	NY455
New York*	NELAP, AIR, SDWA, CWA, RCRA,CLP	10026
Oklahoma	CWA, RCRA	9421
Pennsylvania*	Registration, NELAP CWA,RCRA	68-00281
Tennessee	SDWA	02970
Texas*	NELAP CWA, RCRA	T104704412-08-TX
USDA	FOREIGN SOIL PERMIT	S-41579
USDOE	Department of Energy	DOECAP-STB
Virginia	SDWA	278
Washington*	NELAP CWA,RCRA	C1677
Wisconsin	CWA, RCRA	998310390
West Virginia	CWA,RCRA	252

*As required under the indicated accreditation, the test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report.

Sample Data Summary Package

SAMPLE SUMMARY

SDG#: 6881

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	SAMPLED DATE	SAMPLED TIME	RECEIVED DATE	RECEIVED TIME
A8C80903	4009-11A	WATER	10/10/2008	15:35	10/14/2008	09:00
A8C80901	4009-12	WATER	10/10/2008	14:55	10/14/2008	09:00
A8C80902	4009-12A	WATER	10/10/2008	11:10	10/14/2008	09:00
A8C80902MS	4009-12A	WATER	10/10/2008	11:10	10/14/2008	09:00
A8C80902SD	4009-12A	WATER	10/10/2008	11:10	10/14/2008	09:00
A8C80904	4009-13A	WATER	10/10/2008	09:20	10/14/2008	09:00

METHODS SUMMARY

Job#: A08-C809

Project#: NY9A8398
SDG#: 6881
Site Name: TestAmerica Connecticut

PARAMETER	ANALYTICAL METHOD
Aluminum - Soluble	ILM5.3 CLP-M
Aluminum - Total	ILM5.3 CLP-M
Antimony - Soluble	ILM5.3 CLP-M
Antimony - Total	ILM5.3 CLP-M
Arsenic - Soluble	ILM5.3 CLP-M
Arsenic - Total	ILM5.3 CLP-M
Barium - Soluble	ILM5.3 CLP-M
Barium - Total	ILM5.3 CLP-M
Beryllium - Soluble	ILM5.3 CLP-M
Beryllium - Total	ILM5.3 CLP-M
Cadmium - Soluble	ILM5.3 CLP-M
Cadmium - Total	ILM5.3 CLP-M
Calcium - Soluble	ILM5.3 CLP-M
Calcium - Total	ILM5.3 CLP-M
Chromium - Soluble	ILM5.3 CLP-M
Chromium - Total	ILM5.3 CLP-M
Cobalt - Soluble	ILM5.3 CLP-M
Cobalt - Total	ILM5.3 CLP-M
Copper - Soluble	ILM5.3 CLP-M
Copper - Total	ILM5.3 CLP-M
Iron - Soluble	ILM5.3 CLP-M
Iron - Total	ILM5.3 CLP-M
Lead - Soluble	ILM5.3 CLP-M
Lead - Total	ILM5.3 CLP-M
Magnesium - Soluble	ILM5.3 CLP-M
Magnesium - Total	ILM5.3 CLP-M
Manganese - Soluble	ILM5.3 CLP-M
Manganese - Total	ILM5.3 CLP-M
Mercury - Soluble	ILM5.3 CLP-HG
Mercury - Total	ILM5.3 CLP-HG
Nickel - Soluble	ILM5.3 CLP-M
Nickel - Total	ILM5.3 CLP-M
Potassium - Soluble	ILM5.3 CLP-M
Potassium - Total	ILM5.3 CLP-M
Selenium - Soluble	ILM5.3 CLP-M
Selenium - Total	ILM5.3 CLP-M
Silver - Soluble	ILM5.3 CLP-M

PARAMETER	ANALYTICAL METHOD
Silver - Total	ILM5.3 CLP-M
Sodium - Soluble	ILM5.3 CLP-M
Sodium - Total	ILM5.3 CLP-M
Thallium - Soluble	ILM5.3 CLP-M
Thallium - Total	ILM5.3 CLP-M
Vanadium - Soluble	ILM5.3 CLP-M
Vanadium - Total	ILM5.3 CLP-M
Zinc - Soluble	ILM5.3 CLP-M
Zinc - Total	ILM5.3 CLP-M

References:

ILM5.3 "Statement of Work for Inorganics Analysis", ILM05.3 USEPA Contract Laboratory Program, Multi-media, Multi-concentration.

SDG NARRATIVE

Job#: A08-C809

Project#: NY9A8398
SDG#: 6881
Site Name: TestAmerica Connecticut

General Comments

The enclosed data may or may not have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A08-C809
Sample Cooler(s) were received at the following temperature(s); 2.0 °C
All samples were received in good condition.

Metals Data

The recoveries of sample 4009-12A Matrix Spike and Matrix Spike Duplicate exhibited results above the quality control limits for Total Iron. The sample result is more than four times greater than the spike added. However, the LFB was acceptable.

The Total and Soluble Magnesium values obtained for sample 4009-12A were inconsistent. Reanalysis was performed and the values were confirmed. Only the results from the original analysis are provided in this data package.

"I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this Sample Data package and in the electronic data deliverables has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature."

Sally Hoffman
Project Manager

10-22-08
Date

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION
AND
ANALYTICAL REQUEST SUMMARY

LAB NAME: TESTAMERICA LABORATORIES, INC.

CUSTOMER SAMPLE ID	LABORATORY SAMPLE ID	ANALYTICAL REQUIREMENTS						
		VOA GC/MS	BNA GC/MS	VOA GC	PEST PCB	METALS	TCLP HERB	WATER QUALITY
4009-11A	A8C80903	-	-	-	-	ILM5.3	-	-
4009-12	A8C80901	-	-	-	-	ILM5.3	-	-
4009-12A	A8C80902	-	-	-	-	ILM5.3	-	-
4009-13A	A8C80904	-	-	-	-	ILM5.3	-	-

NYSDEC-1

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYTICAL SUMMARY
INORGANIC ANALYSIS

LAB NAME: TESTAMERICA LABORATORIES, INC.

SAMPLE IDENTIFICATION	MATRIX	METALS REQUESTED	DATE RECEIVED AT LAB	DATE DIGESTED	DATE ANALYZED
4009-11A	WATER	TAL D ME	10/14/2008	10/16-17/2008,	10/17-18/2008
4009-12	WATER	TAL D ME	10/14/2008	10/16-17/2008	10/17-18/2008
4009-12A	WATER	TAL D ME	10/14/2008	10/16-17/2008	10/17-18/2008
4009-13A	WATER	TAL D ME	10/14/2008	10/16-17/2008	10/17-18/2008

NYSDEC-5

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
INORGANIC ANALYSIS

LAB NAME: TESTAMERICA LABORATORIES, INC.

LABORATORY SAMPLE CODE	MATRIX	ANALYTICAL PROTOCOL	DIGESTION PROCEDURE	MATRIX MODIFIER	DIL/CONC FACTOR
4009-11A	WATER	ILM5.3	ILM5.3	AS REQUIRED	AS REQUIRED
4009-12	WATER	ILM5.3	ILM5.3	AS REQUIRED	AS REQUIRED
4009-12A	WATER	ILM5.3	ILM5.3	AS REQUIRED	AS REQUIRED
4009-13A	WATER	ILM5.3	ILM5.3	AS REQUIRED	AS REQUIRED

NYSDEC-7

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

DATA QUALIFIER PAGE

These definitions are provided in the event the data in this report requires the use of one or more of the qualifiers. Not all qualifiers defined below are necessarily used in the accompanying data package.

ORGANIC DATA QUALIFIERS

ND or U	Indicates compound was analyzed for, but not detected.
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS.
B	This flag is used when the analyte is found in the associated blank, as well as in the sample.
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at the secondary dilution factor.
N	Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the Mass Spectral library search. It is applied to all TIC results.
P	This flag is used for CLP methodology only. For Pesticide/Aroclor target analytes, when a difference for detected concentrations between the two GC columns is greater than 25%, the lower of the two values is reported on the data page and flagged with a "P".
A	This flag indicates that a TIC is a suspected aldol-condensation product.
1	Indicates coelution.
*	Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

ND or U	Indicates element was analyzed for, but not detected. Report with the detection limit value.
J or B	Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
N	Indicates spike sample recovery is not within the quality control limits.
S	Indicates value determined by the Method of Standard Addition.
E	Indicates a value estimated or not reported due to the presence of interferences.
H	Indicates analytical holding time exceedance. The value obtained should be considered an estimate.
G	Indicates a value greater than or equal to the project reporting limit but less than the laboratory quantitation limit
*	Indicates the spike or duplicate analysis is not within the quality control limits.
+	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

TestAmerica Connecticut

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

4009-11A

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Lab Sample ID: AD859760

Level (low/med): LOW Date Received: 10/14/2008

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	115	B		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	81.2	B		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	0.6	B		P
7440-70-2	Calcium	111000			P
7440-47-3	Chromium	1.6	B		P
7440-48-4	Cobalt	4.6	B		P
7440-50-8	Copper	3.3	B		P
7439-89-6	Iron	323			P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	44100			P
7439-96-5	Manganese	369			P
7440-02-0	Nickel	14.0	B		P
7440-09-7	Potassium	984	B		P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	52700			P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	11.6	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TestAmerica Connecticut

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

4009-11A-SOL

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Lab Sample ID: AD859800

Level (low/med): LOW Date Received: 10/14/2008

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	79.6	B		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	0.4	B		P
7440-70-2	Calcium	106000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	3.5	B		P
7440-50-8	Copper	2.0	B		P
7439-89-6	Iron	67.6	B		P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	42300			P
7439-96-5	Manganese	365			P
7440-02-0	Nickel	13.9	B		P
7440-09-7	Potassium	1060	B		P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	50400			P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	6.5	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TestAmerica Connecticut

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

4009-12

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Lab Sample ID: AD859756

Level (low/med): LOW Date Received: 10/14/2008

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8360			P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	8.6	B		P
7440-39-3	Barium	117	B		P
7440-41-7	Beryllium	0.40	B		P
7440-43-9	Cadmium	0.5	B		P
7440-70-2	Calcium	150000			P
7440-47-3	Chromium	16.5			P
7440-48-4	Cobalt	29.6	B		P
7440-50-8	Copper	28.9			P
7439-89-6	Iron	59500			P
7439-92-1	Lead	93.3			P
7439-95-4	Magnesium	25300			P
7439-96-5	Manganese	546			P
7440-02-0	Nickel	21.0	B		P
7440-09-7	Potassium	3890	B		P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	104000			P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	10.8	B		P
7440-66-6	Zinc	156			P

Color Before: BROWN Clarity Before: CLOUDY Texture: NONE

Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

TestAmerica Connecticut

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

4009-12A

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Lab Sample ID: AD859757

Level (low/med): LOW Date Received: 10/14/2008

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	2.0	B		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	3960	B		P
7440-47-3	Chromium	2.1	B		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	25.0	U		P
7439-89-6	Iron	5480			P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	7770			P
7439-96-5	Manganese	33.3			P
7440-02-0	Nickel	2.2	B		P
7440-09-7	Potassium	2080	B		P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	94700			P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	5.2	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TestAmerica Connecticut

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

4009-12A-SOL

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Lab Sample ID: AD859797

Level (low/med): LOW Date Received: 10/14/2008

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	0.90	B		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	2170	B		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	25.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	9270			P
7439-96-5	Manganese	1.3	B		P
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2160	B		P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	102000			P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	60.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

TestAmerica Connecticut

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

4009-12-SOL

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Lab Sample ID: AD859796

Level (low/med): LOW Date Received: 10/14/2008

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	456			P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	72.8	B		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	135000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	2.3	B		P
7440-50-8	Copper	1.6	B		P
7439-89-6	Iron	3890			P
7439-92-1	Lead	4.2	B		P
7439-95-4	Magnesium	21500			P
7439-96-5	Manganese	54.6			P
7440-02-0	Nickel	2.1	B		P
7440-09-7	Potassium	2540	B		P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	102000			P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	10.0	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TestAmerica Connecticut

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

4009-13A

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Lab Sample ID: AD859761

Level (low/med): LOW Date Received: 10/14/2008

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	80.7	B		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	166000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	1.3	B		P
7440-50-8	Copper	25.0	U		P
7439-89-6	Iron	435			P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	22900			P
7439-96-5	Manganese	6.1	B		P
7440-02-0	Nickel	1.7	B		P
7440-09-7	Potassium	3130	B		P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	137000			P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	4.6	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TestAmerica Connecticut

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

4009-13A-SOL

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Lab Sample ID: AD859801

Level (low/med): LOW Date Received: 10/14/2008

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	78.5	B		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	154000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	1.4	B		P
7440-50-8	Copper	25.0	U		P
7439-89-6	Iron	176			P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	21600			P
7439-96-5	Manganese	4.7	B		P
7440-02-0	Nickel	1.5	B		P
7440-09-7	Potassium	3170	B		P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	129000			P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	60.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TestAmerica Connecticut

5A-IN

MATRIX SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

4009-12A\MS

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	2107.3700		200.0000	U	2000.00	105		P
Antimony	75 - 125	102.3900		60.0000	U	100.00	102		P
Arsenic	75 - 125	43.4300		10.0000	U	40.00	109		P
Barium	75 - 125	2075.9300		1.9800	B	2000.00	104		P
Beryllium	75 - 125	51.3500		5.0000	U	50.00	103		P
Cadmium	75 - 125	51.5600		5.0000	U	50.00	103		P
Chromium	75 - 125	210.4100		2.1000	B	200.00	104		P
Cobalt	75 - 125	512.8600		50.0000	U	500.00	103		P
Copper	75 - 125	249.9700		25.0000	U	250.00	100		P
Iron		6840.8200		5484.9300		1000.00	136		P
Lead	75 - 125	23.2300		10.0000	U	20.00	116		P
Manganese	75 - 125	544.4500		33.3300		500.00	102		P
Nickel	75 - 125	522.4000		2.1500	B	500.00	104		P
Selenium	75 - 125	50.5000		35.0000	U	50.00	101		P
Silver	75 - 125	51.0800		10.0000	U	50.00	102		P
Mercury	75 - 125	1.6833		0.2000	U	1.67	101		CV
Thallium	75 - 125	54.5400		25.0000	U	50.00	109		P
Vanadium	75 - 125	511.7400		50.0000	U	500.00	102		P
Zinc	75 - 125	519.5400		5.2200	B	500.00	103		P

Comments:

TestAmerica Connecticut

5A-IN

MATRIX SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

4009-12A\MS-SOL

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	2155.2500		200.0000	U	2000.00	108		P
Antimony	75 - 125	109.2700		60.0000	U	100.00	109		P
Arsenic	75 - 125	45.0500		10.0000	U	40.00	113		P
Barium	75 - 125	2088.0000		0.9000	B	2000.00	104		P
Beryllium	75 - 125	52.8600		5.0000	U	50.00	106		P
Cadmium	75 - 125	53.5500		5.0000	U	50.00	107		P
Chromium	75 - 125	212.7600		10.0000	U	200.00	106		P
Cobalt	75 - 125	524.3300		50.0000	U	500.00	105		P
Copper	75 - 125	256.5100		25.0000	U	250.00	103		P
Iron	75 - 125	1106.0800		100.0000	U	1000.00	111		P
Lead	75 - 125	20.9600		10.0000	U	20.00	105		P
Manganese	75 - 125	529.4400		1.2900	B	500.00	106		P
Nickel	75 - 125	538.0700		40.0000	U	500.00	108		P
Selenium	75 - 125	57.9100		35.0000	U	50.00	116		P
Silver	75 - 125	52.7700		10.0000	U	50.00	106		P
Mercury	75 - 125	1.6833		0.2000	U	1.67	101		CV
Thallium	75 - 125	58.1300		25.0000	U	50.00	116		P
Vanadium	75 - 125	523.2500		50.0000	U	500.00	105		P
Zinc	75 - 125	526.5700		60.0000	U	500.00	105		P

Comments:

TestAmerica Connecticut

5A-IN

MATRIX SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

4009-12A\SD

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	2150.0000		200.0000	U	2000.00	108		P
Antimony	75 - 125	101.1800		60.0000	U	100.00	101		P
Arsenic	75 - 125	45.7500		10.0000	U	40.00	114		P
Barium	75 - 125	2105.1200		1.9800	B	2000.00	105		P
Beryllium	75 - 125	52.1400		5.0000	U	50.00	104		P
Cadmium	75 - 125	52.2400		5.0000	U	50.00	104		P
Chromium	75 - 125	212.7900		2.1000	B	200.00	105		P
Cobalt	75 - 125	519.3000		50.0000	U	500.00	104		P
Copper	75 - 125	254.2000		25.0000	U	250.00	102		P
Iron		7751.5200		5484.9300		1000.00	227		P
Lead	75 - 125	24.0500		10.0000	U	20.00	120		P
Manganese	75 - 125	550.8300		33.3300		500.00	104		P
Nickel	75 - 125	531.0800		2.1500	B	500.00	106		P
Selenium	75 - 125	48.3700		35.0000	U	50.00	97		P
Silver	75 - 125	50.9900		10.0000	U	50.00	102		P
Mercury	75 - 125	1.7000		0.2000	U	1.67	102		CV
Thallium	75 - 125	44.5400		25.0000	U	50.00	89		P
Vanadium	75 - 125	518.5500		50.0000	U	500.00	104		P
Zinc	75 - 125	527.0700		5.2200	B	500.00	104		P

Comments:

TestAmerica Connecticut

5A-IN

MATRIX SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

4009-12A\SD-SOL

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75 - 125	2146.8400		200.0000	U	2000.00	107		P
Antimony	75 - 125	108.2300		60.0000	U	100.00	108		P
Arsenic	75 - 125	42.1900		10.0000	U	40.00	105		P
Barium	75 - 125	2068.4200		0.9000	B	2000.00	103		P
Beryllium	75 - 125	52.0900		5.0000	U	50.00	104		P
Cadmium	75 - 125	52.3800		5.0000	U	50.00	105		P
Chromium	75 - 125	209.5700		10.0000	U	200.00	105		P
Cobalt	75 - 125	514.9900		50.0000	U	500.00	103		P
Copper	75 - 125	253.7000		25.0000	U	250.00	101		P
Iron	75 - 125	1082.8700		100.0000	U	1000.00	108		P
Lead	75 - 125	20.0800		10.0000	U	20.00	100		P
Manganese	75 - 125	521.6000		1.2900	B	500.00	104		P
Nickel	75 - 125	529.1800		40.0000	U	500.00	106		P
Selenium	75 - 125	59.0900		35.0000	U	50.00	118		P
Silver	75 - 125	51.3700		10.0000	U	50.00	103		P
Mercury	75 - 125	1.6833		0.2000	U	1.67	101		CV
Thallium	75 - 125	54.4600		25.0000	U	50.00	109		P
Vanadium	75 - 125	515.3500		50.0000	U	500.00	103		P
Zinc	75 - 125	516.9700		60.0000	U	500.00	103		P

Comments:

TestAmerica Connecticut

5B-IN

POST-DIGESTION SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

4009-12AA

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	10355.02		200.00	U	10000.0	104		P
Antimony	75-125	205.99		60.00	U	200.0	103		P
Arsenic	75-125	211.42		10.00	U	200.0	106		P
Barium	75-125	208.53		1.98	B	200.0	103		P
Beryllium	75-125	206.85		5.00	U	200.0	103		P
Cadmium	75-125	207.31		5.00	U	200.0	104		P
Calcium	75-125	14250.06		3963.00	B	10000.0	103		P
Chromium	75-125	207.21		2.10	B	200.0	103		P
Cobalt	75-125	204.98		50.00	U	200.0	102		P
Copper	75-125	201.48		25.00	U	200.0	101		P
Iron	75-125	15608.78		5484.93		10000.0	101		P
Lead	75-125	208.87		10.00	U	200.0	104		P
Magnesium	75-125	18103.07		7766.25		10000.0	103		P
Manganese	75-125	237.38		33.33		200.0	102		P
Nickel	75-125	207.67		2.15	B	200.0	103		P
Potassium	75-125	12846.86		2082.65	B	10000.0	108		P
Selenium	75-125	213.47		35.00	U	200.0	107		P
Silver	75-125	51.71		10.00	U	50.0	103		P
Sodium	75-125	103060.60		94710.24		10000.0	84		P
Thallium	75-125	193.33		25.00	U	200.0	97		P
Vanadium	75-125	204.96		50.00	U	200.0	102		P
Zinc	75-125	212.31		5.22	B	200.0	104		P

Comments:

TestAmerica Connecticut

5B-IN

POST-DIGESTION SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

4009-12AA-SOL

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	10427.39		200.00	U	10000.0	104		P
Antimony	75-125	213.52		60.00	U	200.0	107		P
Arsenic	75-125	212.68		10.00	U	200.0	106		P
Barium	75-125	206.48		0.90	B	200.0	103		P
Beryllium	75-125	207.78		5.00	U	200.0	104		P
Cadmium	75-125	211.27		5.00	U	200.0	106		P
Calcium	75-125	12043.82		2174.97	B	10000.0	99		P
Chromium	75-125	204.26		10.00	U	200.0	102		P
Cobalt	75-125	206.13		50.00	U	200.0	103		P
Copper	75-125	202.60		25.00	U	200.0	101		P
Iron	75-125	10389.28		100.00	U	10000.0	104		P
Lead	75-125	207.97		10.00	U	200.0	104		P
Magnesium	75-125	19175.07		9273.42		10000.0	99		P
Manganese	75-125	209.23		1.29	B	200.0	104		P
Nickel	75-125	207.89		40.00	U	200.0	104		P
Potassium	75-125	12904.27		2156.11	B	10000.0	107		P
Selenium	75-125	229.71		35.00	U	200.0	115		P
Silver	75-125	51.77		10.00	U	50.0	104		P
Sodium	75-125	109754.30		102182.34		10000.0	76		P
Thallium	75-125	214.22		25.00	U	200.0	107		P
Vanadium	75-125	205.51		50.00	U	200.0	103		P
Zinc	75-125	207.16		60.00	U	200.0	104		P

Comments:

TestAmerica Connecticut

6-IN

DUPLICATES

EPA SAMPLE NO.

4009-12A\SD

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: _____ NRAS No.: _____ SDG NO.: 6881

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units: (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		2107.3702		2150.0000		2		P
Antimony		102.3900		101.1800		1		P
Arsenic		43.4300		45.7500		5		P
Barium		2075.9300		2105.1200		1		P
Beryllium		51.3500		52.1400		2		P
Cadmium		51.5600		52.2400		1		P
Chromium		210.4100		212.7900		1		P
Cobalt		512.8600		519.3000		1		P
Copper		249.9700		254.2000		2		P
Iron		6840.8200		7751.5200		12		P
Lead		23.2300		24.0500		3		P
Manganese		544.4500		550.8300		1		P
Nickel		522.4000		531.0800		2		P
Selenium		50.5000		48.3700		4		P
Silver		51.0800		50.9900		0		P
Mercury		1.6833		1.7000		1		CV
Thallium		54.5400		44.5400		20		P
Vanadium		511.7400		518.5500		1		P
Zinc		519.5400		527.0700		1		P

TestAmerica Connecticut

6-IN

DUPLICATES

EPA SAMPLE NO.

4009-12A\SD-SOL

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: _____ NRAS No.: _____ SDG NO.: 6881

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units: (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		2155.2500		2146.8400		0		P
Antimony		109.2700		108.2300		1		P
Arsenic		45.0500		42.1900		7		P
Barium		2088.0000		2068.4200		1		P
Beryllium		52.8600		52.0900		1		P
Cadmium		53.5500		52.3800		2		P
Chromium		212.7600		209.5700		2		P
Cobalt		524.3300		514.9900		2		P
Copper		256.5100		253.7000		1		P
Iron		1106.0799		1082.8700		2		P
Lead		20.9600		20.0800		4		P
Manganese		529.4400		521.6000		1		P
Nickel		538.0700		529.1800		2		P
Selenium		57.9100		59.0900		2		P
Silver		52.7700		51.3700		3		P
Mercury		1.6833		1.6833		0		CV
Thallium		58.1300		54.4600		7		P
Vanadium		523.2500		515.3500		2		P
Zinc		526.5700		516.9700		2		P

TestAmerica Connecticut

3-IN
BLANKS

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: _____ NRAS No.: _____ SDG NO.: 6881

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

	Initial Calibration Blank(ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
Analyte		C	1	C	2	C	3	C		C	M
Aluminum	200.000	U	99.040	B	45.240	B	80.950	B	200.000	U	P
Antimony	60.000	U	60.000	U	60.000	U	60.000	U	60.000	U	P
Arsenic	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P
Barium	200.000	U	200.000	U	200.000	U	200.000	U	200.000	U	P
Beryllium	5.000	U	5.000	U	5.000	U	0.400	B	5.000	U	P
Cadmium	5.000	U	5.000	U	0.350	B	5.000	U	5.000	U	P
Calcium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	5000.000	U	P
Chromium	10.000	U	10.000	U	10.000	U	10.000	U	-0.950	B	P
Cobalt	50.000	U	50.000	U	50.000	U	50.000	U	50.000	U	P
Copper	25.000	U	25.000	U	25.000	U	25.000	U	25.000	U	P
Iron	100.000	U	28.590	B	100.000	U	23.210	B	100.000	U	P
Lead	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P
Magnesium	5000.000	U	81.370	B	5000.000	U	54.720	B	5000.000	U	P
Manganese	15.000	U	15.000	U	15.000	U	0.280	B	15.000	U	P
Nickel	40.000	U	40.000	U	40.000	U	40.000	U	40.000	U	P
Potassium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	5000.000	U	P
Selenium	35.000	U	35.000	U	35.000	U	35.000	U	35.000	U	P
Silver	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P
Sodium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	5000.000	U	P
Thallium	25.000	U	25.000	U	25.000	U	25.000	U	25.000	U	P
Vanadium	50.000	U	50.000	U	50.000	U	50.000	U	50.000	U	P
Zinc	60.000	U	60.000	U	60.000	U	60.000	U	60.000	U	P

TestAmerica Connecticut

3-IN
BLANKS

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: _____ NRAS No.: _____ SDG NO.: 6881

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

	Initial Calibration Blank(ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
Analyte		C	1	C	2	C	3	C		C	M
Arsenic	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P

3-IN
BLANKS

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: _____ NRAS No.: _____ SDG NO.: 6881

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calibration Blank(ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Aluminum	200.000	U	200.000	U	200.000	U	200.000	U	200.000	U	P
Antimony	60.000	U	-5.610	B	-7.580	B	60.000	U	60.000	U	P
Barium	200.000	U	200.000	U	200.000	U	200.000	U	200.000	U	P
Beryllium	5.000	U	5.000	U	5.000	U	5.000	U	5.000	U	P
Cadmium	5.000	U	5.000	U	5.000	U	5.000	U	5.000	U	P
Calcium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	5000.000	U	P
Chromium	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P
Cobalt	50.000	U	50.000	U	50.000	U	50.000	U	50.000	U	P
Copper	25.000	U	25.000	U	25.000	U	25.000	U	25.000	U	P
Iron	100.000	U	100.000	U	100.000	U	100.000	U	100.000	U	P
Lead	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P
Magnesium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	5000.000	U	P
Manganese	15.000	U	15.000	U	15.000	U	15.000	U	15.000	U	P
Nickel	40.000	U	40.000	U	40.000	U	40.000	U	40.000	U	P
Potassium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	5000.000	U	P
Selenium	35.000	U	35.000	U	35.000	U	35.000	U	35.000	U	P
Silver	10.000	U	10.000	U	10.000	U	10.000	U	10.000	U	P
Sodium	-559.080	B	-425.400	B	-447.600	B	-389.770	B	-485.830	B	P
Thallium	25.000	U	25.000	U	25.000	U	25.000	U	25.000	U	P
Vanadium	50.000	U	50.000	U	50.000	U	50.000	U	50.000	U	P
Zinc	60.000	U	60.000	U	60.000	U	60.000	U	60.000	U	P

TestAmerica Connecticut

3-IN
BLANKS

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: _____ NRAS No.: _____ SDG NO.: 6881

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

	Initial Calibration Blank(ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
Analyte		C	1	C	2	C	3	C		C	M
Mercury	0.120	U	0.120	U	0.120	U			0.200	U	CV

TestAmerica Connecticut

3-IN

BLANKS

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: _____ NRAS No.: _____ SDG NO.: 6881

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

	Initial Calibration Blank(ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
Analyte		C	1	C	2	C	3	C		C	M
Mercury	0.120	U	0.120	U	0.120	U			0.200	U	CV

Sample Data Package

SDG Narrative

SAMPLE SUMMARY

SDG#: 6881

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	SAMPLED DATE	SAMPLED TIME	RECEIVED DATE	RECEIVED TIME
A8C80903	4009-11A	WATER	10/10/2008	15:35	10/14/2008	09:00
A8C80901	4009-12	WATER	10/10/2008	14:55	10/14/2008	09:00
A8C80902	4009-12A	WATER	10/10/2008	11:10	10/14/2008	09:00
A8C80902MS	4009-12A	WATER	10/10/2008	11:10	10/14/2008	09:00
A8C80902SD	4009-12A	WATER	10/10/2008	11:10	10/14/2008	09:00
A8C80904	4009-13A	WATER	10/10/2008	09:20	10/14/2008	09:00

METHODS SUMMARY

Job#: A08-C809

Project#: NY9A8398
SDG#: 6881
Site Name: TestAmerica Connecticut

PARAMETER	ANALYTICAL METHOD
Aluminum - Soluble	ILM5.3 CLP-M
Aluminum - Total	ILM5.3 CLP-M
Antimony - Soluble	ILM5.3 CLP-M
Antimony - Total	ILM5.3 CLP-M
Arsenic - Soluble	ILM5.3 CLP-M
Arsenic - Total	ILM5.3 CLP-M
Barium - Soluble	ILM5.3 CLP-M
Barium - Total	ILM5.3 CLP-M
Beryllium - Soluble	ILM5.3 CLP-M
Beryllium - Total	ILM5.3 CLP-M
Cadmium - Soluble	ILM5.3 CLP-M
Cadmium - Total	ILM5.3 CLP-M
Calcium - Soluble	ILM5.3 CLP-M
Calcium - Total	ILM5.3 CLP-M
Chromium - Soluble	ILM5.3 CLP-M
Chromium - Total	ILM5.3 CLP-M
Cobalt - Soluble	ILM5.3 CLP-M
Cobalt - Total	ILM5.3 CLP-M
Copper - Soluble	ILM5.3 CLP-M
Copper - Total	ILM5.3 CLP-M
Iron - Soluble	ILM5.3 CLP-M
Iron - Total	ILM5.3 CLP-M
Lead - Soluble	ILM5.3 CLP-M
Lead - Total	ILM5.3 CLP-M
Magnesium - Soluble	ILM5.3 CLP-M
Magnesium - Total	ILM5.3 CLP-M
Manganese - Soluble	ILM5.3 CLP-M
Manganese - Total	ILM5.3 CLP-M
Mercury - Soluble	ILM5.3 CLP-HG
Mercury - Total	ILM5.3 CLP-HG
Nickel - Soluble	ILM5.3 CLP-M
Nickel - Total	ILM5.3 CLP-M
Potassium - Soluble	ILM5.3 CLP-M
Potassium - Total	ILM5.3 CLP-M
Selenium - Soluble	ILM5.3 CLP-M
Selenium - Total	ILM5.3 CLP-M
Silver - Soluble	ILM5.3 CLP-M

PARAMETER	ANALYTICAL METHOD
Silver - Total	ILM5.3 CLP-M
Sodium - Soluble	ILM5.3 CLP-M
Sodium - Total	ILM5.3 CLP-M
Thallium - Soluble	ILM5.3 CLP-M
Thallium - Total	ILM5.3 CLP-M
Vanadium - Soluble	ILM5.3 CLP-M
Vanadium - Total	ILM5.3 CLP-M
Zinc - Soluble	ILM5.3 CLP-M
Zinc - Total	ILM5.3 CLP-M

References:

ILM5.3 "Statement of Work for Inorganics Analysis", ILM05.3 USEPA Contract Laboratory Program, Multi-media, Multi-concentration.

SDG NARRATIVE

Job#: A08-C809

Project#: NY9A8398
SDG#: 6881
Site Name: TestAmerica Connecticut

General Comments

The enclosed data may or may not have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A08-C809
Sample Cooler(s) were received at the following temperature(s); 2.0 °C
All samples were received in good condition.

Metals Data

The recoveries of sample 4009-12A Matrix Spike and Matrix Spike Duplicate exhibited results above the quality control limits for Total Iron. The sample result is more than four times greater than the spike added. However, the LFB was acceptable.

The Total and Soluble Magnesium values obtained for sample 4009-12A were inconsistent. Reanalysis was performed and the values were confirmed. Only the results from the original analysis are provided in this data package.

"I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this Sample Data package and in the electronic data deliverables has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature."

Sally Hoffman
Project Manager

10.22.08
Date

Chain of Custody Documentation

TestAmerica Connecticut
128 Long Hill Cross Road
Shelton, CT 06484
Phone (203) 929-8140 Fax (203) 929-8142

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Dubauskas, Johanna	Carrier Tracking No(s):	COC No: 220-3058.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: johanna.dubauskas@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 220-6881-1

Address: 10 Hazelwood Drive, ,	Due Date Requested: 10/23/2008
City: Amherst	TAT Requested (days):
State, Zip: NY, 14228-2298	
Phone: 716-691-2600(Tel) 716-691-7991(Fax)	PO #:
Email:	WO #:
Project Name: NYSDEC Standby - Vestal Water Supply	Project #: 22000749
Site:	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT/ ILM05.3 Total TAL Metals	SUBCONTRACT/ ILM05.3 Dissolved TAL Metals	Total Number of containers	Special Instructions/Note:
Preservation Code:										
4009-12 (220-6881-5)	10/10/08	14:55		Water			X	X	2	
4009-12A (220-6881-6)	10/10/08	11:10		Water			X	X	6	
4009-11A (220-6881-8)	10/10/08	15:35		Water			X	X	2	
4009-13A (220-6881-10)	10/10/08	9:20		Water			X	X	2	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 10/13/08 16:04	Company: TA-CT	Received by:	Date/Time: 10/14/08 0900	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∧ Yes ∧ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.0

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10/22/2008

42/575

TestAmerica Laboratories Inc.
Sample Inventory

Job No: A08-C809
Client: TestAmerica Connecticut
Project: NY9A8398
SDG:
Case:
SMO No:
No. Samps: 4

Radiation Check: YES
Custody Seal: YES
Chain of Custody: YES
Sample Tags: NO
Sample Tag Numbers: NO
SMO Forms: NO
CLSIS: NO

Cooler Temperature: 2.0°C

Sample	Receive	Client Sample ID	Lab ID	Condition	Bottles	Parameters	Lab	Pres log Code	Pres log PH
10/10/2008 14:55	10/14/2008 09:00	4009-12	A8C80901	Good	1-1lP	T METALS	RECNY	0001	<2
					1-1lP	D METALS	RECNY	1001	<2
10/10/2008 11:10	10/14/2008 09:00	4009-12A	A8C80902	Good	1-1lP	T METALS	RECNY	0001	<2
					1-1lP	D METALS	RECNY	1001	<2
10/10/2008 11:10	10/14/2008 09:00	4009-12A	A8C80902MS	Good	1-1lP	T METALS	RECNY	0001	<2
					1-1lP	D METALS	RECNY	1001	<2
10/10/2008 11:10	10/14/2008 09:00	4009-12A	A8C80902SD	Good	1-1lP	T METALS	RECNY	0001	<2
					1-1lP	D METALS	RECNY	1001	<2
10/10/2008 15:35	10/14/2008 09:00	4009-11A	A8C80903	Good	1-1lP	T METALS	RECNY	0001	<2
					1-1lP	D METALS	RECNY	1001	<2
10/10/2008 09:20	10/14/2008 09:00	4009-13A	A8C80904	Good	1-1lP	T METALS	RECNY	0001	<2
					1-1lP	D METALS	RECNY	1001	<2

mple Custodian: _____ 10/14/2008

Analytical Services Coordinator: _____ /20

Preservation Code References:

First Digit: Sample Filtration; 1=Filtered, 0=Unfiltered
Second Digit: Sample Requires Cooling; (4°) 1=Cooled, 0=Not Cooled

Third, Fourth Digits - Preservation Types:
00=Nothing added, 01=HNO3, 02=H2SO4, 03=HCl, 04=Sodium Thiosulfate
05=NaOH, 06=NaOH+Zinc Acetate, 07=Sodium Thiosulfate+HCl, 08=MeOH
09=MCAA (Mono chloroacetic acid)

TestAmerica Buffalo

Doc. Login/ARRF
Rev 6
January 2, 2008

SAMPLE LOGIN JOB # C809

Shipment ID_____ Strict Internal COC: YES / NO

Residual Chlorine Check: ☐

Radiation Check <0.02 mR/hr: YES / NO

AC _____ Project / Task 439453981159

TAT 7 BD/_____CD # OF SAMPLES 4 TRIP BLANK Y/N # _____

SHIPPED BY Fedex	ATTACH SHIPPING TAGS
RECEIVED DATE / TIME:	10/24/08 09:00

COOLER TEMP 2.0 °C (<6 °C) OK NO

Cooler Custody Seal intact? YES/NO NONE SEAL # _____

If NO to cooler temp or seal, PM notified? YES_____ (PM Name)

SUBCONTRACT YES/NO LAB_____ SM # _____

COMMENTS: SAMPLE TIME ACTUAL +1HR +2 HR +3 HR NONE

Sample received outside hold time_____

Headspace in VOA vials_____

Problems with bottle labels_____

OTHER SAMPLE RECEIPT COMMENTS (Fill out ARRF, see reverse)

_____

_____

PRESERVATION CHECKED YES___ NO___ NA___ Initials_____

ARE SAMPLE DATES AND TIMES CORRECT? Initials_____

WERE ALL THE APPROPRIATE TESTS ASSIGNED? Initials_____

Temp.Cert.Loss: Carbaryl in Drinking Water for New York State
Dichlorodifluoromethane in Drinking Water for New York State

Metals Data

TestAmerica Connecticut

COVER PAGE

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No: NRAS No.: SDG No: 6881

SOW No.:

EPA Sample No.	Lab Sample ID
4009-11A	A8C80903
4009-11A-SOL	A8C80903-SOL
4009-12	A8C80901
4009-12A	A8C80902
4009-12A\MS	A8C80902MS
4009-12A\MS-SOL	A8C80902MS-SOL
4009-12A\SD	A8C80902SD
4009-12A\SD-SOL	A8C80902SD-SOL
4009-12A-SOL	A8C80902-SOL
4009-12-SOL	A8C80901-SOL
4009-13A	A8C80904
4009-13A-SOL	A8C80904-SOL

		ICP-AES	ICP-MS
Were ICP-AES and ICP-MS interelement corrections applied?	(Yes/No)	YES	NO
Were ICP-AES and ICP-MS background corrections applied?	(Yes/No)	YES	NO
If yes, were raw data generated before application of background corrections?	(Yes/No)	NO	NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette (or via an alternate means of electronic transmission, if approved in advance by USEPA) has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Sally J Hoffman Name: Sally J. Hoffman

Date: 10.22.08 Title: Project Manager

TestAmerica Connecticut

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

4009-11A

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Lab Sample ID: AD859760

Level (low/med): LOW Date Received: 10/14/2008

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	115	B		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	81.2	B		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	0.6	B		P
7440-70-2	Calcium	111000			P
7440-47-3	Chromium	1.6	B		P
7440-48-4	Cobalt	4.6	B		P
7440-50-8	Copper	3.3	B		P
7439-89-6	Iron	323			P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	44100			P
7439-96-5	Manganese	369			P
7440-02-0	Nickel	14.0	B		P
7440-09-7	Potassium	984	B		P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	52700			P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	11.6	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TestAmerica Connecticut

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

4009-11A-SOL

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Lab Sample ID: AD859800

Level (low/med): LOW Date Received: 10/14/2008

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	79.6	B		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	0.4	B		P
7440-70-2	Calcium	106000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	3.5	B		P
7440-50-8	Copper	2.0	B		P
7439-89-6	Iron	67.6	B		P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	42300			P
7439-96-5	Manganese	365			P
7440-02-0	Nickel	13.9	B		P
7440-09-7	Potassium	1060	B		P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	50400			P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	6.5	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TestAmerica Connecticut

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

4009-12

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Lab Sample ID: AD859756

Level (low/med): LOW Date Received: 10/14/2008

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8360			P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	8.6	B		P
7440-39-3	Barium	117	B		P
7440-41-7	Beryllium	0.40	B		P
7440-43-9	Cadmium	0.5	B		P
7440-70-2	Calcium	150000			P
7440-47-3	Chromium	16.5			P
7440-48-4	Cobalt	29.6	B		P
7440-50-8	Copper	28.9			P
7439-89-6	Iron	59500			P
7439-92-1	Lead	93.3			P
7439-95-4	Magnesium	25300			P
7439-96-5	Manganese	546			P
7440-02-0	Nickel	21.0	B		P
7440-09-7	Potassium	3890	B		P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	104000			P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	10.8	B		P
7440-66-6	Zinc	156			P

Color Before: BROWN Clarity Before: CLOUDY Texture: NONE

Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

TestAmerica Connecticut

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

4009-12A

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Lab Sample ID: AD859757

Level (low/med): LOW Date Received: 10/14/2008

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	2.0	B		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	3960	B		P
7440-47-3	Chromium	2.1	B		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	25.0	U		P
7439-89-6	Iron	5480			P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	7770			P
7439-96-5	Manganese	33.3			P
7440-02-0	Nickel	2.2	B		P
7440-09-7	Potassium	2080	B		P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	94700			P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	5.2	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TestAmerica Connecticut

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

4009-12A-SOL

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Lab Sample ID: AD859797

Level (low/med): LOW Date Received: 10/14/2008

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	0.90	B		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	2170	B		P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	50.0	U		P
7440-50-8	Copper	25.0	U		P
7439-89-6	Iron	100	U		P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	9270			P
7439-96-5	Manganese	1.3	B		P
7440-02-0	Nickel	40.0	U		P
7440-09-7	Potassium	2160	B		P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	102000			P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	60.0	U		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

TestAmerica Connecticut

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

4009-12-SOL

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Lab Sample ID: AD859796

Level (low/med): LOW Date Received: 10/14/2008

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	456			P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	72.8	B		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	135000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	2.3	B		P
7440-50-8	Copper	1.6	B		P
7439-89-6	Iron	3890			P
7439-92-1	Lead	4.2	B		P
7439-95-4	Magnesium	21500			P
7439-96-5	Manganese	54.6			P
7440-02-0	Nickel	2.1	B		P
7440-09-7	Potassium	2540	B		P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	102000			P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	10.0	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TestAmerica Connecticut

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

4009-13A

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Lab Sample ID: AD859761

Level (low/med): LOW Date Received: 10/14/2008

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	80.7	B		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	166000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	1.3	B		P
7440-50-8	Copper	25.0	U		P
7439-89-6	Iron	435			P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	22900			P
7439-96-5	Manganese	6.1	B		P
7440-02-0	Nickel	1.7	B		P
7440-09-7	Potassium	3130	B		P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	137000			P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	4.6	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

TestAmerica Connecticut

1A-IN

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

4009-13A-SOL

Lab Name: TESTAMERICA LABORATORIES INC. Contract: NY99-091

Lab Code: TALBFLO Case No.: NRAS No.: SDG NO.: 6881

Matrix (soil/water): WATER Lab Sample ID: AD859801

Level (low/med): LOW Date Received: 10/14/2008

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	60.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	78.5	B		P
7440-41-7	Beryllium	5.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	154000			P
7440-47-3	Chromium	10.0	U		P
7440-48-4	Cobalt	1.4	B		P
7440-50-8	Copper	25.0	U		P
7439-89-6	Iron	176			P
7439-92-1	Lead	10.0	U		P
7439-95-4	Magnesium	21600			P
7439-96-5	Manganese	4.7	B		P
7440-02-0	Nickel	1.5	B		P
7440-09-7	Potassium	3170	B		P
7782-49-2	Selenium	35.0	U		P
7440-22-4	Silver	10.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	129000			P
7440-28-0	Thallium	25.0	U		P
7440-62-2	Vanadium	50.0	U		P
7440-66-6	Zinc	60.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments: