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 Monitoring Summary

First Quarter 2010

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

Report Prepared By:

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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) (Tetra Tech EC, Inc., 2006) (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.

A variable frequency drive (VFD) was installed in February 2009 to provide soft-start operation for the Well 1-1A replacement well pump motor and reduced torque on the Certa-Lock® PVC drop pipe. The VFD also has the potential to provide future energy savings by allowing the well pump motor to be operated at a reduced speed. The VFD setting for the first quarter 2010 was maintained at 51 HZ.

3.1. System Operation

The groundwater treatment system was shut down for a total of six days during the first quarter 2010 operating period. As shown in the Monthly Reports and System O&M Logs provided by ECI (Appendix A), the system was down in accordance with the Contingency Plan on January 25, 2010 due to flooding of the Susquehanna River. Subsequent to the system being shut down for the January flooding event, the discharge line from the pump to the stripper tower froze due to an inoperative drain actuator for the discharge line and the well pump could not be restarted. The pipe was thawed and the treatment plant resumed operation on February 1, 2010. At the request of the NYSDEC, the treatment plant was shut down on March 15, 2010 for approximately five hours to perform an evaluation of scaling in the discharge line between the treatment plant clear well and the New York State Flood Management Area (FMA). Additional information regarding the discharge line evaluation is provided in Section 3.3.

Recent ECI Monthly Reports indicate that Well 1-1A and the air stripper blower are currently being operated in “Hand” (manual) mode. This is because the control panel is not functioning properly. This situation does not affect the effluent groundwater quality

discharged from the treatment system. The control panel was evaluated by Malcolm Pirnie and NYSDEC in December 2009 and January 2010, respectively. No obvious cause was determined for the malfunction. A recommendation for a replacement control panel and updated instrumentation were provided to the NYSDEC in a Periodic Review Report (PRR) and submitted in April 2010 (Malcolm Pirnie, 2010).

Table 3-1 and Figure 3-1 summarize groundwater treatment system flow rates from the Monthly Reports and System O&M Logs. As shown in Table 3-1, the groundwater treatment system flow rate for Well 1-1A increased from an average of 187gallons per minute (GPM) in January 2010 to an average of 203 GPM in March, 2010. As shown on Table 3-1, approximately 23,648,000 gallons of water were treated during the first quarter 2010 operating period.

3.2. Influent – Effluent Sampling

First quarter 2010 influent and effluent groundwater samples were collected from the Well 1-1A treatment system in accordance with the Work Plan; however, as discussed in Section 3.1, the discharge line was frozen in late January which correlates to the typical monthly sampling period. As a result, no samples were collected from the treatment system in January 2010. Two treatment plant sampling events were performed in February; one on February 5, 2010 subsequent to the restart the of the treatment plant and on February 23, 2010 during the typical sampling period. Treatment plant samples were also collected on March 15, 2010 during the annual groundwater sampling event.

Influent and effluent groundwater samples were sent to Test America Laboratories (formerly Severn Trent Laboratories) following chain-of-custody protocols for analysis of volatile organic compounds (VOCs) by United States Environmental Protection Agency USEPA Method 8260B. The laboratory analytical reporting forms are provided in Appendix B. The laboratory analytical data for the treatment plan samples are summarized in Tables 3-2 (influent VOCs) and Table 3-3 (effluent VOCs) ; Figure 3-2 presents the Well 1-1A treatment plant total influent VOC concentrations over time.

As shown in Table 3-2, influent sample concentrations of 1,1,1-trichloroethane, 1,1-dichloroethane, 1,1-dichloroethene, cis-1,2-dichloroethene, trichloroethene, and vinyl chloride are consistent with previous sampling results and exceed the corresponding NYSDEC Class GA Standards in each of the samples collected in the first quarter, 2010. Figure 3-2 shows that the total VOCs concentrations detected in the Well 1-1A influent samples are generally within the range of previous sampling events.

Table 3-3 shows that VOCs were not detected in any of the first quarter 2010 effluent samples.

Based on influent sample concentrations and total flow volumes from the Well 1-1A treatment system, approximately 53 pounds of VOCs were removed by the treatment system during the first quarter 2010 operating period. This quantity is less than the fourth quarter 2009 removal mass of 71 pounds and is principally due to the treatment plant shut down and a significantly lower total influent VOCs concentration reported in the March 2010 influent sample (161 ug/L) as compared to previous sampling events.

3.3. General Operation and Maintenance

3.3.1. Discharge Pipe Evaluation

As mentioned in Section 3.1, an evaluation of scaling in an approximately 200 feet section of 12 inch diameter discharge pipe from the treatment plant clear well to the New York State FMA outfall was performed on March 15, 2010. The evaluation was conducted at the request of the NYSDEC in response to a NYSDEC site visit performed on January 8, 2010 where NYSDEC personnel observed scaling at the outlet of the clear well. Prior to the physical inspection, a groundwater sample was collected from the treatment plant influent on February 25, 2012 for analysis of chloride, sulfate, alkalinity, hardness, total dissolved solids (TDS), and pH to provide water quality data to assist with the identification of the scaling and provide information for potential treatment options. The results of the analyses are summarized in Table 3-4.

3.3.1.1. Pipe Evaluation Procedures

Prior to performing a video inspection of the discharge pipe, an attempt was made to mechanically remove the scale using a high-pressure water “sewer jet”; however, minimal scaling was able to be removed from the pipe. A video inspection of the discharge line was performed using sewer inspection video equipment. The video equipment was advanced from the outfall end of the discharge pipe toward the treatment plant but was only able to be advanced approximately 100 feet due to scale buildup observed in the video at a 45 degree bend in the discharge line. Although based on the video the blockage was relatively minor, the configuration of the scaling in the pipe prevented further advancement of the video equipment. Therefore, the section of pipe between the 45 degree bend and the treatment plant (approximately 100 feet) was not able to be inspected.

3.3.2. Pipe Evaluation Results

Based on the results of the groundwater sample collected from the treatment plant and the inspection video, the scaling appears to be calcium carbonate precipitate. The precipitate appears to be coating the wetted perimeter of the pipe with a thin veneer where flow is relatively laminar and thickens where the flow is more turbulent. Continued scaling in the clear well discharge lines could limit the groundwater extraction rate to less than what is required to maintain hydraulic control of the groundwater plume.

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. Figure 4-1 shows the location of the groundwater monitoring wells. First quarter groundwater monitoring program activities were conducted in accordance with the Work Plan between March 15 and 17, 2010.

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 groundwater samples, water levels were measured to the nearest hundredth of a foot and recorded on a groundwater level data form (Appendix E). 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 808.63-feet above mean sea level (amsl) to 824.99-feet amsl; groundwater elevations in monitoring wells and piezometers screened in the deep groundwater monitoring zone unit ranged from 809.11-feet amsl to 811.27-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 vicinity of the source area in the shallow groundwater monitoring zone is generally northwest toward the Well 1-1A groundwater treatment plant. Figure 4-3 shows that the direction of groundwater flow in the deep groundwater monitoring zone is generally toward the southeast, 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 by chain-of-custody procedures and analyzed for target compound list (TCL) VOCs by USEPA Method 8260. Samples collected from groundwater monitoring wells 4009-12, 4009-12A, 4009-13, and 4009-15 were also analyzed for target analyte list (TAL) metals by USEPA Method ILM05.3 Analytical data packages are provided in Appendix B.

Groundwater sampling results for the first quarter 2010 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 eight 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 (134 ug/L), 4009-7 (288 ug/L), and 4009-8 (1,173 ug/L). Figure 4-5 shows the total VOCs concentrations in samples collected from these wells over time. As shown in Figure 4-5, the concentrations of total VOCs have decreased over time, with the most significant reductions observed in samples from 4009-8. Table 4-2 shows that the concentrations of 1,1,1-trichloroethane (1,1,1-TCA) in the sample from 4009-3 (16 ug/L) has decreased significantly from the concentration in the sample from this well (810 ug/L) in 2008, while the concentration of 1,1,1-TCA in the sample collected from 4009-8 has increased from 130 ug/L in 2008 to 630 ug/L in 2010, which is the maximum 1,1,1-TCA concentration reported in this well since 2007. The concentrations of 1,1,1-TCA (9 ug/L), 1-1, dichloroethane (24 ug/L), 1-1, dichloroethene (4 ug/L), cis-1,2-dichloroethene (110 ug/L) trichlorethene (20 ug/L), and vinyl chloride (120 ug/L) in the sample from 4009-7 decreased compared the levels reported in 2009 and are consistent with previous results from samples from this well. As shown in Table 4-2, the concentrations of VOCs in samples collected from the remainder of wells in the shallow groundwater monitoring network (4009-2, 4009-4, 4009-5, and 4009-12A) were generally consistent with the 2007 through 2009 monitoring results. The concentrations of total VOCs greater than the applicable NYSDEC Class GA Standards in these wells ranged from 48 ug/L (4009-4) to 113 ug/L (4009-5).

As shown in Table 4-2, low levels of 2-butanone, acetone, and trichloroethene were detected in several of the March 17, 2010 groundwater samples and the associated Trip Blank. Table 4-2 shows that these compounds were also detected in the associated Method Blank (indicated by the "B" qualifier); therefore, low-level detections of these compounds is likely related to laboratory contamination.

One duplicate sample (4009-X) was collected from monitoring well 4009-6 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.

4.3.2. VOCs – Deep Groundwater Monitoring Wells

Table 4-2 shows that the concentrations of total VOCs in the groundwater sample collected from monitoring well 4009-12 in 2010 (214 ug/L) decreased significantly compared to results reported in 2009 (401 ug/L). As shown in Table 4-2, the concentrations of 1,1,1-TCA (120 ug/L), trichloroethene (37 ug/L), cis-1,2-dichloroethene (36 ug/L), 1,1-dichloroethane (6.9 ug/L), and 1,1-dichloroethene (8.9 ug/L) are all greater than their corresponding NYSDEC Class GA Standard of 5 ug/L. Table 4-2 also shows that the methylene chloride result in the sample from 4009-12 in 2009 (14 ug/L) is likely to be anomalous and may be related to laboratory contamination since it was not detected in the 2007, 2008, or 2010 groundwater samples from this well. As shown in Table 4-2, groundwater samples collected from the remaining wells screened in the deep groundwater monitoring zone (4009-11, 4009-13, 4009-14, and 4009-15) did not contain any VOCs at concentrations greater than the applicable NYSDEC Class GA Standards.

4.3.3. Metals

Groundwater samples were collected from groundwater monitoring wells 4009-12 and 4009-12A, 4009-13, and 4009-15 and analyzed for total and dissolved TAL metals. Table 4-3 shows that the groundwater samples analyzed for metals in 2010 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 (13,000 ug/L) was reported in the sample from groundwater monitoring well 4009-12A. The total iron concentrations in the other wells exceeding the corresponding NYSDEC Class GA standard of 300 ug/L, ranged from 398 ug/L (4009-15) to 1,740 ug/L (4009-13). The concentrations of total sodium greater than the applicable NYSDEC Class GA Standard (20,000 ug/L) ranged from 66,400 ug/L in the sample from 4009-15 to 118,000 ug/L in the sample from 4009-12. Based on the proximity of these sample locations to Pumphouse Road, the sodium exceedances in these samples are likely the result of the local application of road de-icing agents. Groundwater samples from 4009-12A (502 ug/L) and 4009-13 (533 ug/L) contained concentrations of total manganese greater than the corresponding NYSDEC Class GA Standard of 300 ug/L.

5. Recommendations

Recommendations for revised instrumentation and controls have been presented to the NYSDEC in the PRR (Malcolm Pirnie, 2010). The following recommendations are for items observed during the first quarter 2010 O&M period.

5.1. Discharge Pipe

Since high pressure water was not able to remove the precipitate in the discharge line between the clear well and FMA, a more aggressive mechanical removal method or chemical treatment will be required. Although mechanical methods may be able to remove the existing scaling, a long-term solution should be implemented to provide effective treatment system operation.

Malcolm Pirnie contacted Carus Corporation (Carus) to inquire about treatment options for the discharge line and provided the water quality data from the samples collected from the treatment plant. Carus concluded that the high hardness and potentially iron is causing the scaling due to the introduction of air at the air stripper. Carus proposed the use of Aqua Mag, a blended ortho/polyphosphate product. Aqua Mag product information is provided in Appendix G. The product should have two effects: first, it will sequester the minerals in the raw water so that they do not precipitate in or after the air stripper; second, it should help soften the existing scale in the clearwell and discharge line (and possibly the air stripper media) so that it should begin to wash off the pipe and it will coat the pipe to prevent future buildup.

Injection would be required prior to the air stripper, preferably as far upstream of the stripper as possible to allow time for mixing. The estimated dosage from Carus is 1 milligram per liter (mg/L) of orthophosphate, which equates to 9.6 mg/L of Aqua Mag product. At 200 gpm the site is expected to use about 60 gallons of Aqua Mag per month; at 300 gpm, 90 gallons would be used. According to Carus, precautions are needed with this chemical, including secondary containment and an eyewash, which already exist at the site. According to Carus, Aqua Mag is NSF-certified for potable water use, so discharges to any water body with water containing Aqua Mag should be acceptable at these quantities.

Malcolm Pirnie estimates that the required injection equipment could be installed for approximately $6,000. Assuming the treatment plant operates at 300 GPM, the estimated annual cost for the Aqua Mag product would be $22,000.

6. Summary

The Vestal Well 1-1A groundwater treatment system was shut down for six days in January due to flooding and a frozen discharge pipe. The system operated with minimal interruption during the remainder of the first quarter, 2010 operation and maintenance period. The average flow rate through the treatment system during this period was 197 GPM, a decrease of approximately two percent compared to the average quarterly flow from the fourth quarter, 2009. Total flow through the treatment system from January to March 2009 was approximately 23.9-million gallons. Based on monthly influent and effluent sampling, the treatment system successfully removes VOCs from groundwater extracted from the capture zone. Approximately 53 pounds of VOCs were removed by the treatment system during the first quarter, 2010 operational period.

An evaluation of scaling in the treatment plant discharge line was performed on March 15, 2010. The evaluation included an attempt to remove scaling from the pipe with high pressure water and a video inspection of approximately one half of the discharge line. Based on the results of the evaluation, coupled with groundwater quality data collected from the treatment plant, continuous injection of an othrophosphate-based chemical would reduce existing scaling in the discharge line and mitigate future scaling in post-injection treatment plant components.

First quarter groundwater monitoring activities were conducted between March 15 and 17, 2010. Based on the well inspection survey, the condition of monitoring wells and piezometers evaluated during the groundwater monitoring program were 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 eight of the 13 wells evaluated during the first quarter 2010 sampling event, but were generally within the range of results from the 2007 through 2009 sampling events. The maximum concentration of total VOCs was 1,173 ug/L in the sample from shallow monitoring well 4009-8. Only one deep groundwater monitoring well (4009-12) contained concentrations of VOCs greater than the applicable NYSDEC Class GA Standard. The elevated concentrations of VOCs in this well are likely due to the influence of the pumping well on local vertical groundwater flow. The results from this well were consistent with 2007 through 2009 sample results.

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.

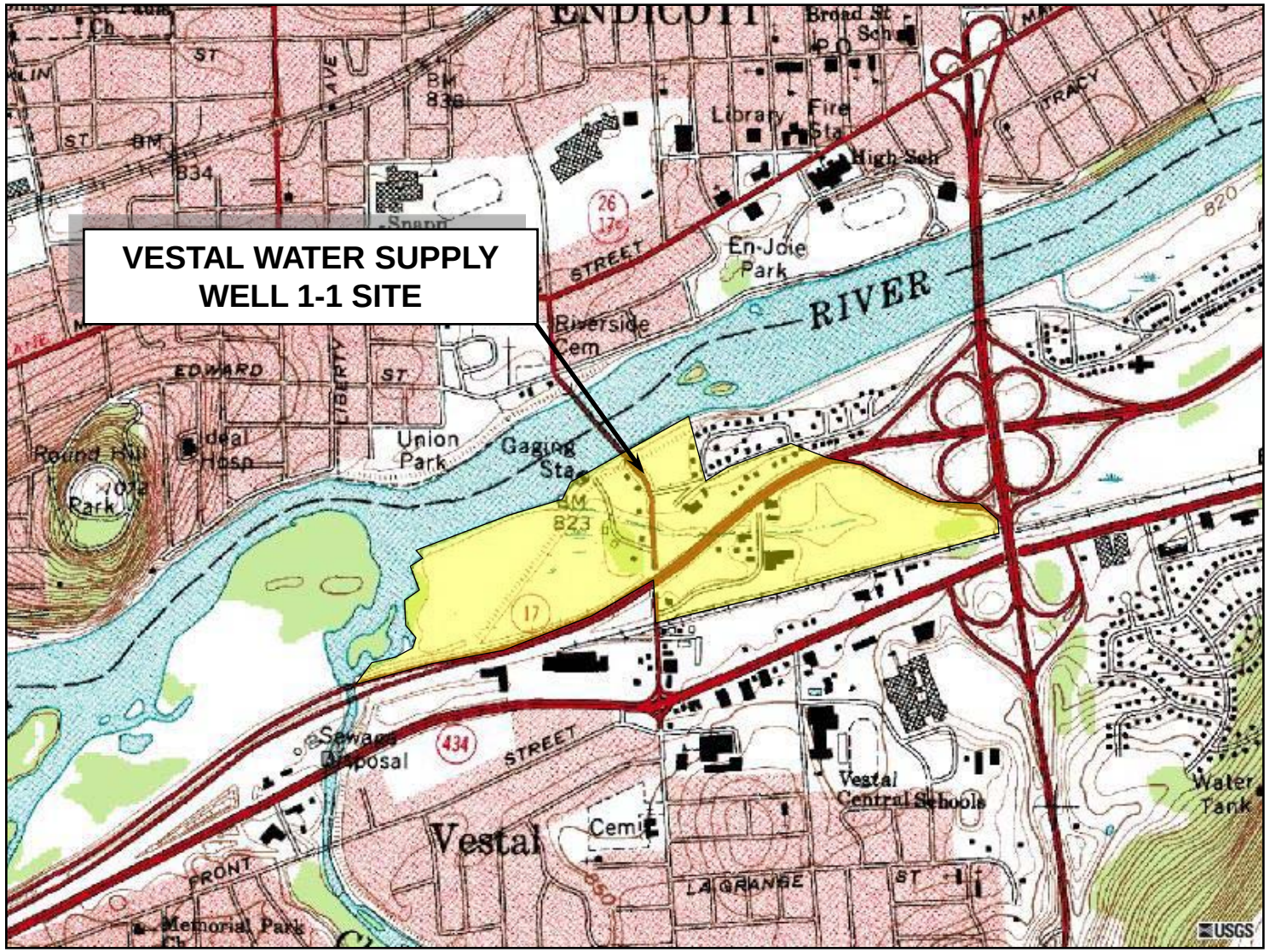
The concentrations of iron, sodium, and/or manganese were detected at concentrations greater than the corresponding NYSDEC Class GA Standards in each of groundwater samples analyzed for metals during the first quarter 2010 sampling event.

The next groundwater sampling event is scheduled to be completed in the second quarter 2011.

7. References

Malcolm Pirnie, 2010, Periodic Review Report, Vestal Water Supply Site, Site Number 7-04-009A.

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



SCALE IN FEET

0 500 1000 2000

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

MALCOLM PIRNIE

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

Figure 3-1
Well 1-1A Treatment Plant Flow
Vestal Water Supply Site
NYSDEC Site Number 7-04-009A

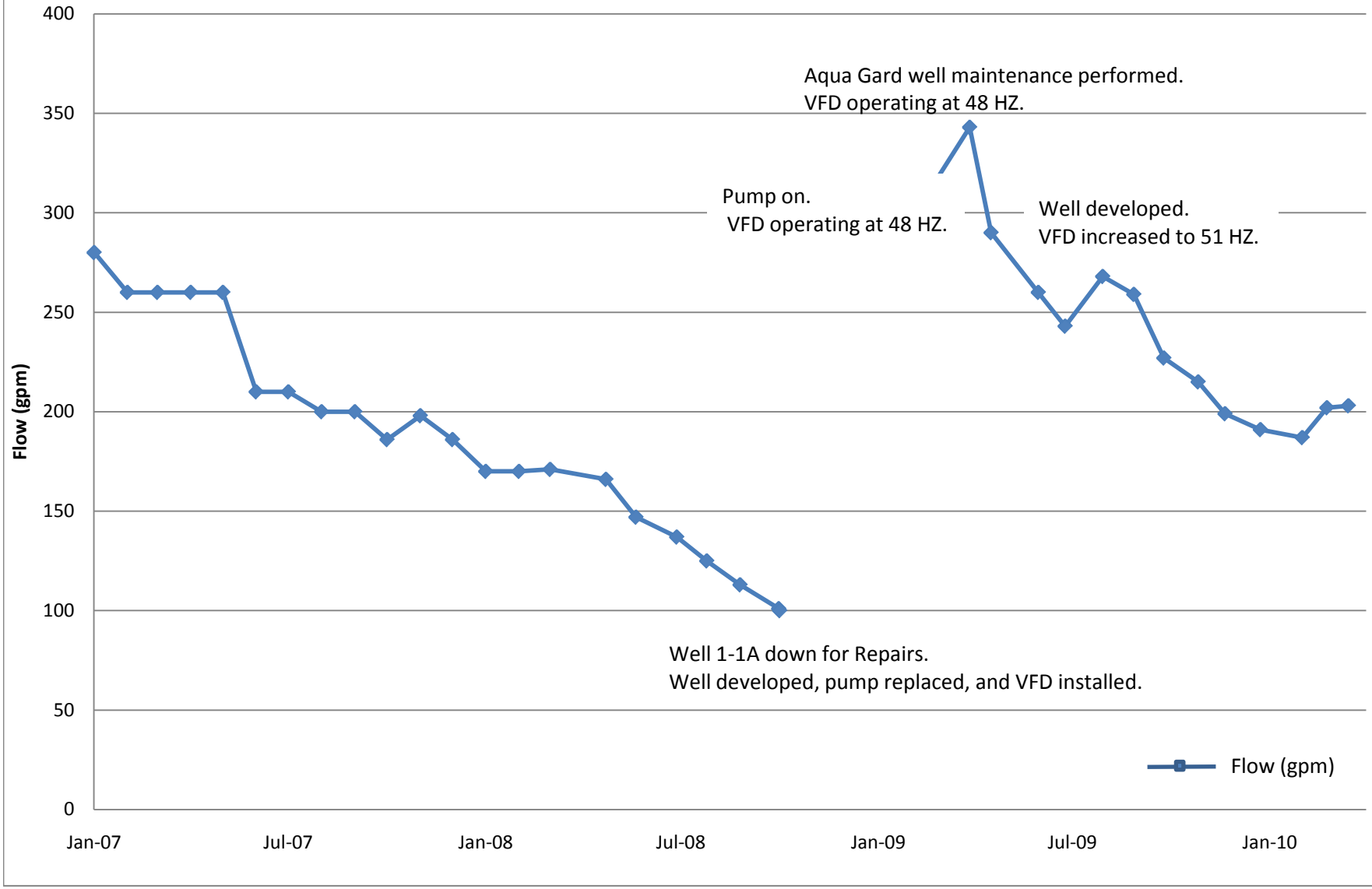
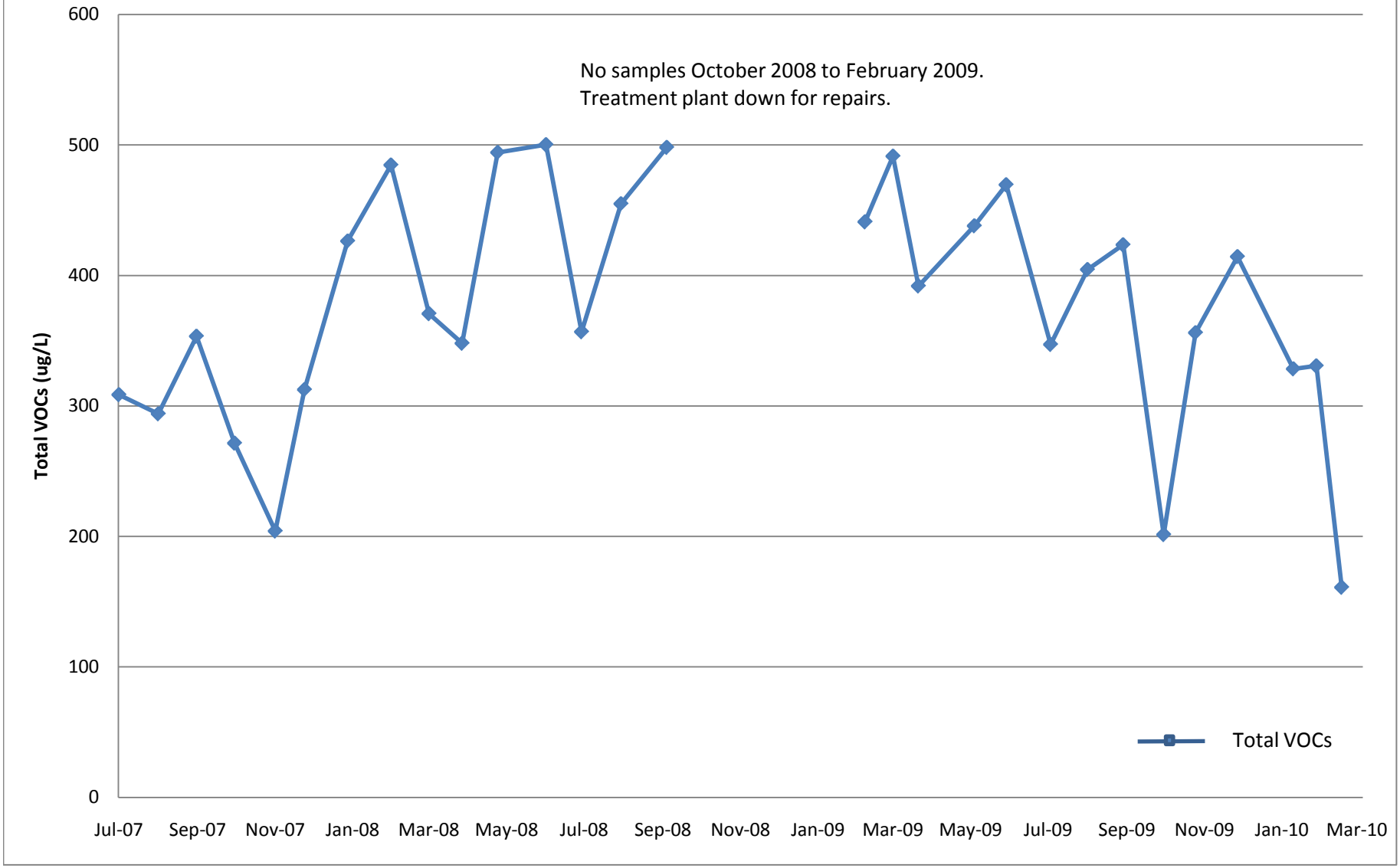
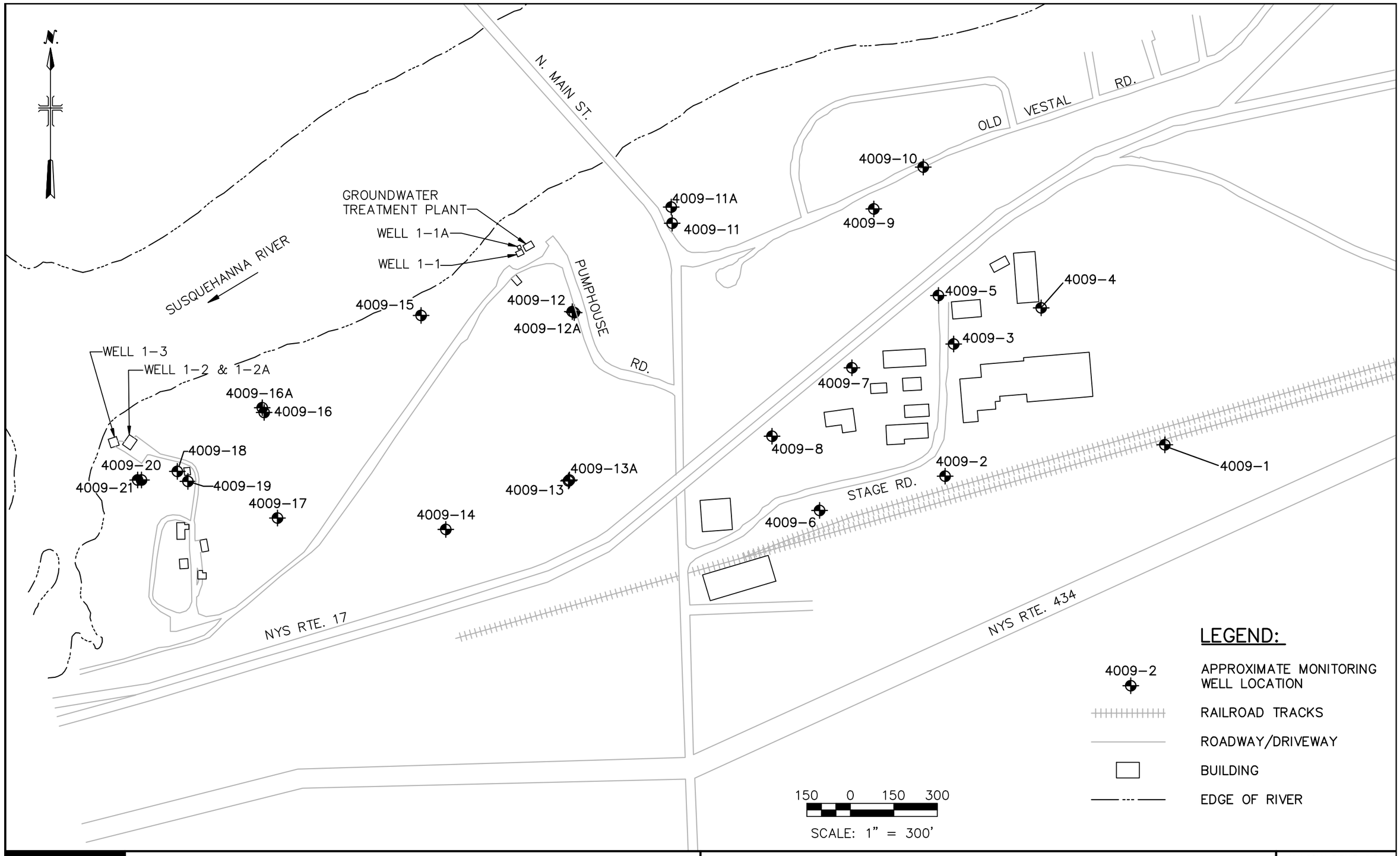


Figure 3-2
Well 1-1A Treatment Plant Total VOCs Concentrations
Vestal Water Supply Site
NYSDEC Site Number 7-04-009A





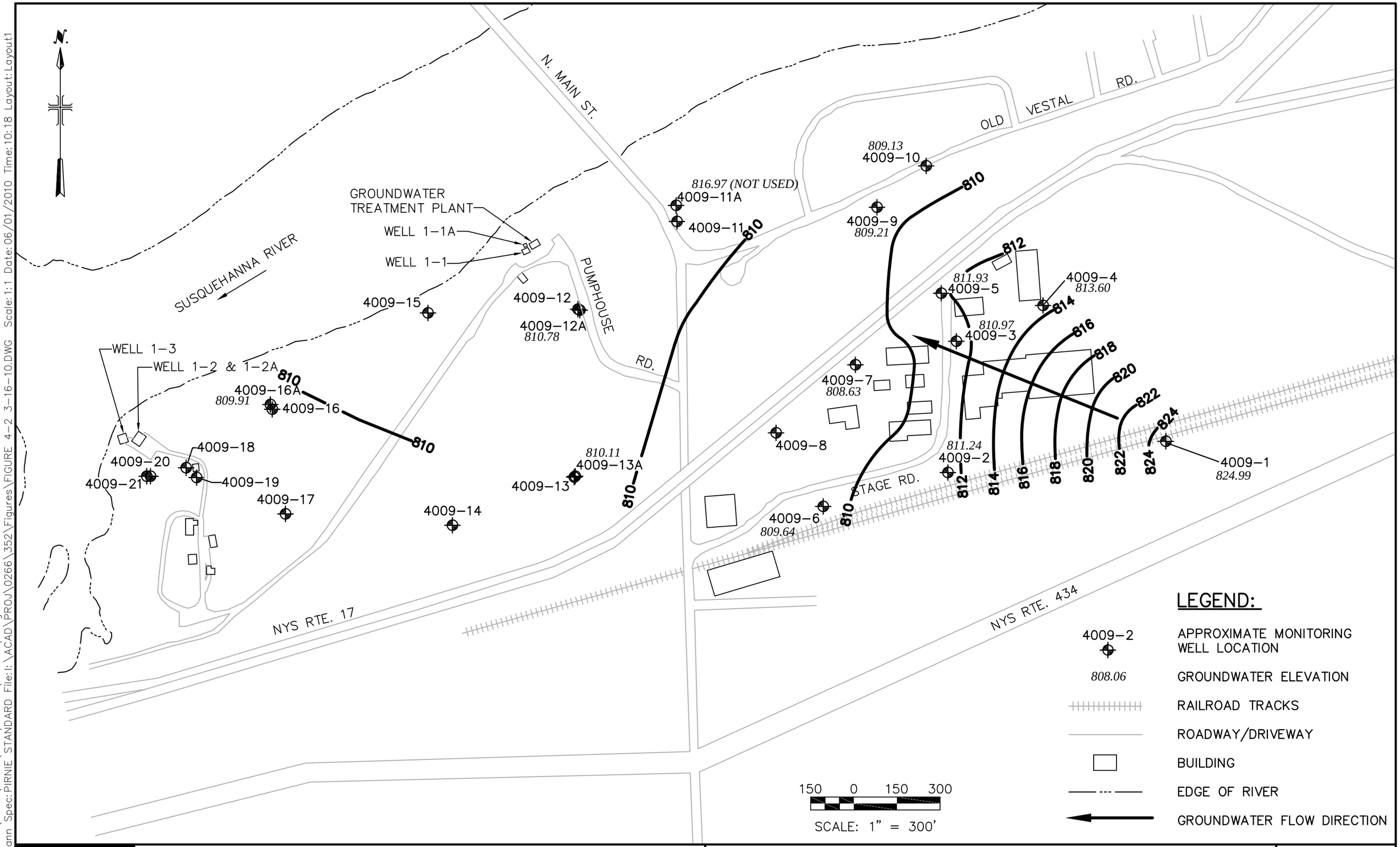
MALCOLM PIRNIE

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'

MALCOLM PIRNIE, INC.
APRIL 2009
FIGURE 4-1

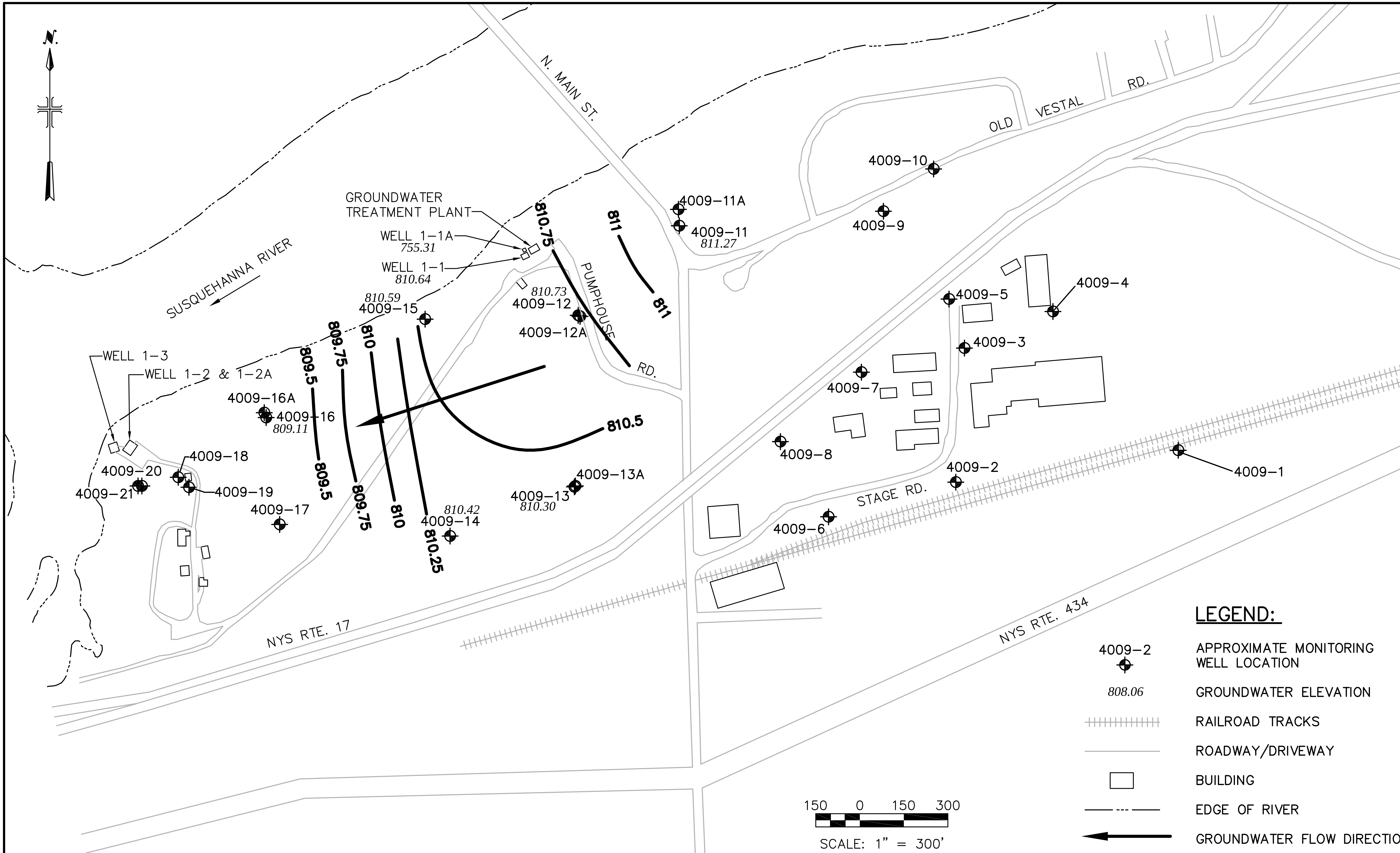


MALCOLM PIRNIE

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

SHALLOW POTENTIOMETRIC SURFACE (3/16/2010)
SCALE: 1" = 300'

MALCOLM PIRNIE, INC.
JUNE 2010
FIGURE 4-2



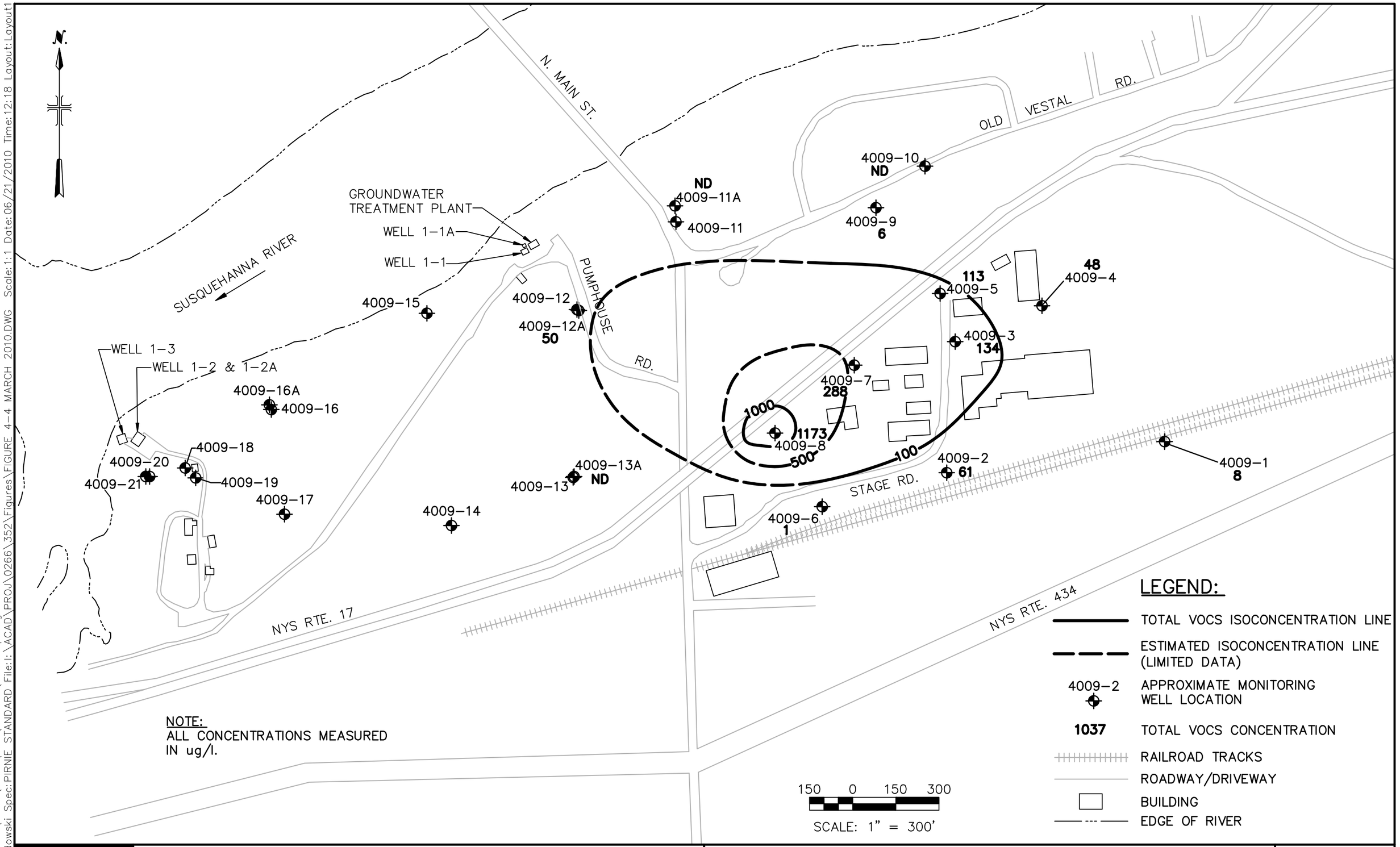
MALCOLM PIRNIE

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

DEEP POTENTIOMETRIC SURFACE (3/16/2010)

SCALE: 1" = 300'

MALCOLM PIRNIE, INC.
JUNE 2010
FIGURE 4-3



MALCOLM PIRNIE

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

TOTAL VOC CONCENTRATIONS (MARCH 2010) – SHALLOW MONITORING WELLS
SCALE: 1" = 300'

MALCOLM PIRNIE, INC.
JUNE 2010
FIGURE 4-4

Figure 4--5
Historical Total VOCs Concentrations in Shallow Groundwater Monitoring Wells
Vestal Water Supply Site
NYSDEC Site Number 7-04-009

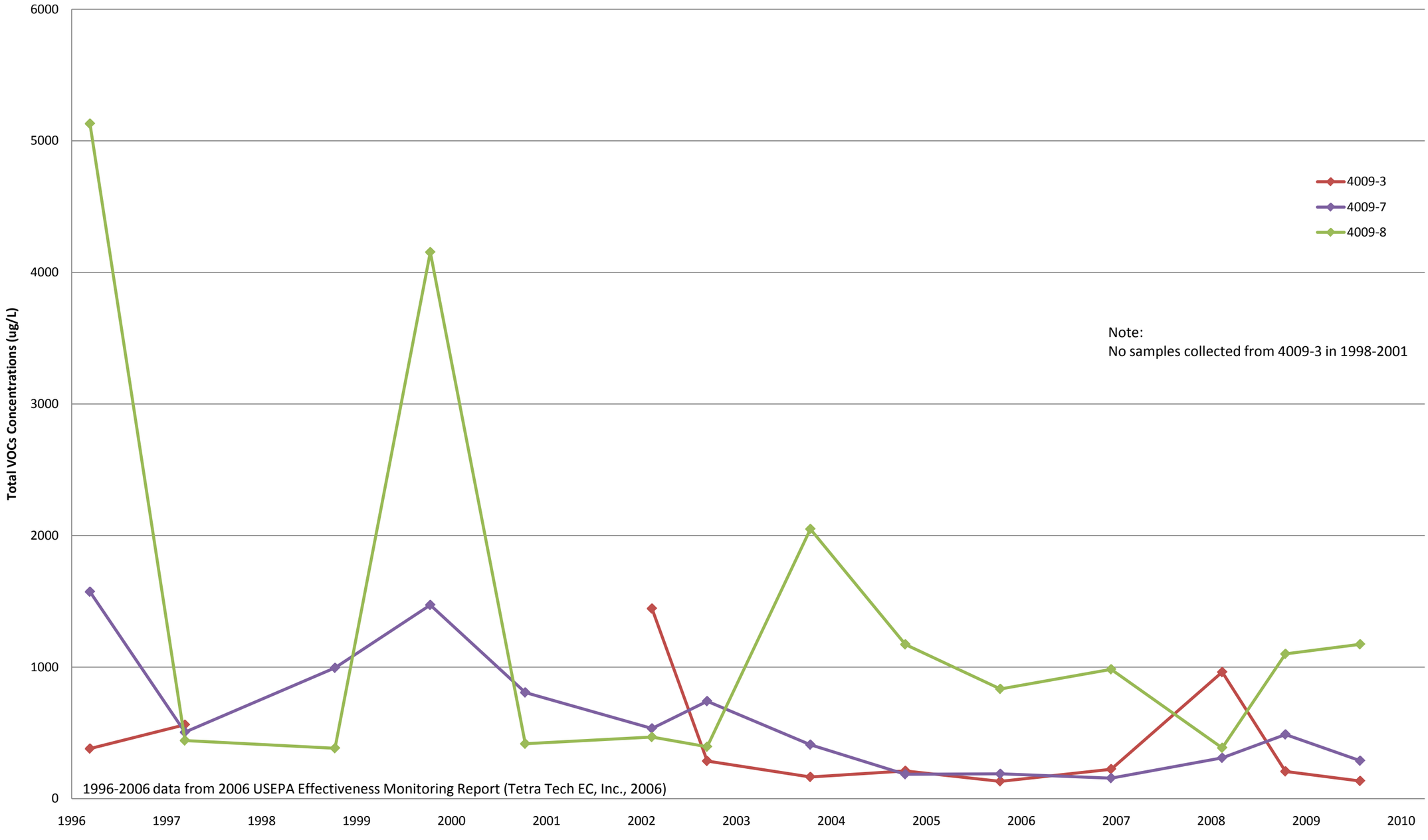


TABLE 3-1
WELL 1-1A FLOW SUMMARY
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE NO. 7-04-009A

Date	System Operation[1] (days/month)		Pumping Rate[1] (gpm)	Total Flow[2] (gallons)	Quarterly Flow (gallons)
January-07	31		280	12,499,200	
February-07	28		260	10,483,200	33,840,000
March-07	29	(3)	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	(4)	100	864,000	
November-08	0	(4)	0	0	864,000
December-08	0	(4)	0	0	
January-09	0	(4)	0	0	
February-09	19	(4)	304	8,317,440	22,641,120
March-09	29	(3)	343	14,323,680	
April-09	30		290	12,528,000	
May-09	30	(5)	260	11,232,000	34,257,600
June-09	30		243	10,497,600	
July-09	29	(4)	268	11,191,680	
August-09	29	(5)	259	10,815,840	31,160,160
September-09	28	(5)	227	9,152,640	
October-09	31		215	9,597,600	
November-09	30	(5)	199	8,596,800	26,720,640
December-09	31		191	8,526,240	
January-10	25	(3)	187	6,732,000	
February-10	28		202	8,144,640	23,938,560
March-10	31		203	9,061,920	
Total Flow (2007)				**117,567,360**	
Total Flow (2008)				**57,824,640**	
Total Flow (2009)				**114,779,520**	
Total Flow (2010)				**23,938,560**	

Notes:
1 - From Environmental Compliance, Inc. O&M Reports and Malcolm Pirnie, Inc. field notes.
2 - Calculated assuming system operating 24-hours per day
3 - System shut down for flooding
4 - System shut down for repairs
5 - System down due to power failure
gpm - Gallons per minute

TABLE 3-2
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (INFLUENT)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Matrix Units	NYSDEC GA Standard ug/L	WELL 1A-INF 7/27/2007 WATER ug/L	WELL 1A-INF 8/27/2007 WATER ug/L	WELL 1A-INF 9/26/2007 WATER ug/L
VOCs				
1,1,1-Trichloroethane	5	**170**	**160**	**200**
1,1,2,2-Tetrachloroethane	5	10 U	5 U	20 U
1,1,2-Trichloroethane	1	10 U	5 U	20 U
1,1-Dichloroethane	5	**20**	**19**	**23**
1,1-Dichloroethene	5	**12**	**10**	**14 J**
1,2-Dichloroethane	0.6	10 U	5 U	20 U
1,2-Dichloropropane	5	10 U	5 U	20 U
2-Hexanone		20 U	10 U	40 U
Acetone		20 U	10 U	40 U
Benzene	1	10 U	0.39 J	20 U
Bromodichloromethane	50	10 U	5 U	20 U
Bromoform		10 U	5 U	20 U
Bromomethane	5	10 U	5 U	20 U
Carbon disulfide		10 U	5 U	20 U
Carbon tetrachloride	5	10 U	5 U	20 U
Chlorobenzene	5	10 U	5 U	20 U
Chloroethane	5	10 U	5 U	20 U
Chloroform	7	10 U	5 U	20 U
Chloromethane		10 U	5 U	20 U
cis-1,2-Dichloroethene	5	**55**	**54**	**58**
cis-1,3-Dichloropropene	0.4	10 U	5 U	20 U
Dibromochloromethane	50	10 U	5 U	20 U
Ethylbenzene	5	10 U	5 U	20 U
Methyl Ethyl Ketone	50	20 U	10 U	40 U
Methyl Isobutyl Ketone		20 U	10 U	40 U
Methylene Chloride	5	10 U	5 U	20 U *
Styrene	5	10 U	5 U	20 U
Tetrachloroethene	5	1.3 J	5 U	20 U
Toluene	5	10 U	0.15 J	20 U
trans-1,2-Dichloroethene	5	10 U	5 U	20 U
trans-1,3-Dichloropropene	0.4	10 U	5 U	20 U
Trichloroethene	5	**46**	**47**	**53**
Vinyl chloride	2	**4.3 J**	**3.4 J**	**5.4 J**
Xylenes, Total	5	10 U	5 U	20 U
Total VOCs		309	294	353

Notes

- Concentration exceeds corresponding NYSDEC Class GA Standard.

U - Not detected at the indicated concentration.

J - Estimated concentration.

M - Manual integrated compound.

B - Analyte found in associated blank as well as the sample.

E - Concentration exceeds instrument calibration range.

* - MS or MSD exceeded control limits.

TABLE 3-2
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (INFLUENT)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Matrix Units	NYSDEC GA Standard ug/L	WELL 1A-INF 10/26/2007 WATER ug/L	WELL 1A-INF 11/27/2007 WATER ug/L	WELL 1A-INF 12/20/2007 WATER ug/L
VOCs				
1,1,1-Trichloroethane	5	**140**	**110**	**170**
1,1,2,2-Tetrachloroethane	5	5 U	10 U	20 U
1,1,2-Trichloroethane	1	5 U	10 U	20 U
1,1-Dichloroethane	5	**22**	**15**	**24**
1,1-Dichloroethene	5	**11**	**8.2 J**	**13 J**
1,2-Dichloroethane	0.6	5 U	10 U	20 U
1,2-Dichloropropane	5	5 U	10 U	20 U *
2-Hexanone		10 U	20 U	40 U
Acetone		10 U	20 U	40 UM
Benzene	1	5 U	10 U	20 U
Bromodichloromethane	50	5 U	10 U	20 U
Bromoform		5 U	10 U	20 U
Bromomethane	5	5 U	10 U	20 U
Carbon disulfide		5 U	10 U	20 U
Carbon tetrachloride	5	5 U	10 U	20 U
Chlorobenzene	5	5 U	10 U	20 U
Chloroethane	5	5 U	10 U	20 U *
Chloroform	7	5 U	10 U	20 U
Chloromethane		5 U *	10 U	20 U *
cis-1,2-Dichloroethene	5	**50**	**39**	**57**
cis-1,3-Dichloropropene	0.4	5 U	10 U	20 U
Dibromochloromethane	50	5 U	10 U	20 U
Ethylbenzene	5	5 U	10 U	20 U
Methyl Ethyl Ketone	50	10 U	20 U	40 U
Methyl Isobutyl Ketone		10 U	20 U	40 U
Methylene Chloride	5	5 U	10 U M	2.2 JMB
Styrene	5	5 U	10 U	20 U
Tetrachloroethene	5	0.97 J	10 U	20 U
Toluene	5	5 U	10 U	20 U
trans-1,2-Dichloroethene	5	5 U	10 U	20 U
trans-1,3-Dichloropropene	0.4	5 U	10 U	20 U
Trichloroethene	5	**41 B**	**29**	**37**
Vinyl chloride	2	**6.5 ***	**2.9 J**	**9.3 JM**
Xylenes, Total	5	5 U	10 U	20 U
Total VOCs		271	204	313

Notes

- Concentration exceeds corresponding NYSDEC Class GA Standard.

U - Not detected at the indicated concentration.

J - Estimated concentration.

M - Manual integrated compound.

B - Analyte found in associated blank as well as the sample.

E - Concentration exceeds instrument calibration range.

* - MS or MSD exceeded control limits.

TABLE 3-2
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (INFLUENT)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Matrix Units	NYSDEC GA Standard ug/L	WELL 1A-INF 1/23/2008 WATER ug/L	WELL 1A-INF 2/26/2008 WATER ug/L	WELL 1A-INF 3/27/2008 WATER ug/L
VOCs				
1,1,1-Trichloroethane	5	**230**	**250**	**180**
1,1,2,2-Tetrachloroethane	5	10 U	10 U	5 U
1,1,2-Trichloroethane	1	10 U	10 U	5 U
1,1-Dichloroethane	5	**30**	**31**	**27**
1,1-Dichloroethene	5	**18 M**	**18**	**17**
1,2-Dichloroethane	0.6	10 U	10 U	5 U
1,2-Dichloropropane	5	10 U	10 U	5 U
2-Hexanone		20 U *	20 U	10 U
Acetone		20 U *	20 U	10 U
Benzene	1	0.6 J	10 U	0.38 J
Bromodichloromethane	50	10 U	10 U	5 U
Bromoform		10 U	10 U	5 U
Bromomethane	5	10 U *	10 U	5 U
Carbon disulfide		10 U	10 U	5 U
Carbon tetrachloride	5	10 U	**35**	5 U
Chlorobenzene	5	10 U	10 U	5 U
Chloroethane	5	10 U	10 U	0.79 J
Chloroform	7	10 U	10 U	5 U
Chloromethane		10 U	10 U	5 U
cis-1,2-Dichloroethene	5	**71**	**73**	**76**
cis-1,3-Dichloropropene	0.4	10 U	10 U	5 U
Dibromochloromethane	50	10 U	10 U	5 U
Ethylbenzene	5	10 U	10 U	5 U
Methyl Ethyl Ketone	50	20 U *	20 U	10 U
Methyl Isobutyl Ketone		20 U	20 U	10 U
Methylene Chloride	5	0.94 J	10 U	5 U
Styrene	5	10 U	10 U	5 U
Tetrachloroethene	5	10 U	10 U	5 U
Toluene	5	10 U	10 U	5 U
trans-1,2-Dichloroethene	5	10 U	10 U	5 U
trans-1,3-Dichloropropene	0.4	10 U	10 U	5 U
Trichloroethene	5	**62**	**69**	**62**
Vinyl chloride	2	**11**	**8.6 J**	**7.5**
Xylenes, Total	5	2.8 J	10 U	5 U
Total VOCs		426	485	371

Notes

- Concentration exceeds corresponding NYSDEC Class GA Standard.

U - Not detected at the indicated concentration.

J - Estimated concentration.

M - Manual integrated compound.

B - Analyte found in associated blank as well as the sample.

E - Concentration exceeds instrument calibration range.

* - MS or MSD exceeded control limits.

TABLE 3-2
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (INFLUENT)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Matrix Units	NYSDEC GA Standard ug/L	WELL 1A-INF 4/22/2008 WATER ug/L	WELL 1A-INF 5/20/2008 WATER ug/L	WELL 1A-INF 6/27/2008 WATER ug/L
VOCs				
1,1,1-Trichloroethane	5	**180**	**300 E**	**290**
1,1,2,2-Tetrachloroethane	5	10 U	10 U	20 U
1,1,2-Trichloroethane	1	10 U	10 U	20 U
1,1-Dichloroethane	5	**26**	**27**	**28**
1,1-Dichloroethene	5	**9.7 J**	**17**	**20 J**
1,2-Dichloroethane	0.6	10 U	10 U	20 U
1,2-Dichloropropane	5	10 U	10 U	20 U
2-Hexanone		20 U	10 U	40 U
Acetone		20 U	0.5 J B	11 J B
Benzene	1	10 U	10 U	20 U
Bromodichloromethane	50	10 U	10 U	20 U
Bromoform		10 U	10 U	20 U
Bromomethane	5	10 U	10 U	20 U
Carbon disulfide		10 U	10 U	20 U
Carbon tetrachloride	5	10 U	10 U	20 U
Chlorobenzene	5	10 U	10 U	20 U
Chloroethane	5	10 U	10 U	20 U
Chloroform	7	10 U	10 U	20 U
Chloromethane		10 U	10 U	20 U
cis-1,2-Dichloroethene	5	**72**	**78**	**77**
cis-1,3-Dichloropropene	0.4	10 U	10 U	20 U
Dibromochloromethane	50	10 U	10 U	20 U
Ethylbenzene	5	10 U	10 U	20 U
Methyl Ethyl Ketone	50	20 U	10 U	40 U
Methyl Isobutyl Ketone		20 U	10 U	40 U
Methylene Chloride	5	2.2 J B	0.32 JB	3.5 J B
Styrene	5	10 U	10 U	20 U
Tetrachloroethene	5	10 U	10 U	20 U
Toluene	5	10 U	10 U	20 U
trans-1,2-Dichloroethene	5	10 U	10 U	20 U
trans-1,3-Dichloropropene	0.4	10 U	10 U	20 U
Trichloroethene	5	**54 * B**	**65**	**64**
Vinyl chloride	2	**4.1 J**	**6.4 J**	**6.7 J**
Xylenes, Total	5	10 U	10 U	20 U
Total VOCs		348	494	500

Notes

- Concentration exceeds corresponding NYSDEC Class GA Standard.

U - Not detected at the indicated concentration.

J - Estimated concentration.

M - Manual integrated compound.

B - Analyte found in associated blank as well as the sample.

E - Concentration exceeds instrument calibration range.

* - MS or MSD exceeded control limits.

TABLE 3-2
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (INFLUENT)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Matrix Units	NYSDEC GA Standard ug/L	WELL 1A-INF 7/25/2008 WATER ug/L	WELL 1A-INF 8/25/2008 WATER ug/L	WELL 1A-INF 9/30/2008 WATER ug/L
VOCs				
1,1,1-Trichloroethane	5	**220**	**270**	**300**
1,1,2,2-Tetrachloroethane	5	20 U	20 U	25 U
1,1,2-Trichloroethane	1	20 U	20 U	25 U *
1,1-Dichloroethane	5	**23**	**27**	**28**
1,1-Dichloroethene	5	**13 J**	**19 J**	**19 J**
1,2-Dichloroethane	0.6	20 U	20 U	25 U
1,2-Dichloropropane	5	20 U	20 U	25 U
2-Hexanone		40 U	40 U	50 U
Acetone		40 U	4.7 J	5.2 J
Benzene	1	20 U	20 U	25 U
Bromodichloromethane	50	20 U	20 U	25 U
Bromoform		20 U	20 U	25 U
Bromomethane	5	20 U	20 U	25 U
Carbon disulfide		20 U	20 U	25 U
Carbon tetrachloride	5	20 U	20 U	25 U
Chlorobenzene	5	20 U	20 U	25 U
Chloroethane	5	20 U	20 U	25 U
Chloroform	7	20 U	20 U	25 U *
Chloromethane		20 U	20 U	25 U
cis-1,2-Dichloroethene	5	**50**	**68**	**75**
cis-1,3-Dichloropropene	0.4	20 U	20 U	25 U
Dibromochloromethane	50	20 U	20 U	25 U
Ethylbenzene	5	20 U	20 U	25 U
Methyl Ethyl Ketone	50	40 U	40 U	50 U
Methyl Isobutyl Ketone		40 U	40 U	50 U
Methylene Chloride	5	20 U	20 U	25 U
Styrene	5	20 U *	20 U	25 U
Tetrachloroethene	5	20 U	20 U	25 U
Toluene	5	20 U	20 U	25 U
trans-1,2-Dichloroethene	5	20 U	20 U	25 U
trans-1,3-Dichloropropene	0.4	20 U	20 U	25 U
Trichloroethene	5	**45**	**59**	**64**
Vinyl chloride	2	**5.8 J**	**7.2 J**	**6.9 J**
Xylenes, Total	5	20 U	20 U	25 U
Total VOCs		357	455	498

Notes

- Concentration exceeds corresponding NYSDEC Class GA Standard.

U - Not detected at the indicated concentration.

J - Estimated concentration.

M - Manual integrated compound.

B - Analyte found in associated blank as well as the sample.

E - Concentration exceeds instrument calibration range.

* - MS or MSD exceeded control limits.

TABLE 3-2
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (INFLUENT)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Matrix Units	NYSDEC GA Standard ug/L	WELL 1A-INF 3/5/2009 WATER ug/L	WELL 1A-INF 3/27/2009 WATER ug/L	WELL 1A-INF 4/16/2009 WATER ug/L
VOCs				
1,1,1-Trichloroethane	5	**260**	**280**	**220**
1,1,2,2-Tetrachloroethane	5	25 U	2 U	10 U
1,1,2-Trichloroethane	1	25 U	2 U	10 U
1,1-Dichloroethane	5	**28**	**31**	**25**
1,1-Dichloroethene	5	**19 J**	**22 ***	**20**
1,2-Dichloroethane	0.6	25 U	2 U	10 U
1,2-Dichloropropane	5	25 U	2 U	10 U
2-Hexanone		50 U	8 U	20 U
Acetone		50 U	2.3 J *	20 U *
Benzene	1	25 U	2 U	10 U
Bromodichloromethane	50	25 U	2 U	10 U
Bromoform		25 U	2 U	10 U
Bromomethane	5	25 U	4 U	10 U
Carbon disulfide		25 U	2 U	10 U
Carbon tetrachloride	5	25 U	2 U	10 U
Chlorobenzene	5	25 U	2 U	10 U
Chloroethane	5	25 U	4 U	10 U
Chloroform	7	25 U	0.67 J B	10 U
Chloromethane		25 U	2 U	10 U
cis-1,2-Dichloroethene	5	**65**	**63**	**60**
cis-1,3-Dichloropropene	0.4	25 U	2 U	10 U
Dibromochloromethane	50	25 U	2 U	10 U
Ethylbenzene	5	25 U	2 U	10 U
Methyl Ethyl Ketone	50	50 U	8 U	20 U
Methyl Isobutyl Ketone		50 U	8 U	20 U
Methylene Chloride	5	25 U	**7.9 J B**	**2.3 J B**
Styrene	5	25 U	2 U	10 U
Tetrachloroethene	5	25 U	2 U	10 U
Toluene	5	25 U	2 U	10 U
trans-1,2-Dichloroethene	5	25 U	0.51 J	10 U
trans-1,3-Dichloropropene	0.4	25 U	2 U	10 U
Trichloroethene	5	**59**	**58**	**55**
Vinyl chloride	2	**10 J**	**14**	**9.6 J**
Xylenes, Total	5	25 U	**12**	10 U
Total VOCs		441	491	392

Notes

- Concentration exceeds corresponding NYSDEC Class GA Standard.

U - Not detected at the indicated concentration.

J - Estimated concentration.

M - Manual integrated compound.

B - Analyte found in associated blank as well as the sample.

E - Concentration exceeds instrument calibration range.

* - MS or MSD exceeded control limits.

TABLE 3-2
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (INFLUENT)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Matrix Units	NYSDEC GA Standard ug/L	WELL 1A-INF 5/30/2009 WATER ug/L	WELL 1A-INF 6/24/2009 WATER ug/L	WELL 1A-INF 7/29/2009 WATER ug/L
VOCs				
1,1,1-Trichloroethane	5	**250**	**270**	**190**
1,1,2,2-Tetrachloroethane	5	20 U	2 U	2 U
1,1,2-Trichloroethane	1	20 U	2 U	2 U
1,1-Dichloroethane	5	**27**	**27**	**21**
1,1-Dichloroethene	5	**24 ***	**22**	**18 ***
1,2-Dichloroethane	0.6	20 U	2 U	2 U
1,2-Dichloropropane	5	20 U	2 U	2 U
2-Hexanone		40 U	8 U	8 U
Acetone		12 J	10	13 B
Benzene	1	20 U	2 U	2 U
Bromodichloromethane	50	20 U	2 U	2 U
Bromoform		20 U	2 U	2 U
Bromomethane	5	20 U	4 U	4 U
Carbon disulfide		20 U	2 U	2 U
Carbon tetrachloride	5	20 U	2 U	2 U
Chlorobenzene	5	20 U	2 U	2 U
Chloroethane	5	20 U	4 U *	4 U *
Chloroform	7	20 U	2 U	2 U
Chloromethane		20 U	2 U *	2 U
cis-1,2-Dichloroethene	5	**53**	**55**	**49**
cis-1,3-Dichloropropene	0.4	20 U	2 U	2 U
Dibromochloromethane	50	20 U	2 U	2 U
Ethylbenzene	5	20 U	2 U	2 U
Methyl Ethyl Ketone	50	40 U	8 U	8 U
Methyl Isobutyl Ketone		40 U	8 U	8 U
Methylene Chloride	5	**11 J B**	**14**	**9.1**
Styrene	5	20 U	2 U	2 U
Tetrachloroethene	5	20 U	2 U	2 U
Toluene	5	20 U	2 U	2 U
trans-1,2-Dichloroethene	5	20 U	1.5 J	2 U *
trans-1,3-Dichloropropene	0.4	20 U	2 U	2 U
Trichloroethene	5	**50**	**59**	**47**
Vinyl chloride	2	**11 J**	**11**	2 U
Xylenes, Total	5	20 U	4 U	4 U
Total VOCs		438	470	347

Notes

- Concentration exceeds corresponding NYSDEC Class GA Standard.

U - Not detected at the indicated concentration.

J - Estimated concentration.

M - Manual integrated compound.

B - Analyte found in associated blank as well as the sample.

E - Concentration exceeds instrument calibration range.

* - MS or MSD exceeded control limits.

TABLE 3-2
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (INFLUENT)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Matrix Units	NYSDEC GA Standard ug/L	WELL 1A-INF 8/27/2009 WATER ug/L	WELL 1A-INF 9/24/2009 WATER ug/L	WELL 1A-INF 10/26/2009 WATER ug/L
VOCs				
1,1,1-Trichloroethane	5	**220**	**230**	**110**
1,1,2,2-Tetrachloroethane	5	2 U	10 U	10 U
1,1,2-Trichloroethane	1	2 U	10 U	10 U
1,1-Dichloroethane	5	**23**	**26**	**14**
1,1-Dichloroethene	5	**19**	**19**	**8.7 J**
1,2-Dichloroethane	0.6	2 U	10 U	10 U
1,2-Dichloropropane	5	2 U	10 U	10 U
2-Hexanone		8 U	20 U	20 U
Acetone		23	20 U	4.2 J
Benzene	1	2 U	10 U	10 U
Bromodichloromethane	50	2 U	10 U	10 U
Bromoform		2 U	10 U	10 U
Bromomethane	5	4 U	10 U	10 U
Carbon disulfide		2 U	10 U	10 U
Carbon tetrachloride	5	2 U	10 U	10 U
Chlorobenzene	5	2 U	10 U	10 U
Chloroethane	5	4 U	10 U	10 U
Chloroform	7	2 U	10 U	10 U
Chloromethane		2 U	10 U	10 U
cis-1,2-Dichloroethene	5	**51**	**70**	**31**
cis-1,3-Dichloropropene	0.4	2 U	10 U	10 U
Dibromochloromethane	50	2 U	10 U	10 U
Ethylbenzene	5	2 U	10 U	10 U
Methyl Ethyl Ketone	50	8 U	20 U	20 U
Methyl Isobutyl Ketone		8 U	20 U	20 U
Methylene Chloride	5	4.9 J B	3.9 J B	10 U
Styrene	5	2 U	10 U	10 U
Tetrachloroethene	5	2 U	10 U	10 U
Toluene	5	2 U	10 U	10 U
trans-1,2-Dichloroethene	5	2 U	10 U	10 U
trans-1,3-Dichloropropene	0.4	2 U	10 U	10 U
Trichloroethene	5	**56**	**66**	**29**
Vinyl chloride	2	**7.6**	**8.6 J**	**4.5 J**
Xylenes, Total	5	4 U	10 U	10 U
Total VOCs		405	424	201

Notes

- Concentration exceeds corresponding NYSDEC Class GA Standard.

U - Not detected at the indicated concentration.

J - Estimated concentration.

M - Manual integrated compound.

B - Analyte found in associated blank as well as the sample.

E - Concentration exceeds instrument calibration range.

* - MS or MSD exceeded control limits.

TABLE 3-2
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (INFLUENT)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Matrix Units	NYSDEC GA Standard ug/L	WELL 1A-INF 11/20/2009 WATER ug/L	WELL 1A-INF 12/23/2009 WATER ug/L	WELL 1A-INF 2/5/2010 WATER ug/L
VOCs				
1,1,1-Trichloroethane	5	**200**	**240**	**170**
1,1,2,2-Tetrachloroethane	5	20 U	20 U	5 U
1,1,2-Trichloroethane	1	20 U	20 U	5 U
1,1-Dichloroethane	5	**24**	**27**	**23**
1,1-Dichloroethene	5	**16 J**	**20**	**16**
1,2-Dichloroethane	0.6	20 U	20 U	5 U
1,2-Dichloropropane	5	20 U	20 U	5 U
2-Hexanone		40 U	40 U *	10 U
Acetone		40 U	5.8 J	10 U
Benzene	1	20 U	20 U	5 U
Bromodichloromethane	50	20 U	20 U	5 U
Bromoform		20 U	20 U	5 U
Bromomethane	5	20 U	20 U	5 U
Carbon disulfide		20 U	20 U	5 U
Carbon tetrachloride	5	20 U	20 U	5 U
Chlorobenzene	5	20 U	20 U	5 U
Chloroethane	5	20 U	20 U	5 U
Chloroform	7	20 U	20 U	5 U
Chloromethane		20 U	20 U	5 U
cis-1,2-Dichloroethene	5	**54**	**55**	**56**
cis-1,3-Dichloropropene	0.4	20 U	20 U	5 U
Dibromochloromethane	50	20 U	20 U	5 U
Ethylbenzene	5	20 U	20 U	5 U
Methyl Ethyl Ketone	50	40 U	40 U	10 U
Methyl Isobutyl Ketone		40 U	40 U	10 U
Methylene Chloride	5	20 U	20 U	5 U
Styrene	5	20 U	20 U	5 U
Tetrachloroethene	5	20 U	20 U	5 U
Toluene	5	20 U	20 U	5 U
trans-1,2-Dichloroethene	5	20 U	20 U	5 U
trans-1,3-Dichloropropene	0.4	20 U	20 U	5 U
Trichloroethene	5	**53**	**58**	**56**
Vinyl chloride	2	**9.1 J**	**8.6 J**	**7.4**
Xylenes, Total	5	20 U	20 U	5 U
Total VOCs		356	414	328

Notes

- Concentration exceeds corresponding NYSDEC Class GA Standard.

U - Not detected at the indicated concentration.

J - Estimated concentration.

M - Manual integrated compound.

B - Analyte found in associated blank as well as the sample.

E - Concentration exceeds instrument calibration range.

* - MS or MSD exceeded control limits.

TABLE 3-2
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (INFLUENT)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Matrix Units	NYSDEC GA Standard ug/L	WELL 1A-INF 2/23/2010 WATER ug/L	WELL 1A-INF 3/15/2010 WATER ug/L
VOCs			
1,1,1-Trichloroethane	5	**170**	**91**
1,1,2,2-Tetrachloroethane	5	5 U	5 U
1,1,2-Trichloroethane	1	5 U	5 U
1,1-Dichloroethane	5	**22**	**14**
1,1-Dichloroethene	5	**17**	**7.5**
1,2-Dichloroethane	0.6	5 U	5 U *
1,2-Dichloropropane	5	5 U	5 U
2-Hexanone		10 U	10 U
Acetone		10 U	10 U
Benzene	1	5 U	5 U
Bromodichloromethane	50	5 U	5 U
Bromoform		5 U	5 U
Bromomethane	5	5 U	5 U
Carbon disulfide		5 U	5 U
Carbon tetrachloride	5	5 U	5 U
Chlorobenzene	5	5 U	5 U
Chloroethane	5	5 U	5 U *
Chloroform	7	5 U	5 U
Chloromethane		5 U	5 U
cis-1,2-Dichloroethene	5	**57**	**22**
cis-1,3-Dichloropropene	0.4	5 U	5 U
Dibromochloromethane	50	5 U	5 U
Ethylbenzene	5	5 U	5 U
Methyl Ethyl Ketone	50	10 U	10 U
Methyl Isobutyl Ketone		10 U	10 U
Methylene Chloride	5	5 U	5 U
Styrene	5	5 U	5 U
Tetrachloroethene	5	5 U	5 U
Toluene	5	5 U	5 U
trans-1,2-Dichloroethene	5	5 U	5 U
trans-1,3-Dichloropropene	0.4	5 U	5 U
Trichloroethene	5	**58**	**23**
Vinyl chloride	2	**6.7**	**3.5 J**
Xylenes, Total	5	5 U	5 U
Total VOCs		331	161

Notes

- Concentration exceeds corresponding NYSDEC Class GA Standard.

U - Not detected at the indicated concentration.

J - Estimated concentration.

M - Manual integrated compound.

B - Analyte found in associated blank as well as the sample.

E - Concentration exceeds instrument calibration range.

* - MS or MSD exceeded control limits.

TABLE 3-3
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (EFFLUENT)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Matrix Units	NYSDEC GA Standard ug/L	WELL 1A-EFF 7/27/2007 WATER ug/L	WELL 1A-EFF 8/27/2007 WATER ug/L	WELL 1A-EFF 9/26/2007 WATER ug/L
VOCs				
1,1,1-Trichloroethane	5	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5	5 U	5 U	5 U
1,1,2-Trichloroethane	1	5 U	5 U	5 U
1,1-Dichloroethane	5	5 U	5 U	5 U
1,1-Dichloroethene	5	5 U	5 U	5 U
1,2-Dichloroethane	0.6	5 U	5 U	5 U
1,2-Dichloropropane	5	5 U	5 U	5 U
2-Hexanone		10 U	10 U	10 U
Acetone		10 U	10 U	10 U
Benzene	1	5 U	5 U	5 U
Bromodichloromethane	50	5 U	5 U	5 U
Bromoform		5 U	5 U	5 U
Bromomethane	5	5 U	5 U	5 U
Carbon disulfide		5 U	5 U	5 U
Carbon tetrachloride	5	5 U	5 U	5 U
Chlorobenzene	5	5 U	5 U	5 U
Chloroethane	5	5 U	5 U	5 U
Chloroform	7	5 U	5 U	5 U
Chloromethane		5 U	5 U	5 U
cis-1,2-Dichloroethene	5	5 U	5 U	5 U
cis-1,3-Dichloropropene	0.4	5 U	5 U	5 U
Dibromochloromethane	50	5 U	5 U	5 U
Ethylbenzene	5	5 U	5 U	5 U
Methyl Ethyl Ketone	50	10 U	10 U	10 U
Methyl Isobutyl Ketone		10 U	10 U	10 U
Methylene Chloride	5	5 U	5 U	5 U *
Styrene	5	5 U	5 U	5 U
Tetrachloroethene	5	5 U	5 U	5 U
Toluene	5	5 U	5 U	5 U
trans-1,2-Dichloroethene	5	5 U	5 U	5 U
trans-1,3-Dichloropropene	0.4	5 U	5 U	5 U
Trichloroethene	5	5 U	5 U	5 U
Vinyl chloride	2	5 U	5 U	5 U
Xylenes, Total	5	5 U	5 U	5 U

Notes

U - Not detected at the indicated concentration.

J - Estimated concentration.

M - Manual integrated compound.

B - Analyte found in associated blank as well as the sample.

* - MS or MSD exceeded control limits.

TABLE 3-3
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (EFFLUENT)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Matrix Units	NYSDEC GA Standard ug/L	WELL 1A-EFF 10/26/2007 WATER ug/L	WELL 1A-EFF 11/27/2007 WATER ug/L	WELL 1A-EFF 12/20/2007 WATER ug/L
VOCs				
1,1,1-Trichloroethane	5	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5	5 U	5 U	5 U
1,1,2-Trichloroethane	1	5 U	5 U	5 U
1,1-Dichloroethane	5	5 U	5 U	5 U
1,1-Dichloroethene	5	5 U	5 U	5 U
1,2-Dichloroethane	0.6	5 U	5 U	5 U
1,2-Dichloropropane	5	5 U	5 U	5 U
2-Hexanone		10 U	10 U	10 U
Acetone		10 U	10 U	10 UM
Benzene	1	5 U	5 U	5 U
Bromodichloromethane	50	5 U	5 U	5 U
Bromoform		5 U	5 U	5 U
Bromomethane	5	5 U	5 U	5 U
Carbon disulfide		5 U	5 U	5 U
Carbon tetrachloride	5	5 U	5 U	5 U
Chlorobenzene	5	5 U	5 U	5 U
Chloroethane	5	5 U	5 U	5 U
Chloroform	7	5 U	5 U	5 U
Chloromethane		5 U *	5 U	5 U
cis-1,2-Dichloroethene	5	5 U	5 U	5 U
cis-1,3-Dichloropropene	0.4	5 U	5 U	5 U
Dibromochloromethane	50	5 U	5 U	5 U
Ethylbenzene	5	5 U	5 U	5 U
Methyl Ethyl Ketone	50	10 U	10 U	10 U
Methyl Isobutyl Ketone		10 U	10 U	10 U
Methylene Chloride	5	5 U	5 U	0.38 JB
Styrene	5	5 U	5 U	5 U
Tetrachloroethene	5	5 U	5 U	5 U
Toluene	5	5 U	5 U	5 U
trans-1,2-Dichloroethene	5	5 U	5 U	5 U
trans-1,3-Dichloropropene	0.4	5 U	5 U	5 U
Trichloroethene	5	5 U	5 U	5 U
Vinyl chloride	2	5 U *	5 U	5 U
Xylenes, Total	5	5 U	5 U	5 U

Notes

U - Not detected at the indicated concentration.

J - Estimated concentration.

M - Manual integrated compound.

B - Analyte found in associated blank as well as the sample.

* - MS or MSD exceeded control limits.

TABLE 3-3
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (EFFLUENT)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Matrix Units	NYSDEC GA Standard ug/L	WELL 1A-EFF 1/23/2008 WATER ug/L	WELL 1A-EFF 2/26/2008 WATER ug/L	WELL 1A-EFF 3/27/2008 WATER ug/L
VOCs				
1,1,1-Trichloroethane	5	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5	5 U	5 U	5 U
1,1,2-Trichloroethane	1	5 U	5 U	5 U
1,1-Dichloroethane	5	5 U	5 U	5 U
1,1-Dichloroethene	5	5 U	5 U	5 U
1,2-Dichloroethane	0.6	5 U	5 U	5 U
1,2-Dichloropropane	5	5 U	5 U	5 U
2-Hexanone		10 U	10 U	10 U
Acetone		10 U	10 U	10 U
Benzene	1	5 U	5 U	5 U
Bromodichloromethane	50	5 U *	5 U	5 U
Bromoform		5 U	5 U	5 U
Bromomethane	5	5 U *	5 U	5 U
Carbon disulfide		5 U *	5 U	5 U
Carbon tetrachloride	5	5 U	5 U	5 U
Chlorobenzene	5	5 U	5 U	5 U
Chloroethane	5	5 U	5 U	5 U
Chloroform	7	5 U	5 U	5 U
Chloromethane		5 U	5 U	5 U
cis-1,2-Dichloroethene	5	5 U	5 U	5 U
cis-1,3-Dichloropropene	0.4	5 U	5 U	5 U
Dibromochloromethane	50	5 U	5 U	5 U
Ethylbenzene	5	5 U	5 U	5 U
Methyl Ethyl Ketone	50	10 U	10 U	10 U
Methyl Isobutyl Ketone		10 U	10 U	10 U
Methylene Chloride	5	5 U	5 U	1.2 JB
Styrene	5	5 U	5 U	5 U
Tetrachloroethene	5	5 U	5 U	5 U
Toluene	5	5 U	5 U	5 U
trans-1,2-Dichloroethene	5	5 U	5 U	5 U
trans-1,3-Dichloropropene	0.4	5 U	5 U	5 U
Trichloroethene	5	5 U	5 U	5 U
Vinyl chloride	2	5 U	5 U	5 U
Xylenes, Total	5	5 U	5 U	5 U

Notes

U - Not detected at the indicated concentration.

J - Estimated concentration.

M - Manual integrated compound.

B - Analyte found in associated blank as well as the sample.

* - MS or MSD exceeded control limits.

TABLE 3-3
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (EFFLUENT)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Matrix Units	NYSDEC GA Standard ug/L	WELL 1A-EFF 4/22/2008 WATER ug/L	WELL 1A-EFF 5/20/2008 WATER ug/L	WELL 1A-EFF 6/27/2008 WATER ug/L
VOCs				
1,1,1-Trichloroethane	5	5 U	10 U	5 U
1,1,2,2-Tetrachloroethane	5	5 U	10 U	5 U
1,1,2-Trichloroethane	1	5 U	10 U	5 U
1,1-Dichloroethane	5	5 U	10 U	5 U
1,1-Dichloroethene	5	5 U	10 U	5 U *
1,2-Dichloroethane	0.6	5 U	10 U	5 U
1,2-Dichloropropane	5	5 U	10 U	5 U
2-Hexanone		10 U	10 U	10 U
Acetone		1.8 J	1.2 J B	10 U
Benzene	1	5 U	10 U	5 U
Bromodichloromethane	50	5 U	10 U	5 U
Bromoform		5 U	10 U	5 U
Bromomethane	5	5 U	10 U	5 U
Carbon disulfide		5 U	10 U	5 U *
Carbon tetrachloride	5	5 U	10 U	5 U
Chlorobenzene	5	5 U	10 U	5 U
Chloroethane	5	5 U	10 U	5 U *
Chloroform	7	5 U	10 U	5 U
Chloromethane		5 U	10 U	5 U
cis-1,2-Dichloroethene	5	5 U	0.3 J	5 U
cis-1,3-Dichloropropene	0.4	5 U	10 U	5 U
Dibromochloromethane	50	5 U	10 U	5 U
Ethylbenzene	5	5 U	10 U	5 U
Methyl Ethyl Ketone	50	10 U	10 U	10 U
Methyl Isobutyl Ketone		10 U	10 U	10 U
Methylene Chloride	5	5 U	0.34 J B	5 U
Styrene	5	5 U	10 U	5 U
Tetrachloroethene	5	5 U	10 U	5 U
Toluene	5	5 U	10 U	5 U
trans-1,2-Dichloroethene	5	5 U	10 U	5 U
trans-1,3-Dichloropropene	0.4	5 U	10 U	5 U
Trichloroethene	5	1.1 J*B	10 U	5 U
Vinyl chloride	2	5 U	10 U	5 U
Xylenes, Total	5	5 U	10 U	5 U

Notes

U - Not detected at the indicated concentration.

J - Estimated concentration.

M - Manual integrated compound.

B - Analyte found in associated blank as well as the sample.

* - MS or MSD exceeded control limits.

TABLE 3-3
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (EFFLUENT)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Matrix Units	NYSDEC GA Standard ug/L	WELL 1A-EFF 7/25/2008 WATER ug/L	WELL 1A-EFF 8/25/2008 WATER ug/L	WELL 1A-EFF 9/30/2008 WATER ug/L
VOCs				
1,1,1-Trichloroethane	5	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5	5 U	5 U	5 U
1,1,2-Trichloroethane	1	5 U	5 U	5 U *
1,1-Dichloroethane	5	5 U	5 U	5 U
1,1-Dichloroethene	5	5 U	5 U	5 U
1,2-Dichloroethane	0.6	5 U	5 U	5 U
1,2-Dichloropropane	5	5 U	5 U	5 U
2-Hexanone		10 U	10 U	10 U
Acetone		1 J B	10 U	10 U
Benzene	1	5 U	5 U	5 U
Bromodichloromethane	50	5 U	5 U	5 U
Bromoform		5 U	5 U	5 U
Bromomethane	5	5 U	5 U	5 U
Carbon disulfide		5 U	5 U	5 U
Carbon tetrachloride	5	5 U	5 U	5 U
Chlorobenzene	5	5 U	5 U	5 U
Chloroethane	5	5 U	5 U	5 U
Chloroform	7	5 U	5 U	5 U *
Chloromethane		5 U	5 U	5 U
cis-1,2-Dichloroethene	5	5 U	5 U	5 U
cis-1,3-Dichloropropene	0.4	5 U	5 U	5 U
Dibromochloromethane	50	5 U	5 U	5 U
Ethylbenzene	5	5 U	5 U	5 U
Methyl Ethyl Ketone	50	10 U	10 U	10 U
Methyl Isobutyl Ketone		10 U	10 U	10 U
Methylene Chloride	5	5 U	5 U	5 U
Styrene	5	5 U	5 U	5 U
Tetrachloroethene	5	5 U	5 U	5 U
Toluene	5	5 U	5 U	5 U
trans-1,2-Dichloroethene	5	5 U	5 U	5 U
trans-1,3-Dichloropropene	0.4	5 U	5 U	5 U
Trichloroethene	5	5 U	5 U	5 U
Vinyl chloride	2	5 U	5 U	5 U
Xylenes, Total	5	5 U	5 U	5 U

Notes

U - Not detected at the indicated concentration.

J - Estimated concentration.

M - Manual integrated compound.

B - Analyte found in associated blank as well as the sample.

* - MS or MSD exceeded control limits.

TABLE 3-3
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (EFFLUENT)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Matrix Units	NYSDEC GA Standard ug/L	WELL 1A-EFF 3/5/2009 WATER ug/L	WELL 1A-EFF 3/27/2009 WATER ug/L	WELL 1A-EFF 4/16/2009 WATER ug/L
VOCs				
1,1,1-Trichloroethane	5	1.5 J	0.5 U	5 U
1,1,2,2-Tetrachloroethane	5	5 U	0.5 U	5 U
1,1,2-Trichloroethane	1	5 U	0.5 U	5 U
1,1-Dichloroethane	5	5 U	0.27 J	5 U
1,1-Dichloroethene	5	5 U	0.16 J *	5 U
1,2-Dichloroethane	0.6	5 U	0.5 U	5 U
1,2-Dichloropropane	5	5 U	0.5 U	5 U
2-Hexanone		10 U	2 U	10 U
Acetone		1.1 J	2 U *	10 U *
Benzene	1	5 U	0.5 U	5 U
Bromodichloromethane	50	5 U	0.5 U	5 U
Bromoform		5 U	0.5 U	5 U
Bromomethane	5	5 U	1 U	5 U
Carbon disulfide		5 U	0.5 U	5 U
Carbon tetrachloride	5	5 U	0.5 U	5 U
Chlorobenzene	5	5 U	0.5 U	5 U
Chloroethane	5	5 U	1 U	5 U
Chloroform	7	5 U	0.5 U	5 U
Chloromethane		5 U	0.5 U	5 U
cis-1,2-Dichloroethene	5	5 U	0.82	5 U
cis-1,3-Dichloropropene	0.4	5 U	0.5 U	5 U
Dibromochloromethane	50	5 U	0.5 U	5 U
Ethylbenzene	5	5 U	0.5 U	5 U
Methyl Ethyl Ketone	50	10 U	2 U	10 U
Methyl Isobutyl Ketone		10 U	2 U	10 U
Methylene Chloride	5	5 U	2 U	5 U
Styrene	5	5 U	0.5 U	5 U
Tetrachloroethene	5	5 U	0.5 U	5 U
Toluene	5	5 U	0.33 J	5 U
trans-1,2-Dichloroethene	5	5 U	0.5 U	5 U
trans-1,3-Dichloropropene	0.4	5 U	0.5 U	5 U
Trichloroethene	5	5 U	0.5 J	5 U
Vinyl chloride	2	5 U	0.5 U	5 U
Xylenes, Total	5	5 U	3.4	5 U

Notes

U - Not detected at the indicated concentration.

J - Estimated concentration.

M - Manual integrated compound.

B - Analyte found in associated blank as well as the sample.

* - MS or MSD exceeded control limits.

TABLE 3-3
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (EFFLUENT)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Matrix Units	NYSDEC GA Standard ug/L	WELL 1A-EFF 5/30/2009 WATER ug/L	WELL 1A-EFF 6/24/2009 WATER ug/L	WELL 1A-EFF 7/29/2009 WATER ug/L
VOCs				
1,1,1-Trichloroethane	5	5 U	5 U	0.96
1,1,2,2-Tetrachloroethane	5	5 U	5 U	0.5 U
1,1,2-Trichloroethane	1	5 U	5 U	0.5 U
1,1-Dichloroethane	5	5 U	5 U	0.5 U
1,1-Dichloroethene	5	5 U *	5 U *	0.5 U *
1,2-Dichloroethane	0.6	5 U	5 U	0.5 U
1,2-Dichloropropane	5	5 U	5 U	0.5 U
2-Hexanone		10 U	10 U *	2 U
Acetone		10 U	10 U	1.8 J B
Benzene	1	5 U	5 U	0.5 U
Bromodichloromethane	50	5 U	5 U	0.5 U
Bromoform		5 U	5 U	0.5 U
Bromomethane	5	5 U	5 U	1 U
Carbon disulfide		5 U	5 U	0.5 U
Carbon tetrachloride	5	5 U	5 U	0.5 U
Chlorobenzene	5	5 U	5 U	0.5 U
Chloroethane	5	5 U	5 U	1 U *
Chloroform	7	5 U	5 U	0.5 U
Chloromethane		5 U	5 U *	0.5 U
cis-1,2-Dichloroethene	5	5 U	5 U	0.45 J
cis-1,3-Dichloropropene	0.4	5 U	5 U	0.5 U
Dibromochloromethane	50	5 U	5 U	0.5 U
Ethylbenzene	5	5 U	5 U	0.5 U
Methyl Ethyl Ketone	50	10 U	10 U	2 U
Methyl Isobutyl Ketone		10 U	10 U	2 U
Methylene Chloride	5	5 U	5 U	2 U
Styrene	5	5 U	5 U	0.5 U
Tetrachloroethene	5	5 U	5 U	0.5 U
Toluene	5	5 U	5 U	0.5 U
trans-1,2-Dichloroethene	5	5 U	5 U *	0.5 U *
trans-1,3-Dichloropropene	0.4	5 U	5 U	0.5 U
Trichloroethene	5	5 U	5 U	0.37 J
Vinyl chloride	2	5 U	5 U	0.5 U
Xylenes, Total	5	5 U	5 U	1 U

Notes

U - Not detected at the indicated concentration.

J - Estimated concentration.

M - Manual integrated compound.

B - Analyte found in associated blank as well as the sample.

* - MS or MSD exceeded control limits.

TABLE 3-3
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (EFFLUENT)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Matrix Units	NYSDEC GA Standard ug/L	WELL 1A-EFF 8/27/2009 WATER ug/L	WELL 1A-EFF 9/24/2009 WATER ug/L	WELL 1A-EFF 10/26/2009 WATER ug/L
VOCs				
1,1,1-Trichloroethane	5	0.5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5	0.5 U	5 U	5 U
1,1,2-Trichloroethane	1	0.5 U	5 U	5 U
1,1-Dichloroethane	5	0.5 U	5 U	5 U
1,1-Dichloroethene	5	0.5 U	5 U	5 U
1,2-Dichloroethane	0.6	0.5 U	5 U	5 U
1,2-Dichloropropane	5	0.5 U	5 U	5 U
2-Hexanone		2 U	10 U	10 U
Acetone		2 U	10 U	10 U
Benzene	1	0.5 U	5 U	5 U
Bromodichloromethane	50	0.5 U	5 U	5 U
Bromoform		0.5 U	5 U	5 U
Bromomethane	5	1 U	5 U	5 U
Carbon disulfide		0.5 U	5 U	5 U
Carbon tetrachloride	5	0.5 U	5 U	5 U
Chlorobenzene	5	0.5 U	5 U	5 U
Chloroethane	5	1 U	5 U	5 U
Chloroform	7	0.5 U	5 U	5 U
Chloromethane		0.5 U	5 U	5 U
cis-1,2-Dichloroethene	5	0.46 J	5 U	5 U
cis-1,3-Dichloropropene	0.4	0.5 U	5 U	5 U
Dibromochloromethane	50	0.5 U	5 U	5 U
Ethylbenzene	5	0.5 U	5 U	5 U
Methyl Ethyl Ketone	50	2 U	10 U	10 U
Methyl Isobutyl Ketone		2 U	10 U	10 U
Methylene Chloride	5	2 U	5 U	5 U
Styrene	5	0.5 U	5 U	5 U
Tetrachloroethene	5	0.5 U	5 U	5 U
Toluene	5	0.5 U	5 U	5 U
trans-1,2-Dichloroethene	5	0.5 U	5 U	5 U
trans-1,3-Dichloropropene	0.4	0.5 U	5 U	5 U
Trichloroethene	5	0.29 J	5 U	5 U
Vinyl chloride	2	0.5 U	5 U	5 U
Xylenes, Total	5	1 U	5 U	5 U

Notes
U - Not detected at the indicated concentration.
J - Estimated concentration.
M - Manual integrated compound.
B - Analyte found in associated blank as well as the sample.
* - MS or MSD exceeded control limits.

TABLE 3-3
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (EFFLUENT)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Matrix Units	NYSDEC GA Standard ug/L	WELL 1A-EFF 11/20/2009 WATER ug/L	WELL 1A-EFF 12/23/2009 WATER ug/L	WELL 1A-EFF 2/5/2010 WATER ug/L
VOCs				
1,1,1-Trichloroethane	5	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5	5 U	5 U	5 U
1,1,2-Trichloroethane	1	5 U	5 U	5 U
1,1-Dichloroethane	5	5 U	5 U	5 U
1,1-Dichloroethene	5	5 U	5 U	5 U
1,2-Dichloroethane	0.6	5 U	5 U	5 U
1,2-Dichloropropane	5	5 U	5 U	5 U
2-Hexanone		10 U	10 U *	10 U
Acetone		10 U	10 U	10 U
Benzene	1	5 U	5 U	5 U
Bromodichloromethane	50	5 U	5 U	5 U
Bromoform		5 U	5 U	5 U
Bromomethane	5	5 U	5 U	5 U
Carbon disulfide		5 U	5 U	5 U
Carbon tetrachloride	5	5 U	5 U	5 U
Chlorobenzene	5	5 U	5 U	5 U
Chloroethane	5	5 U	5 U	5 U
Chloroform	7	5 U	5 U	5 U
Chloromethane		5 U	5 U	5 U
cis-1,2-Dichloroethene	5	5 U	5 U	5 U
cis-1,3-Dichloropropene	0.4	5 U	5 U	5 U
Dibromochloromethane	50	5 U	5 U	5 U
Ethylbenzene	5	5 U	5 U	5 U
Methyl Ethyl Ketone	50	10 U	10 U	10 U
Methyl Isobutyl Ketone		10 U	10 U *	10 U
Methylene Chloride	5	5 U	5 U	5 U
Styrene	5	5 U	5 U	5 U
Tetrachloroethene	5	5 U	5 U	5 U
Toluene	5	5 U	5 U	5 U
trans-1,2-Dichloroethene	5	5 U	5 U	5 U
trans-1,3-Dichloropropene	0.4	5 U	5 U	5 U
Trichloroethene	5	5 U	5 U	5 U
Vinyl chloride	2	5 U	5 U	5 U
Xylenes, Total	5	5 U	5 U	5 U

Notes

U - Not detected at the indicated concentration.

J - Estimated concentration.

M - Manual integrated compound.

B - Analyte found in associated blank as well as the sample.

* - MS or MSD exceeded control limits.

TABLE 3-3
SUMMARY OF GROUNDWATER TREATMENT SYSTEM VOCS (EFFLUENT)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Matrix Units	NYSDEC GA Standard ug/L	WELL 1A-EFF 2/23/2010 WATER ug/L	WELL 1A-EFF 3/15/2010 WATER ug/L
VOCs			
1,1,1-Trichloroethane	5	5 U	5 U
1,1,2,2-Tetrachloroethane	5	5 U	5 U
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
1,2-Dichloroethane	0.6	5 U	5 U *
1,2-Dichloropropane	5	5 U	5 U
2-Hexanone		10 U	10 U
Acetone		10 U	10 U
Benzene	1	5 U	5 U
Bromodichloromethane	50	5 U	5 U
Bromoform		5 U	5 U
Bromomethane	5	5 U	5 U
Carbon disulfide		5 U	5 U
Carbon tetrachloride	5	5 U	5 U
Chlorobenzene	5	5 U	5 U
Chloroethane	5	5 U	5 U *
Chloroform	7	5 U	5 U
Chloromethane		5 U	5 U
cis-1,2-Dichloroethene	5	5 U	5 U
cis-1,3-Dichloropropene	0.4	5 U	5 U
Dibromochloromethane	50	5 U	5 U
Ethylbenzene	5	5 U	5 U
Methyl Ethyl Ketone	50	10 U	10 U
Methyl Isobutyl Ketone		10 U	10 U
Methylene Chloride	5	5 U	5 U
Styrene	5	5 U	5 U
Tetrachloroethene	5	5 U	5 U
Toluene	5	5 U	5 U
trans-1,2-Dichloroethene	5	5 U	5 U
trans-1,3-Dichloropropene	0.4	5 U	5 U
Trichloroethene	5	5 U	5 U
Vinyl chloride	2	5 U	5 U
Xylenes, Total	5	5 U	5 U

Notes

U - Not detected at the indicated concentration.

J - Estimated concentration.

M - Manual integrated compound.

B - Analyte found in associated blank as well as the sample.

* - MS or MSD exceeded control limits.

TABLE 3-4
SUMMARY OF TREATMENT PLANT WATER QUALITY DATA
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date	Units	Well 1-1A 2/23/2010
Chloride	mg/L	183.3
Sulfate	mg/L	21.41
Alkalinity	mg/L	267.9
Total Dissolved Solids	mg/L	561
Hardness as calcium carbonate	mg/L	355
pH	SU	7.68

mg/L - milligrams per liter
SU - Standard unit

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)	8/13/2007		10/8/2008		6/22/2009		3/16/2010	
				DTW (feet)	Elevation (feet)	DTW (feet)	Elevation (feet)	DTW (feet)	Elevation (feet)	DTW (feet)	Elevation (feet)
4009-1	S-8	Shallow	832.20	7.49	824.71	7.79	824.41	7.16	825.04	7.21	824.99
4009-2	EB-33	Shallow	828.59	19.33	809.26	19.79	808.80	18.11	810.48	17.35	811.24
4009-3	S-7	Shallow	823.72	17.89	805.83	18.59	805.13	14.64	809.08	12.75	810.97
4009-4	S-6	Shallow	822.46	12.91	809.55	13.82	808.64	10.29	812.17	8.86	813.60
4009-5	EB-31	Shallow	825.77	20.49	805.28	20.79	804.98	16.19	809.58	13.84	811.93
4009-6	S-1	Shallow	827.16	20.75	806.41	21.19	805.97	18.99	808.17	17.52	809.64
4009-7	S-2	Shallow	823.72	20.10	803.62	21.11	802.61	17.02	806.70	15.09	808.63
4009-8	S-11	Shallow	**	18.72	-	21.95	-	17.77	-	15.29	-
4009-9	EB-41	Shallow	825.29 [2]	22.60	802.69	23.18	802.11	19.15	806.14	16.08	809.21
4009-10	EB-42	Shallow	831.54	28.57	802.97	29.15	802.39	25.47	806.07	22.41	809.13
4009-11	1-32	Deep	831.08	17.55	813.53	29.38	801.70	22.47	808.61	19.81	811.27
4009-11A	1-32A	Shallow	830.86	28.31	802.55	20.70	810.16	16.02	814.84	13.89	816.97
4009-12	1-29	Deep	823.55	20.89	802.66	21.93	801.62	15.57	807.98	12.82	810.73
4009-12A	1-29A	Shallow	824.08	21.30	802.78	22.40	801.68	16.02	808.06	13.30	810.78
4009-13	1-30	Deep	816.54	13.46	803.08	14.71	801.83	8.48	808.06	6.24	810.30
4009-13A	1-30A	Shallow	816.42	23.05	793.37	14.23	802.19	9.24	807.18	6.31	810.11
4009-14	1-23	Deep	820.91	17.75	803.16	19.10	801.81	12.69	808.22	10.49	810.42
4009-15	1-24	Deep	826.76	23.81	802.95	25.21	801.55	18.35	808.41	16.17	810.59
4009-16	1-20	Deep	825.93	23.86	802.07	25.41	800.52	18.55	807.38	16.82	809.11
4009-16A	1-20A	Shallow	826.32	24.01	802.31	25.34	800.98	18.42	807.90	16.41	809.91
4009-17	Piezo-levee*	Deep	-	17.15	-	18.81	-	NM	-	10.03	-
4009-18	well-west well house*	Deep	-	31.83	-	33.32	-	26.44	-	24.39	-
4009-19	well-south well house*	Deep	-	22.00	-	23.52	-	16.81	-	14.63	-
4009-20	Piezo-north*	Shallow	-	21.30	-	21.44	-	15.42	-	11.80	-
4009-21	Piezo-west*	Deep	-	20.30	-	21.59	-	14.75	-	12.96	-
Well 1-1	Former Pumping Well	Deep	832.53 [3]	-	-	30.03	802.50	24.62	807.91	21.89	810.64
Well 1-1A	Pumping Well	Deep	831.33 [3]	-	-			61.85	769.48	76.02	755.31

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	4009-1 6/22/2009 Shallow ug/L	4009-1 3/16/2010 Shallow ug/L	4009-2 8/14/2007 Shallow ug/L	4009-2 10/9/2008 Shallow ug/L	4009-2 6/22/2009 Shallow ug/L	4009-2 3/16/2010 Shallow ug/L	4009-3 8/14/2007 Shallow ug/L	4009-3 10/9/2008 Shallow ug/L	4009-3 6/23/2009 Shallow ug/L	4009-3 3/16/2010 Shallow ug/L
1,1,1-Trichloroethane	5	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	**130**	**810**	**57**	**16**
1,1,2,2-Tetrachloroethane	5	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	50 U	5 U	0.5 U
1,1,2-Trichloroethane	1	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	50 U	5 U	0.5 U
1,1-Dichloroethane	5	3.2 J	**6.7**	2.5 J	2	2.4 J	3.3 J	3.2 J	3.1	**19**	**39 J**	**27**	**21**
1,1-Dichloroethene	5	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	1.4 J	50 U	2.4 J	1.1
1,2-Dichloroethane	0.6	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	50 U	5 U	0.5 U
1,2-Dichloropropane	1	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	50 U	5 U	0.5 U
2-Butanone (MEK)	50	10 U	10 U	10 U	2 U	10 U	10 U	10 U	2 U	10 U	100 U	10 U	2 U
2-Hexanone		10 U	10 U	10 U	2 U	10 U	10 U	10 U	2 U	10 U	100 U	10 U	2 U
4-Methyl-2-pentanone (MIBK)		10 U	10 U	10 U	2 U	10 U	10 U	10 U	2 U	10 U	100 U	10 U	2 U
Acetone		10 U	1.1 J	1.5 J	1.7 J B	10 U	1 J B	10 U	2 U	10 U	100 U	10 U	2 U
Benzene	1	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	50 U	5 U	0.5 U
Bromodichloromethane	50	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	50 U	5 U	0.5 U
Bromoform		10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	50 U	5 U	0.5 U
Bromomethane	5	10 U	5 U	5 U	1 U	10 U	5 U	5 U	1 U	10 U	50 U	5 U	1 U
Carbon disulfide		10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	50 U	5 U	0.5 U
Carbon tetrachloride	5	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	50 U	5 U	0.5 U
Chlorobenzene	5	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	50 U	5 U	0.5 U
Chloroethane	5	10 U	5 U	5 U	1 U	10 U	5 U	5 U	1 U	10 U	50 U	5 U *	1 U
Chloroform	7	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	50 U	5 U	0.5 U
Chloromethane		10 U	5 U *	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	50 U *	5 U	0.5 U
cis-1,2-Dichloroethene	5	1.4 J	3 J	1.5 J	1.8	**34**	**34**	**37**	**34**	**26**	**37 J**	**28**	**33**
cis-1,3-Dichloropropene	0.4	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	50 U	5 U	0.5 U
Dibromochloromethane		10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	50 U	5 U	0.5 U
Ethylbenzene	5	10 U	5 U	5 U	0.5 U	10 U	5 U	1.2 J	0.2 J	10 U	50 U	5 U	0.5 U
Methylene Chloride	5	10 U	5 U	5 U *	2 U	10 U	5 U	5 U *	2 U	0.24 J	50 U	5 U	2 U
Styrene	5	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	50 U	5 U	0.5 U
Tetrachloroethene	5	0.65 J	1.6 J	0.86 J	0.97	10 U	5 U	5 U	0.38 J	10 U	50 U	5 U	0.5 U
Toluene	5	10 U	5 U	5 U	0.5 U *	10 U	5 U	0.95 J B	0.5 U *	10 U	50 U	0.95 J	0.5 U *
trans-1,2-Dichloroethene	5	10 U	5 U	5 U	0.5 U	0.83 J	1 J	1.1 J	1.3	0.46 J M	50 U	1 J	0.96
trans-1,3-Dichloropropene	0.4	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	50 U	5 U	0.5 U
Trichloroethene	5	0.95 J	2.1 J	1.4 J	1.5	2.5 J	2.5 J	3.8 J	3.7	**8 J**	**13 J**	**13**	**13**
Vinyl chloride	2	10 U	5 U	5 U	0.5 U	**12**	**15**	**3.9 J**	**18**	**40**	**63**	**79**	**49**
Xylenes, Total		10 U		5 U	1 U	10 U	5 U	5 U	1 U	10 U	50 U	5 U	1 U
Total VOCs		6	15	8	8	52	57	50	61	224	962	207	134

Notes

- Concentration exceeds NYSDEC Class GA Standard

U - Compound was not detected at the indicated concentration
J - Compound detected below the reporting limit or
Concentration is estimated for TICS.
B - Analyte detected in the method blank and sample
M - Manual integrated compound
* - Laboratory control sample/duplicate exceeds control limits.
1 - Sample 4009-X is a duplicate sample from 4009-6

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	4009-4 6/23/2009 Shallow ug/L	4009-4 3/17/2010 Shallow ug/L	4009-5 8/14/2007 Shallow ug/L	4009-5 10/9/2008 Shallow ug/L	4009-5 6/23/2009 Shallow ug/L	4009-5 3/17/2010 Shallow ug/L	4009-6 8/14/2007 Shallow ug/L	4009-6 10/9/2008 Shallow ug/L	4009-6 6/23/2009 Shallow ug/L	4009-6 3/16/2010 Shallow ug/L
1,1,1-Trichloroethane	5	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.32 J	10 U	5 U	5 U	0.5 U
1,1,2,2-Tetrachloroethane	5	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U
1,1,2-Trichloroethane	1	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U
1,1-Dichloroethane	5	10 U	5 U	5 U	0.28 J	2.3 J	3.7 J	3.4 J	4.6	10 U	5 U	5 U	0.5 U
1,1-Dichloroethene	5	10 U	5 U	5 U	0.5 U	1.1 J	2.4 J	1.9 J	3.1	10 U	5 U	5 U	0.5 U
1,2-Dichloroethane	0.6	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U
1,2-Dichloropropane	1	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U
2-Butanone (MEK)	50	10 U	10 U	10 U	0.55 J B	10 U	10 U	10 U	0.54 J B	10 U	10 U	10 U	2 U
2-Hexanone		10 U	10 U	10 U	2 U	10 U	10 U	10 U	2 U	10 U	10 U	10 U	2 U
4-Methyl-2-pentanone (MIBK)		10 U	10 U	10 U	2 U	10 U	10 U	10 U	2 U	10 U	10 U	10 U	2 U
Acetone		10 U	3.7 J B	10 U	1.4 J B	10 U	10 U	10 U	1.3 J B	10 U	3.1 J B	10 U	2 U
Benzene	1	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U
Bromodichloromethane	50	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U
Bromoform		10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U
Bromomethane	5	10 U	5 U	5 U	1 U	10 U	5 U	5 U	1 U	10 U	5 U	5 U	1 U
Carbon disulfide		10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U
Carbon tetrachloride	5	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U
Chlorobenzene	5	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U
Chloroethane	5	10 U	5 U	5 U	1 U	10 U	5 U	5 U	1 U	10 U	5 U	5 U	1 U
Chloroform	7	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U
Chloromethane		10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U
cis-1,2-Dichloroethene	5	**15**	**13**	**41**	**42**	**12**	**20**	**12**	**21**	10 U	5 U	5 U	0.5 U
cis-1,3-Dichloropropene	0.4	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U
Dibromochloromethane		10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U
Ethylbenzene	5	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U
Methylene Chloride	5	10 U	5 U	5 U *	0.13 J B	10 U	5 U	5 U *	2 U	10 U	5 U	5 U *	2 U
Styrene	5	10 U	5 U	5 U	0.5 U	10 U	5 U *	5 U	0.5 U	10 U	5 U	5 U	0.5 U
Tetrachloroethene	5	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U
Toluene	5	10 U	5 U	0.91 J B	0.5 U	10 U	5 U	5 U	0.19 J	10 U	5 U	0.89 J B	0.5 U *
trans-1,2-Dichloroethene	5	10 U	5 U	5 U	0.31 J	10 U	5 U	5 U	0.46 J	10 U	5 U	5 U	0.5 U
trans-1,3-Dichloropropene	0.4	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U	5 U	0.5 U
Trichloroethene	5	**26**	**8.5**	**6.3**	2.6	**40**	**63**	**55**	**56 B**	0.75 J	5 U	5 U	0.59
Vinyl chloride	2	0.52 J	5 U	5 U	0.41 J	0.89 J	**12**	**3.3 J**	**25**	10 U	5 U	5 U	0.5 U
Xylenes, Total		10 U	5 U	5 U	1 U	10 U	5 U	5 U	1 U	10 U	5 U	5 U	1 U
Total VOCs		42	25	48	48	56	101	76	113	1	3	1	1

Notes

- Concentration exceeds NYSDEC Class GA Standard

U - Compound was not detected at the indicated concentration
J - Compound detected below the reporting limit or
Concentration is estimated for TICS.
B - Analyte detected in the method blank and sample
M - Manual integrated compound
* - Laboratory control sample/duplicate exceeds control limits.
1 - Sample 4009-X is a duplicate sample from 4009-6

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-X[(1)] 3/16/2010 Shallow ug/L	4009-7 8/15/2007 Shallow ug/L	4009-7 10/9/2008 Shallow ug/L	4009-7 6/23/2009 Shallow ug/L	4009-7 3/17/2010 Shallow ug/L	4009-8 8/14/2007 Shallow ug/L	4009-8 10/9/2008 Shallow ug/L	4009-8 6/23/2009 Shallow ug/L	4009-8 3/16/2010 Shallow ug/L	4009-9 8/14/2007 Shallow ug/L	4009-9 10/9/2008 Shallow ug/L	4009-9 6/23/2009 Shallow ug/L
1,1,1-Trichloroethane	5	0.5 U	1.9 J M	**7.2 J**	**13 J**	**9**	**540**	**130**	**490**	**630**	10 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5	0.5 U	10 U	10 U	20 U	1 U	40 U	10 U	50 U	5 U	10 U	5 U	5 U
1,1,2-Trichloroethane	1	0.5 U	10 U	10 U	20 U	1 U	40 U	10 U	50 U	5 U	10 U	5 U	5 U
1,1-Dichloroethane	5	0.5 U	**6.1 J**	**20**	**35**	**24**	**73**	**16**	**49 J**	**52**	10 U	5 U	5 U
1,1-Dichloroethene	5	0.5 U	1.5 J	4.4 J	**9.3 J**	4	**17 J**	4.3 J	**23 J**	**22**	10 U	5 U	5 U
1,2-Dichloroethane	0.6	0.5 U	10 U	10 U	20 U	1 U	40 U	10 U	50 U	5 U	10 U	5 U	5 U
1,2-Dichloropropane	1	0.5 U	10 U	10 U	20 U	1 U	40 U	10 U	50 U	5 U	10 U	5 U	5 U
2-Butanone (MEK)	50	2 U	10 U	20 U	40 U	4 U	40 U	20 U	100 U	20 U	10 U	10 U	10 U
2-Hexanone		2 U	10 U	20 U	40 U	4 U	40 U	20 U	100 U	20 U	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)		2 U	10 U	20 U	40 U	4 U	40 U	20 U	100 U	20 U	10 U	10 U	10 U
Acetone		2 U	10 U	2.8 J	5.2 J	4 U	40 U	3.5 J	16 J	52 B	10 U	10 U	1.2 J
Benzene	1	0.5 U	0.47 J	10 U	20 U	0.52 J	40 U	10 U	50 U	**1.5 J**	10 U	5 U	5 U
Bromodichloromethane	50	0.5 U	10 U	10 U	20 U	1 U	40 U	10 U	50 U	5 U	10 U	5 U	5 U
Bromoform		0.5 U	10 U	10 U	20 U	1 U	40 U	10 U	50 U	5 U	10 U	5 U	5 U
Bromomethane	5	1 U	10 U	10 U	20 U	2 U	40 U	10 U	50 U	10 U	10 U	5 U	5 U
Carbon disulfide		0.5 U	10 U	10 U	20 U	1 U	40 U	10 U	50 U	5 U	10 U	5 U	5 U
Carbon tetrachloride	5	0.5 U	10 U	10 U	20 U	1 U	40 U	10 U	50 U	5 U	10 U	5 U	5 U
Chlorobenzene	5	0.5 U	10 U	10 U	20 U	1 U	40 U	10 U	50 U	5 U	10 U	5 U	5 U
Chloroethane	5	1 U	10 U	10 U	20 U *	2 U	**5.8 J**	10 U	50 U *	10 U	10 U	5 U	5 U *
Chloroform	7	0.5 U	10 U	10 U	20 U	1 U	40 U	10 U	50 U	5 U	10 U	5 U	5 U
Chloromethane		0.5 U	10 U	10 U *	20 U	1 U	40 U	10 U	50 U	5 U	10 U	5 U	5 U
cis-1,2-Dichloroethene	5	0.5 U	**74**	**130**	**160**	**110**	**180**	**130**	**320**	**240**	**9.3 J**	**12**	**6.4**
cis-1,3-Dichloropropene	0.4	0.5 U	10 U	10 U	20 U	1 U	40 U	10 U	50 U	5 U	10 U	5 U	5 U
Dibromochloromethane		0.5 U	10 U	10 U	20 U	1 U	40 U	10 U	50 U	5 U	10 U	5 U	5 U
Ethylbenzene	5	0.5 U	10 U	10 U	20 U	1 U	40 U	10 U	50 U	5 U	10 U	5 U	5 U
Methylene Chloride	5	2 U	10 U	10 U	20 U	4 U	1.9 J B	10 U	**7.9 J**	3.5 J	10 U	5 U	5 U
Styrene	5	0.5 U	10 U	10 U	20 U	1 U	40 U	10 U	50 U	5 U	10 U	5 U *	5 U
Tetrachloroethene	5	0.5 U	10 U	10 U	20 U	1 U	40 U	10 U	50 U	5 U	10 U	5 U	5 U
Toluene	5	0.5 U *	10 U	10 U	3.7 J	1 U	40 U	10 U	50 U	5 U	10 U	5 U	0.91 J
trans-1,2-Dichloroethene	5	0.5 U	0.4 J M	10 U	20 U	0.76 J	40 U	10 U	50 U	5 U	10 U	5 U	5 U
trans-1,3-Dichloropropene	0.4	0.5 U	10 U	10 U	20 U	1 U	40 U	10 U	50 U	5 U	10 U	5 U	5 U
Trichloroethene	5	0.52	**45**	**46**	**52**	**20**	**79**	**85**	**160**	**130**	10 U	5 U	5 U
Vinyl chloride	2	0.5 U	**27**	**100**	**210**	**120**	**86**	**17**	**34 J**	**94**	10 U	5 U	5 U
Xylenes, Total		1 U	10 U	10 U	20 U	2 U	40 U	10 U	50 U	10 U	10 U	5 U	5 U
Total VOCs		1	156	310	488	288	983	386	1100	1173	9	12	9

Notes

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J - Compound detected below the reporting limit or
Concentration is estimated for TICS.
B - Analyte detected in the method blank and sample
M - Manual integrated compound
* - Laboratory control sample/duplicate exceeds control limits.
1 - Sample 4009-X is a duplicate sample from 4009-6

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	4009-9 3/15/2010 Shallow ug/L	4009-10 8/14/2007 Shallow ug/L	4009-10 10/10/2008 Shallow ug/L	4009-10 6/22/2009 Shallow ug/L	4009-10 3/15/2010 Shallow ug/L	4009-11 8/14/2007 Deep ug/L	4009-11 10/10/2008 Deep ug/L	4009-11 6/24/2009 Deep ug/L	4009-11 3/15/2010 Deep ug/L	4009-11A 8/14/2007 Shallow ug/L	4009-11A 10/10/2008 Shallow ug/L	4009-11A 6/24/2009 Shallow ug/L
1,1,1-Trichloroethane	5	5 U	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
1,1,2,2-Tetrachloroethane	5	5 U	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
1,1,2-Trichloroethane	1	5 U	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
1,1-Dichloroethane	5	5 U	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
1,1-Dichloroethene	5	5 U	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U *	5 U	10 U	5 U	0.5 U *
1,2-Dichloroethane	0.6	5 U *	10 U	5 U	5 U	5 U *	10 U	5 U	0.5 U	5 U *	10 U	5 U	0.5 U
1,2-Dichloropropane	1	5 U	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
2-Butanone (MEK)	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U	2 U	10 U	10 U	10 U	2 U
2-Hexanone		10 U	10 U	10 U	10 U	10 U	10 U	10 U	2 U *	10 U	10 U	10 U	2 U *
4-Methyl-2-pentanone (MIBK)		10 U	10 U	10 U	10 U	10 U	10 U	10 U	2 U	10 U	10 U	10 U	2 U
Acetone		10 U	10 U	10 U	10 U	10 U	10 U	7.8 J B	2.7	10 U	10 U	2.4 J B	2 U
Benzene	1	5 U	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Bromodichloromethane	50	5 U	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Bromoform		5 U	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Bromomethane	5	5 U	10 U	5 U	5 U	5 U	10 U	5 U	1 U	5 U	10 U	5 U	1 U
Carbon disulfide		5 U	10 U	5 U	5 U	5 U	10 U	5 U	0.67	5 U	10 U	5 U	0.5 U
Carbon tetrachloride	5	5 U	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Chlorobenzene	5	5 U	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Chloroethane	5	5 U *	10 U	5 U	5 U *	5 U *	10 U	5 U	1 U	5 U *	10 U	5 U	1 U
Chloroform	7	5 U	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Chloromethane		5 U	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U *	5 U	10 U	5 U	0.5 U *
cis-1,2-Dichloroethene	5	**5.2**	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
cis-1,3-Dichloropropene	0.4	5 U	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Dibromochloromethane		5 U	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Ethylbenzene	5	5 U	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Methylene Chloride	5	5 U	10 U	5 U	5 U	5 U	10 U	5 U	2 U	5 U	10 U	5 U	2 U
Styrene	5	5 U	10 U	5 U *	5 U	5 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Tetrachloroethene	5	5 U	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Toluene	5	5 U	10 U	5 U	0.94 J	5 U	10 U	5 U	0.99	5 U	10 U	5 U	0.95
trans-1,2-Dichloroethene	5	5 U	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U *	5 U	10 U	5 U	0.5 U *
trans-1,3-Dichloropropene	0.4	5 U	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Trichloroethene	5	0.86 J	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Vinyl chloride	2	5 U	10 U	5 U	5 U	5 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Xylenes, Total		5 U	10 U	5 U	5 U	5 U	10 U	5 U	2.5	5 U	10 U	5 U	1 U
Total VOCs		6	0	0	1	0	0	8	7	0	0	2	1

Notes

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* - Laboratory control sample/duplicate exceeds control limits.
1 - Sample 4009-X is a duplicate sample from 4009-6

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	4009-11A 3/15/2010 Shallow ug/L	4009-12 8/15/2007 Deep ug/L	4009-12 12/12/2008 Deep ug/L	4009-12 6/24/2009 Deep ug/L	4009-12 3/15/2010 Deep ug/L	4009-12A 8/15/2007 Shallow ug/L	4009-12A 10/10/2008 Shallow ug/L	4009-12A 6/24/2009 Shallow ug/L	4009-12A 3/15/2010 Shallow ug/L	4009-13 8/15/2007 Deep ug/L	4009-13 10/10/2008 Deep ug/L	4009-13 2/3/2009 Deep ug/L
1,1,1-Trichloroethane	5	5 U	0.39 J M	**200**	**230**	**120**	**8 J**	4.1 J	**12**	**11**	10 U	5 U	0.5 U
1,1,2,2-Tetrachloroethane	5	5 U	10 U	20 U	2 U	10 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
1,1,2-Trichloroethane	1	5 U	10 U	20 U	2 U	10 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
1,1-Dichloroethane	5	5 U	2.4 J	**10 J**	**12**	**6.9 J**	**7.4 J**	**10**	**11**	**12**	10 U	5 U	0.5 U
1,1-Dichloroethene	5	5 U	0.17 J M	**11 J**	**19**	**8.9 J**	1.6 J	2.1 J	3.4 *	2.8 J	10 U	5 U	0.5 U
1,2-Dichloroethane	0.6	5 U *	10 U	20 U	2 U	10 U	10 U	5 U	0.5 U	5 U *	10 U	5 U	0.5 U *
1,2-Dichloropropane	1	5 U	10 U	20 U	2 U	10 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
2-Butanone (MEK)	50	10 U	10 U	40 U	8 U	20 U	10 U	10 U	2 U	10 U	10 U	10 U	2 U
2-Hexanone		10 U	10 U	40 U	8 U	20 U	10 U	10 U	2 U *	10 U	10 U	10 U	2 U
4-Methyl-2-pentanone (MIBK)		10 U	10 U	40 U	8 U	20 U	10 U	10 U	2 U	10 U	10 U	10 U	2 U
Acetone		10 U	10 U	40 U	9.1	5 J B	10 U	1.6 J	2 U	10 U	10 U	3.6 J B	2 U
Benzene	1	5 U	10 U	20 U	2 U	10 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Bromodichloromethane	50	5 U	10 U	20 U	2 U	10 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Bromoform		5 U	10 U	20 U	2 U	10 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Bromomethane	5	5 U	10 U	20 U	4 U	10 U	10 U	5 U	1 U	5 U	10 U	5 U	1 U
Carbon disulfide		5 U	20 J N	20 U	2 U	10 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Carbon tetrachloride	5	5 U	10 U	20 U	2 U	10 U	0.96 J	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Chlorobenzene	5	5 U	10 U	20 U	2 U	10 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Chloroethane	5	5 U *	10 U	20 U	4 U *	10 U	10 U	5 U	1 U	5 U *	10 U	5 U	1 U
Chloroform	7	5 U	10 U	20 U	2 U	10 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Chloromethane		5 U	10 U	20 U *	2 U *	10 U	10 U	5 U *	0.5 U *	5 U	10 U	5 U	0.5 U
cis-1,2-Dichloroethene	5	5 U	10 U	**48**	**56**	**36**	**17**	**18**	**21**	**19**	10 U	5 U	0.5 U
cis-1,3-Dichloropropene	0.4	5 U	**2.7 J**	20 U	2 U	10 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Dibromochloromethane		5 U	10 U	20 U	2 U	10 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Ethylbenzene	5	5 U	10 U	20 U	2 U	10 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Methylene Chloride	5	5 U	10 U	20 U	**14**	10 U	10 U	5 U	2 U	5 U	10 U	5 U	2 U
Styrene	5	5 U	10 U	20 U	2 U	10 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U *
Tetrachloroethene	5	5 U	10 U	20 U	2 U	10 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.23 J
Toluene	5	5 U	10 U	20 U	2 U	10 U	10 U	5 U	0.94	5 U	10 U	5 U	0.5 U
trans-1,2-Dichloroethene	5	5 U	10 U	20 U	1.5 J	10 U	10 U	5 U	0.25 J *	5 U	10 U	5 U	0.5 U
trans-1,3-Dichloropropene	0.4	5 U	10 U	20 U	2 U	10 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Trichloroethene	5	5 U	1.3 J	**43**	**59**	**37**	3.8 J	3.8 J	**5.7**	**5**	10 U	5 U	0.5 U
Vinyl chloride	2	5 U	10 U	20 U	2 U	10 U	10 U	5 U	0.5 U	5 U	10 U	5 U	0.5 U
Xylenes, Total		5 U	10 U	20 U	4 U	10 U	10 U	5 U	1 U	5 U	10 U	5 U	1.5 U
Total VOCs		0	27	312	401	214	39	40	54	50	0	4	0.2

Notes

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M - Manual integrated compound
* - Laboratory control sample/duplicate exceeds control limits.
1 - Sample 4009-X is a duplicate sample from 4009-6

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 6/24/2009 Deep ug/L	4009-13 3/17/2010 Deep ug/L	4009-13A 8/15/2007 Shallow ug/L	4009-13A 10/10/2008 Shallow ug/L	4009-13A 2/3/2009 Shallow ug/L	4009-13A 6/24/2009 Shallow ug/L	4009-13A 3/17/2010 Shallow ug/L	4009-14 8/15/2007 Deep ug/L	4009-14 10/9/2008 Deep ug/L	4009-14 6/22/2009 Deep ug/L	4009-14 3/17/2010 Deep ug/L	4009-15 8/15/2007 Deep ug/L	4009-15 10/10/2008 Deep ug/L
1,1,1-Trichloroethane	5	0.5 U	0.5 U	10 U	5 U	0.5 U	0.5 U	0.35 J	10 U	5 U	5 U	0.5 U	10 U	5 U
1,1,2,2-Tetrachloroethane	5	0.5 U	0.5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
1,1,2-Trichloroethane	1	0.5 U	0.5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
1,1-Dichloroethane	5	0.5 U	0.13 J	10 U	5 U	0.5 U	0.5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
1,1-Dichloroethene	5	0.5 U *	0.5 U	10 U	5 U	0.5 U	0.5 U *	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
1,2-Dichloroethane	0.6	0.5 U	0.5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
1,2-Dichloropropane	1	0.5 U	0.5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
2-Butanone (MEK)	50	2 U	0.59 J B	10 U	10 U	2 U	2 U	0.62 J B	10 U	10 U	10 U	0.4 J	10 U	10 U
2-Hexanone		2 U *	2 U	10 U	10 U	2 U	2 U *	2 U	10 U	10 U	10 U	2 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)		2 U	2 U	10 U	10 U	2 U	2 U	2 U	10 U	10 U	10 U	2 U	10 U	10 U
Acetone		2 U	1.5 J B	10 U	1.4 J	1.7 J B	2 U	1.1 J B	10 U	2.1 J B	10 U	1.1 J B	10 U	2 J
Benzene	1	0.5 U	0.5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
Bromodichloromethane	50	0.5 U	0.5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
Bromoform		0.5 U	0.5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
Bromomethane	5	1 U	1 U	10 U	5 U	1 U	1 U	1 U	10 U	5 U	5 U	1 U	10 U	5 U
Carbon disulfide		0.5 U	0.5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	10 U	5 U	5 U	0.12 J	10 U	5 U
Carbon tetrachloride	5	0.5 U	0.5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
Chlorobenzene	5	0.5 U	0.5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
Chloroethane	5	1 U	1 U	10 U	5 U	1 U	1 U	1 U	10 U	5 U	5 U	1 U	10 U	5 U
Chloroform	7	0.5 U	0.5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
Chloromethane		0.5 U *	0.5 U	10 U	5 U	0.5 U	0.5 U *	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
cis-1,2-Dichloroethene	5	0.5 U	0.5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
cis-1,3-Dichloropropene	0.4	0.5 U	0.5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
Dibromochloromethane		0.5 U	0.5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
Ethylbenzene	5	0.5 U	0.5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
Methylene Chloride	5	2 U	2 U	10 U	5 U	0.81 J B	2 U	2 U	10 U	5 U	5 U *	2 U *	10 U	5 U
Styrene	5	0.5 U	0.5 U	10 U	5 U *	0.5 U *	0.5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
Tetrachloroethene	5	0.5 U	0.5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
Toluene	5	1	0.5 U	10 U	5 U	0.5 U	0.9	0.5 U	10 U	5 U	1.1 J B	0.36 J	10 U	5 U
trans-1,2-Dichloroethene	5	0.5 U *	0.5 U	10 U	5 U	0.5 U	0.5 U *	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
trans-1,3-Dichloropropene	0.4	0.5 U	0.5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
Trichloroethene	5	0.5 U	0.13 J B	10 U	5 U	0.5 U	0.5 U	0.18 J B	10 U	5 U	5 U	0.28 J B	10 U	5 U
Vinyl chloride	2	0.5 U	0.5 U	10 U	5 U	0.5 U	0.5 U	0.5 U	10 U	5 U	5 U	0.5 U	10 U	5 U
Xylenes, Total		2.5	1 U	10 U	5 U	1.5 U	1 U	1 U	10 U	5 U	2.5 J	1 U	10 U	5 U
Total VOCs		3.5	2.4	0	1	3	1	2	0	2	4	2	0	0

Notes

- Concentration exceeds NYSDEC Class GA Standard

U - Compound was not detected at the indicated concentration

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

B - Analyte detected in the method blank and sample

M - Manual integrated compound

* - Laboratory control sample/duplicate exceeds control limits.

1 - Sample 4009-X is a duplicate sample from 4009-6

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 2/3/2009 Deep ug/L	4009-15 6/22/2009 Deep ug/L	4009-15 3/17/2010 Deep ug/L	Trip Blank 3/16/2010 - ug/L	Trip Blank 3/17/2010 - ug/L
1,1,1-Trichloroethane	5	0.5 U	5 U	2.9	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	5	0.5 U	5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	1	0.5 U	5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	5	0.5 U	1.3 J	0.71	0.5 U	0.5 U
1,1-Dichloroethene	5	0.5 U	5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.6	0.5 U *	5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	1	0.5 U	5 U	0.5 U	0.5 U	0.5 U
2-Butanone (MEK)	50	2 U	10 U	0.45 J	2 U	0.47 J
2-Hexanone		2 U	10 U	2 U	2 U	2 U
4-Methyl-2-pentanone (MIBK)		2 U	10 U	2 U	2 U	2 U
Acetone		1.4 J B	10 U	1.3 J B	2 U	1.6 J B
Benzene	1	0.5 U	5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	50	0.5 U	5 U	0.5 U	0.5 U	0.5 U
Bromoform		0.5 U	5 U	0.5 U	0.5 U	0.5 U
Bromomethane	5	1 U	5 U	1 U	1 U	1 U
Carbon disulfide		0.5 U	5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	5	0.5 U	5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	5	0.5 U	5 U	0.5 U	0.5 U	0.5 U
Chloroethane	5	1 U	5 U *	1 U	1 U	1 U
Chloroform	7	0.5 U	5 U	0.5 U	0.5 U	0.5 U
Chloromethane		0.5 U	5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	5	0.5 U	5 U	0.65	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.4	0.5 U	5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane		0.5 U	5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	5	0.5 U	5 U	0.5 U	0.5 U	0.5 U
Methylene Chloride	5	2 U	5 U	2 U *	2 U	2 U *
Styrene	5	0.5 U *	5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	5	0.71	5 U	0.5 U	0.5 U	0.5 U
Toluene	5	0.5 U	0.95 J	0.5 U	0.5 U *	0.5 U
trans-1,2-Dichloroethene	5	0.5 U	5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.4	0.5 U	5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.22 J	5 U	0.22 J B	0.5 U	0.28 J B
Vinyl chloride	2	0.5 U	5 U	0.5 U	0.5 U	0.5 U
Xylenes, Total		1.5 U	2.5 J	1 U	1 U	1 U
Total VOCs		2	5	6		

Notes

- Concentration exceeds NYSDEC Class GA Standard

U - Compound was not detected at the indicated concentration

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

B - Analyte detected in the method blank and sample

M - Manual integrated compound

* - Laboratory control sample/duplicate exceeds control limits.

1 - Sample 4009-X is a duplicate sample from 4009-6

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	4009-12 6/24/2009 Deep ug/L
Aluminum		115 B	200 U	200 U	8360	456	85.5 U
Antimony		60.0 U	60.0 U	60.0 U	60.0 U	60.0 U	60 U
Arsenic	25	10.0 U	10.0 U	10.0 U	8.6 B	10.0 U	10 U
Barium	1000	81.2 B	79.6 B	24.9 B	117 B	72.8 B	66.6 B
Beryllium		5.0 U	5.0 U	5.0 U	0.40 B	5.0 U	0.2 U
Cadmium	5	0.6 B	0.4 B	5.0 U	0.5 B	5.0 U	5 U
Calcium		111000	106000	63900	150000	135000	148000
Chromium	50	1.6 B	10.0 U	10.0 U	16.5	10.0 U	10 U
Cobalt		4.6 B	3.5 B	50.0 U	29.6 B	2.3 B	50 J B
Copper	200	3.3 B	2.0 B	3.1 B	28.9	1.6 B	25 J
Iron	300	**323**	67.6 B	**8940**	**59500**	**3890**	**1300**
Lead	25	10.0 U	10.0 U	10.0 U	**93.3**	4.2 B	2.4 J
Magnesium		44100	42300	11400	25300	21500	22100
Manganese	300	**369**	**365**	247	**546**	54.6	18.9
Mercury	0.7	0.200 U	0.200 U	0.20 U	0.200 U	0.200 U	0.2 U
Nickel	100	14.0 B	13.9 B	1.7 B	21.0 B	2.1 B	40 U
Potassium		984 B	1060 B	4380 B	3890 B	2540 B	2360
Selenium	10	35.0 U	35.0 U	35.0 U	35.0 U	35.0 U	35 U
Silver	50	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10 U
Sodium	20000	**52700**	**50400**	**32400**	**104000**	**102000**	**109000**
Thallium		25.0 U	25.0 U	25.0 U	25.0 U	25.0 U	25 U
Vanadium		50.0 U	50.0 U	0.84 B	10.8 B	50.0 U	50 U
Zinc		11.6 B	6.5 B	60.0 U	156	10.0 B	12.5

Notes

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

B - Analyte detected in the associated method blank.

J - Concentration greater than MDL but less than RL, result estimated

(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	4009-12 3/15/2010 Deep ug/L	4009-12(1) 3/15/2010 Deep ug/L	4009-12A 8/15/2007 Shallow 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
Aluminum		53.6 B, J	200 U	200 U	67.2 B	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	69.9 J	67.9 J	51.2 B	49.4 B	2.0 B	0.90 B
Beryllium		5.0 U	5.0 U	0.29 B	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		153000	147000	125000	126000	3960 B	2170 B
Chromium	50	10.0 U	10.0 U	10.0 U	10.0 U	2.1 B	10.0 U
Cobalt		0.6 J	1.0 J	50.0 U	50.0 U	50.0 U	50.0 U
Copper	200	25.0 U	25.0 J	3.2 B	2.0 B	25.0 U	25.0 U
Iron	300	**1200**	**809**	**590**	**566**	**5480**	100 U
Lead	25	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
Magnesium		23200 B	22200	23200	23500	7770	9270
Manganese	300	29.2	20.2	**335**	**337**	33.3	1.3 B
Mercury	0.7	0.2 U	0.2 U	0.20 U	0.20 U	0.200 U	0.200 U
Nickel	100	40.0 U	40.0 U	1.7 B	1.4 B	2.2 B	40.0 U
Potassium		2970 J	2570 J	2160 B	2220 B	2080 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	**118000**	**114000**	**93500**	**93300**	**94700**	**102000**
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	0.85 B	50.0 U	50.0 U	50.0 U
Zinc		44.1 J	41.0 J	60.0 U	60.0 U	5.2 B	60.0 U

Notes

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

B - Analyte detected in the associated method blank.

J - Concentration greater than MDL but less than RL, result estimated

(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 6/24/2009 Shallow ug/L	4009-12A 3/15/2010 Shallow ug/L	4009-12A[(1)] 3/15/2010 Shallow ug/L	4009-13 6/24/2009 Shallow ug/L	4009-13 3/17/2010 Shallow ug/L	4009-13[(1)] 3/17/2010 Shallow ug/L
Aluminum		200 U	200 U	110 J	200 U	200 U	200 U
Antimony		20 U	60.0 U	60.0 U	20 U	60.0 U	60.0 U
Arsenic	25	10 U	10.0 U	10.0 U	6.9 J	12.0	10.9
Barium	1000	51.0	54.4 J	53.7 J	128 B	107 J	110 J
Beryllium		2 U	5.0 U	5.0 U	2 U	5.0 U	5.0 U
Cadmium	5	1 U	5.0 U	5.0 U	1 U	5.0 U	5.0 U
Calcium		134000	136000	135000	114000	93400	95100
Chromium	50	4 U	10.0 U	10.0 U	4 U	10.0 U	10.0 U
Cobalt		4 U	50.0 U	50.0 U	4 U	1.1 J	50.0 U
Copper	200	10 U	25.0 U	25.0 U	10 U	25.0 U	25.0 U
Iron	300	**1770 B**	**13000**	**2050**	**1260**	**1740**	**983**
Lead	25	5 U	10.0 U	10.0 U	5 U	10.0 U	10.0 U
Magnesium		25600 B	25500 B	24800	42000	43200 B	41800
Manganese	300	**414 B**	**502**	**424**	**652**	**553**	**565**
Mercury	0.7	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	100	10 U	3.1 J	40.0 U	1.9 J	1.4 J	40.0 U
Potassium		2280	2280 J	2060 J	2160	2190 J	2050 J
Selenium	10	15 U	35.0 U	35.0 U	15 U	35.0 U	35.0 U
Silver	50	3 U	10.0 U	10.0 U	3 U	10.0 U	10.0 U
Sodium	20000	**107000**	**105000**	**105000**	**97500**	**95300**	**93500**
Thallium		20 U	25.0 U	25.0 U	20 U	25.0 U	25.0 U
Vanadium		5 U	50.0 U	50.0 U	5 U	50.0 U	50.0 U
Zinc		10.1	6.2 J	60.0 U	24.0	5.0 J	60.0 U

Notes

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

B - Analyte detected in the associated method blank.

J - Concentration greater than MDL but less than RL, result estimated

(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	4009-13A 8/15/2007 Shallow ug/L	4009-13A 10/10/2008 Shallow ug/L	4009-13A[(1)] 10/10/2008 Shallow ug/L	4009-15 8/15/2007 Deep ug/L	4009-15 6/22/2009 Deep ug/L	4009-15 3/17/2010 Deep ug/L
Aluminum		200 U	200 U	200 U	200 U	80.5 J	200 U
Antimony		60.0 U	60.0 U	60.0 U	60.0 U	20.0 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	74.1 B	80.7 B	78.5 B	4.6 B	9.5 B	15.7 J
Beryllium		5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	5.0 U
Cadmium	5	5.0 U	5.0 U	5.0 U	5.0 U	1.0 U	5.0 U
Calcium		155000	166000	154000	5650	32000 B	87800
Chromium	50	10.0 U	10.0 U	10.0 U	10.0 U	4 U	10.0 U
Cobalt		50.0 U	1.3 B	1.4 B	50.0 U	1.4 J B	0.6 J
Copper	200	3.8 B	25.0 U	25.0 U	3.1 B	5.2 J	25.0 U
Iron	300	31.2 B	**435**	176	**638**	**3790**	**398**
Lead	25	10.0 U	10.0 U	10.0 U	10.0 U	5 U	10.0 U
Magnesium		21200	22900	21600	1520 B	23900	19900 B
Manganese	300	2.6 B	6.1 B	4.7 B	8.6 B	49.4	12.2 J
Mercury	0.7	0.20 U	0.200 U	0.200 U	0.20 U	0.2 U	0.2 U
Nickel	100	1.6 B	1.7 B	1.5 B	1.6 B	1.4 J	40.0 U
Potassium		3080 B	3130 B	3170 B	6160	2460	1760 J
Selenium	10	35.0 U	35.0 U	35.0 U	35.0 U	15 U	35.0 U
Silver	50	10.0 U	10.0 U	10.0 U	10.0 U	3 U	10.0 U
Sodium	20000	**116000**	**137000**	**129000**	8750	**69300**	**66400**
Thallium		25.0 U	25.0 U	25.0 U	25.0 U	20 U	25.0 U
Vanadium		50.0 U	50.0 U	50.0 U	0.78 B	5 U	50.0 U
Zinc		60.0 U	4.6 B	60.0 U	4.6 B	104	7.2 J

Notes

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

B - Analyte detected in the associated method blank.

J - Concentration greater than MDL but less than RL, result estimated

(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[(1)] 3/17/2010 Deep ug/L	WELL 1-A EFF 8/27/2007 Pumping Well ug/L
Aluminum		200 U	200 U
Antimony		60.0 U	60.0 U
Arsenic	25	10.0 U	10.0 U
Barium	1000	16.3 J	48.3 B
Beryllium		5.0 U	5.0 U
Cadmium	5	5.0 U	5.0 U
Calcium		89400	101000
Chromium	50	10.0 U	10.0 U
Cobalt		50.0 U	50.0 U
Copper	200	25.0 U	25.0 U
Iron	300	**302**	100 U
Lead	25	10.0 U	10.0 U
Magnesium		19800	15300
Manganese	300	11.4 J	99.1
Mercury	0.7	0.2 U	0.20 U
Nickel	100	40.0 U	1.6 B
Potassium		1680 J	1810 B
Selenium	10	35.0 U	35.0 U
Silver	50	10.0 U	10.0 U
Sodium	20000	**67400**	**65400**
Thallium		25.0 U	25.0 U
Vanadium		50.0 U	50.0 U
Zinc		3.0 J	60.0 U

Notes

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

B - Analyte detected in the associated method blank.

J - Concentration greater than MDL but less than RL, result estimated

(1) - Sample results for dissolved metals.

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

Appendix A

Monthly Reports and System Operation and Maintenance Logs

0266352 / ALB

MALCOLM PIRNIE

ENVIRONMENTAL COMPLIANCE, INC.
101 Mount Bethel Rd.
Warren, New Jersey 07059
908-754-1700
908-754-1866 (fax)
http://www.eci-nj.com
j.jimenez@eci-nj.com (email)

Vestal Well 1-1 Monthly Report
January 2010

SECTION I – SUMMARY OF ACTIVITIES

System operated continually until January 25, when the well was shut down at the request of the NYSDEC due to river flooding. While system was shut done water lines froze preventing startup on January 29. Dick Green and Jeremy Wyckoff used propane torch to defrost and drain the water lines. On February 1st system was restarted. System flow ranged from 186 GPM to 189 GPM during the month.

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 grounds
- Checked belts, changed air filters and greased blower
- Shoveled snow and salted grounds, as needed.

SECTION III – REPAIR WORK COMPLETED

- System froze and required defrosting, as indicated above.

SECTION IV – REPAIR WORK NEEDED

- Control panel auto mode not functioning
- Seeding of excavated area in spring
- Fill ruts previously left by well contractor

SECTION V – RECOMMENDATIONS

- Repair control panel, as needed
- Follow-up on NYSEG site restoration

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Vestal Well 1-1 Monthly Report
February 2010

SECTION I – SUMMARY OF ACTIVITIES

System operated continuously entire month without incident. System flow ranged from 218 GPM at beginning of month to 193 GPM at end of the month.

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 grounds
- Changed belts, changed air filters and greased blower
- Shoveled snow and salted grounds, as needed.

SECTION III – REPAIR WORK COMPLETED

- None

SECTION IV – REPAIR WORK NEEDED

- Control panel auto mode not functioning
- Fill ruts and seed disturbed soil

SECTION V – RECOMMENDATIONS

- Repair control panel, as needed
- Fill ruts and seed

ENVIRONMENTAL COMPLIANCE, INC.
101 Mount Bethel Rd.
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Vestal Well 1-1 Monthly Report
March 2009

SECTION I – SUMMARY OF ACTIVITIES

System ran continuously during the month except for 2 days that the system was shut down at request of NYSDEC due to flooding conditions on the river. System operated between 335 and 350 GPM.

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
- Replaced belts and air filters on blower

SECTION III – REPAIR WORK COMPLETED

- Filled ruts caused by recent construction
- Installation of variable speed control.
- Installation of cathodic protection system

SECTION IV – REPAIR WORK NEEDED

- Fill depressions created during pump replacement

SECTION V – RECOMMENDATIONS

- Fill and seed depressions.

ENVIRONMENTAL COMPLIANCE, INC.					VESTAL WELL 1-1 MONTHLY O & M LOG																										
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																															
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)					189							188							186							186					
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	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	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
CLEARWELL LEVEL	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
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	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X

ENVIRONMENTAL COMPLIANCE, INC.						VESTAL WELL 1-1 MONTHLY O & M LOG																February 2010									
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																															
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				
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				
FLOW METER (GPM)						213						203							198							193					
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				
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				
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				
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				
ALARM / CONTROL PANEL	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X				
CLEARWELL LEVEL	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		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				
INGROUND TANK LEVEL	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X				

VESTAL WELL 1-1 MONTHLY O & M LOG March 2009

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		X	X	X	X	X	X		X	X	X	X	X	X		X	X	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
PUMP MOTOR OIL		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 VIBRATION / HEAT		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
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
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
FLOW METER (GPM)		356							350							340							335							335	
DIALER - ALARMS N/A.																															
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
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
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
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
ALARM / CONTROL PANEL		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
CLEARWELL LEVEL		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
FLOAT & BYPASS 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
H.S. PUMP PACKING		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
H.S. PUMP MOTOR OIL		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 VIBRATION / HEAT		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
SURGE RELIEF VALVE		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
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
INGROUND TANK LEVEL		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

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

Appendix B

Analytical Reporting Forms

MALCOLM PIRNIE

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 220-11458-1

SDG Number: Monthly

Job Description: NYSDEC Standby - Vestal Water Supply

For:
Malcolm Pirnie, Inc.
855 Route 146
Suite 210
Clifton Park, NY 12065

Attention: Mr. Jeremy Wyckoff

Approved for release.
Joan Widomski
Data Review Analyst I
2/22/2010 12:40 PM

Designee for
Johanna Dubauskas
Project Manager I
johanna.dubauskas@testamericainc.com
02/22/2010

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Project Manager.

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

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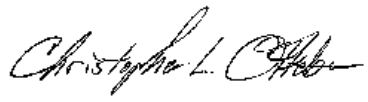
Table of Contents

Case Narrative for Job: 220-11458

Client: Malcolm Pirnie, Inc.
Date: February 22, 2010

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.



Christopher L. Otterbein
Laboratory Director

February 22, 2010

Comments
No additional comments.

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

GC/MS VOA
No 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: 220-11458-1
Sdg Number: Monthly

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-11458-1	WELL 1-1A INF	Water	02/05/2010 1140	02/06/2010 1000
220-11458-2	WELL 1-1A EFF	Water	02/05/2010 1145	02/06/2010 1000

EXECUTIVE SUMMARY - Detections

Client: Malcolm Pirnie, Inc.

Job Number: 220-11458-1
Sdg Number: Monthly

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
220-11458-1	**WELL 1-1A INF**				
1,1-Dichloroethane		23	5.0	ug/L	8260B
1,1-Dichloroethene		16	5.0	ug/L	8260B
1,1,1-Trichloroethane		170	5.0	ug/L	8260B
Trichloroethene		56	5.0	ug/L	8260B
Vinyl chloride		7.4	5.0	ug/L	8260B
cis-1,2-Dichloroethene		56	5.0	ug/L	8260B

METHOD SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 220-11458-1
Sdg Number: Monthly

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

Lab References:

TAL CT = TestAmerica Connecticut

Method References:

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: 220-11458-1
Sdg Number: Monthly

Method	Analyst	Analyst ID
SW846 8260B	Kostrzewska, Barbara	BK

Client: Malcolm Pirnie, Inc.

Job Number: 220-11458-1
Sdg Number: Monthly

Client Sample ID: **WELL 1-1A INF**

Lab Sample ID: 220-11458-1
Client Matrix: Water

Date Sampled: 02/05/2010 1140
Date Received: 02/06/2010 1000

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 02/18/2010 1302
Date Prepared: 02/18/2010 1302

Analysis Batch: 220-36034

Instrument ID: MSL
Lab File ID: L1644.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	23		1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	16		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	170		0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	56		0.62	5.0
Vinyl chloride	7.4		0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	56		0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	88		65 - 136
4-Bromofluorobenzene	88		51 - 142
Dibromofluoromethane	99		68 - 132
Toluene-d8 (Surr)	94		63 - 127

Client: Malcolm Pirnie, Inc.

Job Number: 220-11458-1
Sdg Number: Monthly

Client Sample ID: **WELL 1-1A EFF**

Lab Sample ID: 220-11458-2
Client Matrix: Water

Date Sampled: 02/05/2010 1145
Date Received: 02/06/2010 1000

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 02/18/2010 1326
Date Prepared: 02/18/2010 1326

Analysis Batch: 220-36034

Instrument ID: MSL
Lab File ID: L1645.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	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	90		65 - 136
4-Bromofluorobenzene	87		51 - 142
Dibromofluoromethane	100		68 - 132
Toluene-d8 (Surr)	97		63 - 127

Client: Malcolm Pirnie, Inc.

Job Number: 220-11458-1
Sdg Number: Monthly

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DBFM %Rec	DCA %Rec	TOL %Rec	BFB %Rec
220-11458-1	WELL 1-1A INF	99	88	94	88
220-11458-2	WELL 1-1A EFF	100	90	97	87
MB 220-36034/3		95	85	93	84
LCS 220-36034/2		101	93	103	89

Surrogate	Acceptance Limits
DBFM = Dibromofluoromethane	68-132
DCA = 1,2-Dichloroethane-d4 (Surr)	65-136
TOL = Toluene-d8 (Surr)	63-127
BFB = 4-Bromofluorobenzene	51-142

Client: Malcolm Pirnie, Inc.

Job Number: 220-11458-1
Sdg Number: Monthly

Method Blank - Batch: 220-36034

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-36034/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/18/2010 1127
Date Prepared: 02/18/2010 1127

Analysis Batch: 220-36034
Prep Batch: N/A
Units: ug/L

Instrument ID: MSL
Lab File ID: L1640.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)	85	65 - 136
4-Bromofluorobenzene	84	51 - 142
Dibromofluoromethane	95	68 - 132
Toluene-d8 (Surr)	93	63 - 127

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

Client: Malcolm Pirnie, Inc.

Job Number: 220-11458-1
Sdg Number: Monthly

Lab Control Sample - Batch: 220-36034

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-36034/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/18/2010 1015
Date Prepared: 02/18/2010 1015

Analysis Batch: 220-36034
Prep Batch: N/A
Units: ug/L

Instrument ID: MSL
Lab File ID: L1637.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	20.0	13.6	68	41 - 150	
Benzene	20.0	21.1	106	66 - 131	
Bromodichloromethane	20.0	17.9	90	78 - 120	
Bromoform	20.0	18.0	90	66 - 120	
Bromomethane	20.0	23.2	116	47 - 150	
Methyl Ethyl Ketone	20.0	15.8	79	42 - 150	
Carbon disulfide	20.0	29.3	146	55 - 150	
Carbon tetrachloride	20.0	18.4	92	69 - 135	
Chlorobenzene	20.0	19.5	98	68 - 120	
Chloroethane	20.0	20.4	102	49 - 150	
Chloroform	20.0	20.6	103	77 - 126	
Chloromethane	20.0	22.7	114	33 - 150	
Dibromochloromethane	20.0	16.9	85	75 - 120	
1,1-Dichloroethane	20.0	20.7	103	75 - 130	
1,2-Dichloroethane	20.0	18.9	94	73 - 127	
1,1-Dichloroethene	20.0	25.0	125	65 - 142	
1,2-Dichloropropane	20.0	20.6	103	69 - 129	
cis-1,3-Dichloropropene	20.0	18.5	92	63 - 120	
trans-1,3-Dichloropropene	20.0	18.6	93	73 - 120	
Ethylbenzene	20.0	19.8	99	62 - 120	
2-Hexanone	20.0	12.6	63	46 - 150	
Methylene Chloride	20.0	22.0	110	56 - 138	
methyl isobutyl ketone	20.0	16.8	84	70 - 122	
Styrene	20.0	19.0	95	47 - 120	
1,1,2,2-Tetrachloroethane	20.0	18.7	93	75 - 124	
Tetrachloroethene	20.0	21.7	109	50 - 120	
Toluene	20.0	20.8	104	66 - 120	
1,1,1-Trichloroethane	20.0	19.9	99	73 - 135	
1,1,2-Trichloroethane	20.0	19.3	96	76 - 125	
Trichloroethene	20.0	22.1	110	60 - 122	
Vinyl chloride	20.0	20.6	103	61 - 150	
Xylenes, Total	60.0	59.6	99	58 - 120	
cis-1,2-Dichloroethene	20.0	22.0	110	65 - 120	
trans-1,2-Dichloroethene	20.0	22.4	112	58 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	93	65 - 136
4-Bromofluorobenzene	89	51 - 142
Dibromofluoromethane	101	68 - 132
Toluene-d8 (Surr)	103	63 - 127

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

DATA REPORTING QUALIFIERS

Client: Malcolm Pirnie, Inc.

Job Number: 220-11458-1
Sdg Number: Monthly

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.

Client: Malcolm Pirnie, Inc.

Job Number: 220-11458-1
Sdg Number: Monthly

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:220-36034					
LCS 220-36034/2	Lab Control Sample	T	Water	8260B	
MB 220-36034/3	Method Blank	T	Water	8260B	
220-11458-1	WELL 1-1A INF	T	Water	8260B	
220-11458-2	WELL 1-1A EFF	T	Water	8260B	

Report Basis
T = Total

Client: Malcolm Pirnie, Inc.

Job Number: 220-11458-1
SDG: Monthly

Laboratory Chronicle

Lab ID: 220-11458-1 **Client ID: WELL 1-1A INF**

Sample Date/Time: 02/05/2010 11:40 Received Date/Time: 02/06/2010 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11458-B-1		220-36034		02/18/2010 13:02	1	TAL CT	BK
A:8260B	220-11458-B-1		220-36034		02/18/2010 13:02	1	TAL CT	BK

Lab ID: 220-11458-2 **Client ID: WELL 1-1A EFF**

Sample Date/Time: 02/05/2010 11:45 Received Date/Time: 02/06/2010 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11458-B-2		220-36034		02/18/2010 13:26	1	TAL CT	BK
A:8260B	220-11458-B-2		220-36034		02/18/2010 13:26	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 220-36034/3		220-36034		02/18/2010 11:27	1	TAL CT	BK
A:8260B	MB 220-36034/3		220-36034		02/18/2010 11:27	1	TAL CT	BK

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 220-36034/2		220-36034		02/18/2010 10:15	1	TAL CT	BK
A:8260B	LCS 220-36034/2		220-36034		02/18/2010 10:15	1	TAL CT	BK

Lab References:
TAL CT = TestAmerica Connecticut

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 220-11539-1

Job Description: NYSDEC Standby - Vestal Water Supply

For:
Malcolm Pirnie, Inc.
855 Route 146
Suite 210
Clifton Park, NY 12065

Attention: Mr. Jeremy Wyckoff

Approved for release.
Cheryl Cascella
Data Review Analyst I
3/9/2010 12:07 PM

Designee for
Johanna Dubauskas
Project Manager I
johanna.dubauskas@testamericainc.com
03/09/2010

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Project Manager.

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

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Comments
No additional comments.

Receipt
Sample(s) Trip Blank (220-11539-3), Well 1-1A EFF (220-11539-2) were submitted for analysis; however, they were not listed on the Chain-of-Custody (COC).TestAmerica added these samples to the coc for documentation of sample receipt.

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

GC/MS VOA
No analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

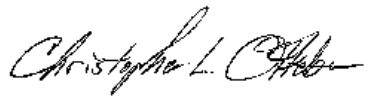
General Chemistry
Method(s) SM 4500 H+ B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The associated sample has been qualified with the "HF" flag to indicate pH was performed in the laboratory outside the 15 minute timeframe.

No other analytical or quality issues were noted.

Case Narrative for Job: 220-11539

Client: Nysdec
Date: March 9, 2010

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.



Christopher L. Otterbein
Laboratory Director

March 9, 2010

SAMPLE SUMMARY

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-11539-1	Well 1-1A INF	Water	02/23/2010 1225	02/24/2010 1022
220-11539-2	Well 1-1A EFF	Water	02/23/2010 1230	02/24/2010 1022
220-11539-3	Trip Blank	Water	02/23/2010 0000	02/24/2010 1022

EXECUTIVE SUMMARY - Detections

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
220-11539-1	**WELL 1-1A INF**					
1,1-Dichloroethane		22		5.0	ug/L	8260B
1,1-Dichloroethene		17		5.0	ug/L	8260B
1,1,1-Trichloroethane		170		5.0	ug/L	8260B
Trichloroethene		58		5.0	ug/L	8260B
Vinyl chloride		6.7		5.0	ug/L	8260B
cis-1,2-Dichloroethene		57		5.0	ug/L	8260B
Hardness as calcium carbonate		355		1.0	mg/L	SM 2340B
Chloride		181		5.0	mg/L	300.0
Sulfate		21.3		1.0	mg/L	300.0
Alkalinity		266		2.0	mg/L	SM 2320B
Total Dissolved Solids		559		10.0	mg/L	SM 2540C
pH		7.70	HF	0.100	SU	SM 4500 H+ B

METHOD SUMMARY

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL CT	SW846 8260B	
Purge and Trap	TAL CT		SW846 5030B
Hardness, Calculation	TAL CT	SM SM 2340B	
Anions, Ion Chromatography	TAL CT	MCAWW 300.0	
Alkalinity	TAL CT	SM SM 2320B	
Solids, Total Dissolved (TDS)	TAL CT	SM SM 2540C	
pH	TAL CT	SM SM 4500 H+ B	

Lab References:

TAL CT = TestAmerica Connecticut

Method References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

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: 220-11539-1

Method	Analyst	Analyst ID
SW846 8260B	Kostrzewska, Barbara	BK
SM SM 2340B	Petronchak, Nestor	NP
MCAWW 300.0	Nemeth, Doreen	DN
SM SM 2320B	Mendoza, Julia	JM
SM SM 2540C	Mendoza, Julia	JM
SM SM 4500 H+ B	Mendoza, Julia	JM

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

Client Sample ID: **Well 1-1A INF**

Lab Sample ID: 220-11539-1 Date Sampled: 02/23/2010 1225
Client Matrix: Water Date Received: 02/24/2010 1022

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36222 Instrument ID: MSL
Preparation: 5030B Lab File ID: L1812.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 02/24/2010 1519 Final Weight/Volume: 5 mL
Date Prepared: 02/24/2010 1519

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	22		1.0	5.0
1,2-Dichloroethane	5.0	U	0.72	5.0
1,1-Dichloroethene	17		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	170		0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	58		0.62	5.0
Vinyl chloride	6.7		0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	57		0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	84		65 - 136
4-Bromofluorobenzene	83		51 - 142
Dibromofluoromethane	93		68 - 132
Toluene-d8 (Surr)	88		63 - 127

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

Client Sample ID: **Well 1-1A EFF**

Lab Sample ID: 220-11539-2 Date Sampled: 02/23/2010 1230
Client Matrix: Water Date Received: 02/24/2010 1022

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36222 Instrument ID: MSL
Preparation: 5030B Lab File ID: L1813.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 02/24/2010 1543 Final Weight/Volume: 5 mL
Date Prepared: 02/24/2010 1543

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	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	87		65 - 136
4-Bromofluorobenzene	87		51 - 142
Dibromofluoromethane	101		68 - 132
Toluene-d8 (Surr)	96		63 - 127

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

Client Sample ID: **Trip Blank**

Lab Sample ID: 220-11539-3 Date Sampled: 02/23/2010 0000
Client Matrix: Water Date Received: 02/24/2010 1022

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36222 Instrument ID: MSL
Preparation: 5030B Lab File ID: L1811.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 02/24/2010 1455 Final Weight/Volume: 5 mL
Date Prepared: 02/24/2010 1455

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	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	87		65 - 136
4-Bromofluorobenzene	92		51 - 142
Dibromofluoromethane	102		68 - 132
Toluene-d8 (Surr)	94		63 - 127

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

Client Sample ID: **Well 1-1A INF**

Lab Sample ID: 220-11539-1 Date Sampled: 02/23/2010 1225
Client Matrix: Water Date Received: 02/24/2010 1022

SM 2340B Hardness, Calculation

Method:	SM 2340B	Analysis Batch: 220-36383		Instrument ID:	NOEQUIP
Preparation:	N/A			Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	
Date Analyzed:	03/04/2010 1408			Final Weight/Volume:	1.0 mL
Date Prepared:					

Analyte	Result (mg/L)	Qualifier	MDL	RL
Hardness as calcium carbonate	355		1.0	1.0

General Chemistry

Client Sample ID: **Well 1-1A INF**

Lab Sample ID: 220-11539-1 Date Sampled: 02/23/2010 1225
Client Matrix: Water Date Received: 02/24/2010 1022

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Chloride	181		mg/L	0.42	5.0	5.0	300.0
Analysis Batch: 220-36389	Date Analyzed: 03/03/2010 1319						
Sulfate	21.3		mg/L	0.053	1.0	1.0	300.0
Analysis Batch: 220-36389	Date Analyzed: 03/02/2010 1849						
Alkalinity	266		mg/L	0.16	2.0	1.0	SM 2320B
Analysis Batch: 220-36194	Date Analyzed: 02/24/2010 1632						
Total Dissolved Solids	559		mg/L	4.0	10.0	1.0	SM 2540C
Analysis Batch: 220-36180	Date Analyzed: 02/24/2010 1342						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
pH	7.70	HF	SU	0.100	0.100	1.0	SM 4500 H+ B
Analysis Batch: 220-36195	Date Analyzed: 02/24/2010 1632						

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DBFM %Rec	DCA %Rec	TOL %Rec	BFB %Rec
220-11539-1	Well 1-1A INF	93	84	88	83
220-11539-2	Well 1-1A EFF	101	87	96	87
220-11539-3	Trip Blank	102	87	94	92
MB 220-36222/3		97	88	93	85
LCS 220-36222/2		97	90	92	86

Surrogate	Acceptance Limits
DBFM = Dibromofluoromethane	68-132
DCA = 1,2-Dichloroethane-d4 (Surr)	65-136
TOL = Toluene-d8 (Surr)	63-127
BFB = 4-Bromofluorobenzene	51-142

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

Method Blank - Batch: 220-36222

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-36222/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 1132
Date Prepared: 02/24/2010 1132

Analysis Batch: 220-36222
Prep Batch: N/A
Units: ug/L

Instrument ID: MSL
Lab File ID: L1803.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)	88	65 - 136
4-Bromofluorobenzene	85	51 - 142
Dibromofluoromethane	97	68 - 132
Toluene-d8 (Surr)	93	63 - 127

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

Lab Control Sample - Batch: 220-36222

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-36222/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 1020
Date Prepared: 02/24/2010 1020

Analysis Batch: 220-36222
Prep Batch: N/A
Units: ug/L

Instrument ID: MSL
Lab File ID: L1800.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	20.0	13.1	66	41 - 150	
Benzene	20.0	20.7	103	66 - 131	
Bromodichloromethane	20.0	17.7	89	78 - 120	
Bromoform	20.0	16.5	83	66 - 120	
Bromomethane	20.0	14.6	73	47 - 150	
Methyl Ethyl Ketone	20.0	15.8	79	42 - 150	
Carbon disulfide	20.0	24.3	122	55 - 150	
Carbon tetrachloride	20.0	16.6	83	69 - 135	
Chlorobenzene	20.0	18.8	94	68 - 120	
Chloroethane	20.0	18.2	91	49 - 150	
Chloroform	20.0	20.1	100	77 - 126	
Chloromethane	20.0	18.4	92	33 - 150	
Dibromochloromethane	20.0	15.5	77	75 - 120	
1,1-Dichloroethane	20.0	19.7	98	75 - 130	
1,2-Dichloroethane	20.0	18.0	90	73 - 127	
1,1-Dichloroethene	20.0	22.0	110	65 - 142	
1,2-Dichloropropane	20.0	20.3	102	69 - 129	
cis-1,3-Dichloropropene	20.0	19.1	96	63 - 120	
trans-1,3-Dichloropropene	20.0	18.7	93	73 - 120	
Ethylbenzene	20.0	19.0	95	62 - 120	
2-Hexanone	20.0	12.3	62	46 - 150	
Methylene Chloride	20.0	21.2	106	56 - 138	
methyl isobutyl ketone	20.0	15.8	79	70 - 122	
Styrene	20.0	18.8	94	47 - 120	
1,1,2,2-Tetrachloroethane	20.0	18.5	92	75 - 124	
Tetrachloroethene	20.0	19.0	95	50 - 120	
Toluene	20.0	18.5	92	66 - 120	
1,1,1-Trichloroethane	20.0	18.4	92	73 - 135	
1,1,2-Trichloroethane	20.0	19.9	99	76 - 125	
Trichloroethene	20.0	21.1	105	60 - 122	
Vinyl chloride	20.0	17.5	87	61 - 150	
Xylenes, Total	60.0	57.0	95	58 - 120	
cis-1,2-Dichloroethene	20.0	20.7	104	65 - 120	
trans-1,2-Dichloroethene	20.0	20.1	100	58 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	90	65 - 136
4-Bromofluorobenzene	86	51 - 142
Dibromofluoromethane	97	68 - 132
Toluene-d8 (Surr)	92	63 - 127

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

Method Blank - Batch: 220-36389

Method: 300.0
Preparation: N/A

Lab Sample ID: MB 220-36389/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/02/2010 1606
Date Prepared: N/A

Analysis Batch: 220-36389
Prep Batch: N/A
Units: mg/L

Instrument ID: IC Lachet
Lab File ID: IC100302.omn
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Chloride	1.0	U	0.083	1.0
Sulfate	0.173	J	0.053	1.0

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

Lab Control Sample - Batch: 220-36389 **Method: 300.0**
Preparation: N/A

Lab Sample ID: LCS 220-36389/6 ^2
Client Matrix: Water
Dilution: 2.0
Date Analyzed: 03/02/2010 1620
Date Prepared: N/A

Analysis Batch: 220-36389
Prep Batch: N/A
Units: mg/L

Instrument ID: IC Lachet
Lab File ID: IC100302.omn
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	13.4	13.98	104	90 - 110	
Sulfate	16.0	15.35	96	90 - 110	

Lab Control Sample - Batch: 220-36389 **Method: 300.0**
Preparation: N/A

Lab Sample ID: LCS 220-36389/7 ^2
Client Matrix: Water
Dilution: 2.0
Date Analyzed: 03/02/2010 1633
Date Prepared: N/A

Analysis Batch: 220-36389
Prep Batch: N/A
Units: mg/L

Instrument ID: IC Lachet
Lab File ID: IC100302.omn
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	13.4	13.61	102	90 - 110	
Sulfate	16.0	15.36	96	90 - 110	

Lab Control Sample - Batch: 220-36389 **Method: 300.0**
Preparation: N/A

Lab Sample ID: LCS 220-36389/8 ^2
Client Matrix: Water
Dilution: 2.0
Date Analyzed: 03/02/2010 1647
Date Prepared: N/A

Analysis Batch: 220-36389
Prep Batch: N/A
Units: mg/L

Instrument ID: IC Lachet
Lab File ID: IC100302.omn
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	13.4	13.80	103	90 - 110	
Sulfate	16.0	15.39	96	90 - 110	

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

Lab Control Sample - Batch: 220-36389

Method: 300.0
Preparation: N/A

Lab Sample ID: LCS 220-36389/9 ^2
Client Matrix: Water
Dilution: 2.0
Date Analyzed: 03/02/2010 1700
Date Prepared: N/A

Analysis Batch: 220-36389
Prep Batch: N/A
Units: mg/L

Instrument ID: IC Lachet
Lab File ID: IC100302.omn
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	13.4	13.66	102	90 - 110	
Sulfate	16.0	15.36	96	90 - 110	

Matrix Spike Blank - Batch: 220-36389

Method: 300.0
Preparation: N/A

Lab Sample ID: MSB 220-36389/26
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/03/2010 1305
Date Prepared: N/A

Analysis Batch: 220-36389
Prep Batch: N/A
Units: mg/L

Instrument ID: IC Lachet
Lab File ID: IC100303.omn
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	7.94	7.26	91	80 - 120	
Sulfate	19.9	18.54	93	80 - 120	

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

Matrix Spike - Batch: 220-36389

Method: 300.0
Preparation: N/A

Lab Sample ID: 220-11539-1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/02/2010 1916
Date Prepared: N/A

Analysis Batch: 220-36389
Prep Batch: N/A
Units: mg/L

Instrument ID: IC Lachet
Lab File ID: IC100302.omn
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 5 mL

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Sulfate	21.3	19.9	40.79	98	80 - 120	

Matrix Spike - Batch: 220-36389

Method: 300.0
Preparation: N/A

Lab Sample ID: 220-11539-1
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 03/03/2010 1346
Date Prepared: N/A

Analysis Batch: 220-36389
Prep Batch: N/A
Units: mg/L

Instrument ID: IC Lachet
Lab File ID: IC100303.omn
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 5 mL

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	181	39.7	226.0	113	80 - 120	4

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

Duplicate - Batch: 220-36389

Method: 300.0
Preparation: N/A

Lab Sample ID: 220-11539-1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/02/2010 1902
Date Prepared: N/A

Analysis Batch: 220-36389
Prep Batch: N/A
Units: mg/L

Instrument ID: IC Lachet
Lab File ID: IC100302.omn
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 5 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Sulfate	21.3	21.41	0	20	

Duplicate - Batch: 220-36389

Method: 300.0
Preparation: N/A

Lab Sample ID: 220-11539-1
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 03/03/2010 1333
Date Prepared: N/A

Analysis Batch: 220-36389
Prep Batch: N/A
Units: mg/L

Instrument ID: IC Lachet
Lab File ID: IC100303.omn
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 5 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Chloride	181	183.3	1	20	

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

Method Blank - Batch: 220-36194

Method: SM 2320B
Preparation: N/A

Lab Sample ID: MB 220-36194/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 1624
Date Prepared: N/A

Analysis Batch: 220-36194
Prep Batch: N/A
Units: mg/L

Instrument ID: Titrator
Lab File ID: N/A
Initial Weight/Volume: 20 mL
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Alkalinity	0.330	J	0.16	2.0

Lab Control Sample - Batch: 220-36194

Method: SM 2320B
Preparation: N/A

Lab Sample ID: LCS 220-36194/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 1612
Date Prepared: N/A

Analysis Batch: 220-36194
Prep Batch: N/A
Units: mg/L

Instrument ID: Titrator
Lab File ID: N/A
Initial Weight/Volume: 20 mL
Final Weight/Volume: 1.0 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Alkalinity	236	254.5	108	85 - 115	

Duplicate - Batch: 220-36194

Method: SM 2320B
Preparation: N/A

Lab Sample ID: 220-11539-1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 1640
Date Prepared: N/A

Analysis Batch: 220-36194
Prep Batch: N/A
Units: mg/L

Instrument ID: Titrator
Lab File ID: N/A
Initial Weight/Volume: 20 mL
Final Weight/Volume: 1.0 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Alkalinity	266	267.9	1	20	

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

Method Blank - Batch: 220-36180

Method: SM 2540C
Preparation: N/A

Lab Sample ID: MB 220-36180/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 1342
Date Prepared: N/A

Analysis Batch: 220-36180
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 100 mL
Final Weight/Volume: 100 mL

Analyte	Result	Qual	MDL	RL
Total Dissolved Solids	10.0	U	4.0	10.0

Lab Control Sample - Batch: 220-36180

Method: SM 2540C
Preparation: N/A

Lab Sample ID: LCS 220-36180/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 1342
Date Prepared: N/A

Analysis Batch: 220-36180
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 100 mL
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Dissolved Solids	750	743.0	99	89 - 111	

Duplicate - Batch: 220-36180

Method: SM 2540C
Preparation: N/A

Lab Sample ID: 220-11539-1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 1342
Date Prepared: N/A

Analysis Batch: 220-36180
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 100 mL
Final Weight/Volume: 100 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Dissolved Solids	559	561.0	0	5	

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

Method Blank - Batch: 220-36195

Method: SM 4500 H+ B
Preparation: N/A

Lab Sample ID: MB 220-36195/13
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 1709
Date Prepared: N/A

Analysis Batch: 220-36195
Prep Batch: N/A
Units: SU

Instrument ID: Titrator
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 20 mL

Analyte	Result	Qual	RL	RL
pH	5.520		0.100	0.100

Duplicate - Batch: 220-36195

Method: SM 4500 H+ B
Preparation: N/A

Lab Sample ID: 220-11539-1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 02/24/2010 1640
Date Prepared: N/A

Analysis Batch: 220-36195
Prep Batch: N/A
Units: SU

Instrument ID: Titrator
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 20 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
pH	7.70	7.680	0	20	

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

DATA REPORTING QUALIFIERS

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
General Chemistry		
	HF	Field parameter with a holding time of 15 minutes
	U	Indicates analyzed for but not detected.
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	J	Sample result is greater than the MDL but below the CRDL

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:220-36222					
LCS 220-36222/2	Lab Control Sample	T	Water	8260B	
MB 220-36222/3	Method Blank	T	Water	8260B	
220-11539-1	Well 1-1A INF	T	Water	8260B	
220-11539-2	Well 1-1A EFF	T	Water	8260B	
220-11539-3	Trip Blank	T	Water	8260B	

Report Basis
T = Total

Metals					
Analysis Batch:220-36383					
220-11539-1	Well 1-1A INF	T	Water	SM 2340B	

Report Basis
T = Total

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:220-36180					
LCS 220-36180/2	Lab Control Sample	T	Water	SM 2540C	
MB 220-36180/1	Method Blank	T	Water	SM 2540C	
220-11539-1	Well 1-1A INF	T	Water	SM 2540C	
220-11539-1DU	Duplicate	T	Water	SM 2540C	
Analysis Batch:220-36194					
LCS 220-36194/3	Lab Control Sample	T	Water	SM 2320B	
MB 220-36194/5	Method Blank	T	Water	SM 2320B	
220-11539-1	Well 1-1A INF	T	Water	SM 2320B	
220-11539-1DU	Duplicate	T	Water	SM 2320B	
Analysis Batch:220-36195					
MB 220-36195/13	Method Blank	T	Water	SM 4500 H+ B	
220-11539-1	Well 1-1A INF	T	Water	SM 4500 H+ B	
220-11539-1DU	Duplicate	T	Water	SM 4500 H+ B	
Analysis Batch:220-36389					
LCS 220-36389/6 ^2	Lab Control Sample	T	Water	300.0	
LCS 220-36389/7 ^2	Lab Control Sample	T	Water	300.0	
LCS 220-36389/8 ^2	Lab Control Sample	T	Water	300.0	
LCS 220-36389/9 ^2	Lab Control Sample	T	Water	300.0	
MSB 220-36389/26	Matrix Spike Blank	T	Water	300.0	
MB 220-36389/5	Method Blank	T	Water	300.0	
220-11539-1	Well 1-1A INF	T	Water	300.0	
220-11539-1DU	Duplicate	T	Water	300.0	
220-11539-1MS	Matrix Spike	T	Water	300.0	

Report Basis
T = Total

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

Laboratory Chronicle

Lab ID: 220-11539-1 **Client ID: Well 1-1A INF**

Sample Date/Time: 02/23/2010 12:25 Received Date/Time: 02/24/2010 10:22

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11539-D-1		220-36222		02/24/2010 15:19	1	TAL CT	BK
A:8260B	220-11539-D-1		220-36222		02/24/2010 15:19	1	TAL CT	BK
A:SM 2340B	220-11539-B-1		220-36383		03/04/2010 14:08	1	TAL CT	NP
A:300.0	220-11539-A-1		220-36389		03/02/2010 18:49	1	TAL CT	DN
A:300.0	220-11539-A-1 ^5		220-36389		03/03/2010 13:19	5	TAL CT	DN
A:SM 2320B	220-11539-A-1		220-36194		02/24/2010 16:32	1	TAL CT	JM
A:SM 2540C	220-11539-A-1		220-36180		02/24/2010 13:42	1	TAL CT	JM
A:SM 4500 H+ B	220-11539-A-1		220-36195		02/24/2010 16:32	1	TAL CT	JM

Lab ID: 220-11539-1 MS **Client ID: Well 1-1A INF**

Sample Date/Time: 02/23/2010 12:25 Received Date/Time: 02/24/2010 10:22

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	220-11539-A-1 MS		220-36389		03/02/2010 19:16	1	TAL CT	DN
A:300.0	220-11539-A-1 MS ^5		220-36389		03/03/2010 13:46	5	TAL CT	DN

Lab ID: 220-11539-1 DU **Client ID: Well 1-1A INF**

Sample Date/Time: 02/23/2010 12:25 Received Date/Time: 02/24/2010 10:22

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	220-11539-A-1 DU		220-36389		03/02/2010 19:02	1	TAL CT	DN
A:300.0	220-11539-A-1 DU ^5		220-36389		03/03/2010 13:33	5	TAL CT	DN
A:SM 2320B	220-11539-A-1 DU		220-36194		02/24/2010 16:40	1	TAL CT	JM
A:SM 2540C	220-11539-A-1 DU		220-36180		02/24/2010 13:42	1	TAL CT	JM
A:SM 4500 H+ B	220-11539-A-1 DU		220-36195		02/24/2010 16:40	1	TAL CT	JM

Lab ID: 220-11539-2 **Client ID: Well 1-1A EFF**

Sample Date/Time: 02/23/2010 12:30 Received Date/Time: 02/24/2010 10:22

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11539-B-2		220-36222		02/24/2010 15:43	1	TAL CT	BK
A:8260B	220-11539-B-2		220-36222		02/24/2010 15:43	1	TAL CT	BK

Lab ID: 220-11539-3 **Client ID: Trip Blank**

Sample Date/Time: 02/23/2010 00:00 Received Date/Time: 02/24/2010 10:22

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11539-B-3		220-36222		02/24/2010 14:55	1	TAL CT	BK
A:8260B	220-11539-B-3		220-36222		02/24/2010 14:55	1	TAL CT	BK

Client: Malcolm Pirnie, Inc. Job Number: 220-11539-1

Laboratory Chronicle

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 220-36222/3		220-36222		02/24/2010 11:32	1	TAL CT	BK
A:8260B	MB 220-36222/3		220-36222		02/24/2010 11:32	1	TAL CT	BK
A:300.0	MB 220-36389/5		220-36389		03/02/2010 16:06	1	TAL CT	DN
A:SM 2320B	MB 220-36194/5		220-36194		02/24/2010 16:24	1	TAL CT	JM
A:SM 2540C	MB 220-36180/1		220-36180		02/24/2010 13:42	1	TAL CT	JM
A:SM 4500 H+ B	MB 220-36195/13		220-36195		02/24/2010 17:09	1	TAL CT	JM

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 220-36222/2		220-36222		02/24/2010 10:20	1	TAL CT	BK
A:8260B	LCS 220-36222/2		220-36222		02/24/2010 10:20	1	TAL CT	BK
A:300.0	LCS 220-36389/6 ^2		220-36389		03/02/2010 16:20	2	TAL CT	DN
A:300.0	LCS 220-36389/7 ^2		220-36389		03/02/2010 16:33	2	TAL CT	DN
A:300.0	LCS 220-36389/8 ^2		220-36389		03/02/2010 16:47	2	TAL CT	DN
A:300.0	LCS 220-36389/9 ^2		220-36389		03/02/2010 17:00	2	TAL CT	DN
A:SM 2320B	LCS 220-36194/3		220-36194		02/24/2010 16:12	1	TAL CT	JM
A:SM 2540C	LCS 220-36180/2		220-36180		02/24/2010 13:42	1	TAL CT	JM

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
A:300.0	MSB 220-36389/26		220-36389		03/03/2010 13:05	1	TAL CT	DN

Lab References:
TAL CT = TestAmerica Connecticut

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 220-11678-1

Job Description: NYSDEC Standby - Vestal Water Supply

For:
Malcolm Pirnie, Inc.
855 Route 146
Suite 210
Clifton Park, NY 12065

Attention: Mr. Jeremy Wyckoff

Approved for release.
Cheryl Cascella
Data Review Analyst I
3/30/2010 12:17 PM

Designee for
Johanna Dubauskas
Project Manager I
johanna.dubauskas@testamericainc.com
03/30/2010

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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

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ACCREDITED IN ACCORDANCE WITH nelac

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Comments
No additional comments.

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

GC/MS VOA
No analytical or quality issues were noted.

Subcontract Work
Method(s) ILM05.3 Dissolved TAL Metals, ILM05.3 Total TAL Metals: The sample has been subcontracted to TestAmerica Buffalo the subcontract certifications are different from those listed on the TestAmerica cover page of this final report.

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: 220-11678-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-11678-1	4009-12	Water	03/15/2010 1235	03/16/2010 0940
220-11678-2	4009-12A	Water	03/15/2010 1255	03/16/2010 0940
220-11678-3	4009-11	Water	03/15/2010 1545	03/16/2010 0940
220-11678-4	4009-11A	Water	03/15/2010 1550	03/16/2010 0940
220-11678-5	4009-9	Water	03/15/2010 1745	03/16/2010 0940
220-11678-6	4009-10	Water	03/15/2010 1805	03/16/2010 0940
220-11678-7	4009-12	Water	03/15/2010 1235	03/16/2010 0940
220-11678-8	4009-12A	Water	03/15/2010 1255	03/16/2010 0940

EXECUTIVE SUMMARY - Detections

Client: Malcolm Pirnie, Inc. Job Number: 220-11678-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
220-11678-1	**4009-12**					
Acetone		5.0	J B	20	ug/L	8260B
1,1-Dichloroethane		6.9	J	10	ug/L	8260B
1,1-Dichloroethene		8.9	J	10	ug/L	8260B
1,1,1-Trichloroethane		120		10	ug/L	8260B
Trichloroethene		37		10	ug/L	8260B
cis-1,2-Dichloroethene		36		10	ug/L	8260B
220-11678-2	**4009-12A**					
1,1-Dichloroethane		12		5.0	ug/L	8260B
1,1-Dichloroethene		2.8	J	5.0	ug/L	8260B
1,1,1-Trichloroethane		11		5.0	ug/L	8260B
Trichloroethene		5.0		5.0	ug/L	8260B
cis-1,2-Dichloroethene		19		5.0	ug/L	8260B
220-11678-5	**4009-9**					
Trichloroethene		0.86	J	5.0	ug/L	8260B
cis-1,2-Dichloroethene		5.2		5.0	ug/L	8260B

METHOD SUMMARY

Client: Malcolm Pirnie, Inc. Job Number: 220-11678-1

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: 220-11678-1

Method	Analyst	Analyst ID
SW846 8260B	Kostrzewska, Barbara	BK

Client: Malcolm Pirnie, Inc. Job Number: 220-11678-1

Client Sample ID: 4009-12

Lab Sample ID: 220-11678-1 Date Sampled: 03/15/2010 1235
Client Matrix: Water Date Received: 03/16/2010 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36736 Instrument ID: MSW
Preparation: 5030B Lab File ID: W1626.D
Dilution: 2.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/17/2010 2145 Final Weight/Volume: 5 mL
Date Prepared: 03/17/2010 2145

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.0	J B	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	6.9	J	2.1	10
1,2-Dichloroethane	10	U	1.4	10
1,1-Dichloroethene	8.9	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	120		1.4	10
1,1,2-Trichloroethane	10	U	1.3	10
Trichloroethene	37		1.2	10
Vinyl chloride	10	U	2.0	10
Xylenes, Total	10	U	4.5	10
cis-1,2-Dichloroethene	36		2.0	10
trans-1,2-Dichloroethene	10	U	1.5	10

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95		65 - 136
4-Bromofluorobenzene	90		51 - 142
Dibromofluoromethane	96		68 - 132
Toluene-d8 (Surr)	100		63 - 127

Client: Malcolm Pirnie, Inc. Job Number: 220-11678-1

Client Sample ID: 4009-12A

Lab Sample ID: 220-11678-2 Date Sampled: 03/15/2010 1255
Client Matrix: Water Date Received: 03/16/2010 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36714 Instrument ID: MSW
Preparation: 5030B Lab File ID: W1581.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/16/2010 2008 Final Weight/Volume: 5 mL
Date Prepared: 03/16/2010 2008

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	12		1.0	5.0
1,2-Dichloroethane	5.0	U *	0.72	5.0
1,1-Dichloroethene	2.8	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	11		0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	5.0		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	19		0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	108		65 - 136
4-Bromofluorobenzene	83		51 - 142
Dibromofluoromethane	96		68 - 132
Toluene-d8 (Surr)	72		63 - 127

Client: Malcolm Pirnie, Inc. Job Number: 220-11678-1

Client Sample ID: 4009-11

Lab Sample ID: 220-11678-3 Date Sampled: 03/15/2010 1545
Client Matrix: Water Date Received: 03/16/2010 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36714 Instrument ID: MSW
Preparation: 5030B Lab File ID: W1574.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/16/2010 1713 Final Weight/Volume: 5 mL
Date Prepared: 03/16/2010 1713

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	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	106		65 - 136
4-Bromofluorobenzene	82		51 - 142
Dibromofluoromethane	94		68 - 132
Toluene-d8 (Surr)	72		63 - 127

Client: Malcolm Pirnie, Inc. Job Number: 220-11678-1

Client Sample ID: 4009-11A

Lab Sample ID: 220-11678-4 Date Sampled: 03/15/2010 1550
Client Matrix: Water Date Received: 03/16/2010 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36714 Instrument ID: MSW
Preparation: 5030B Lab File ID: W1575.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/16/2010 1739 Final Weight/Volume: 5 mL
Date Prepared: 03/16/2010 1739

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	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109		65 - 136
4-Bromofluorobenzene	83		51 - 142
Dibromofluoromethane	96		68 - 132
Toluene-d8 (Surr)	71		63 - 127

Client: Malcolm Pirnie, Inc. Job Number: 220-11678-1

Client Sample ID: 4009-9

Lab Sample ID: 220-11678-5 Date Sampled: 03/15/2010 1745
Client Matrix: Water Date Received: 03/16/2010 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36714 Instrument ID: MSW
Preparation: 5030B Lab File ID: W1576.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/16/2010 1804 Final Weight/Volume: 5 mL
Date Prepared: 03/16/2010 1804

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	0.86	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	5.2		0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	108		65 - 136
4-Bromofluorobenzene	80		51 - 142
Dibromofluoromethane	94		68 - 132
Toluene-d8 (Surr)	72		63 - 127

Client: Malcolm Pirnie, Inc. Job Number: 220-11678-1

Client Sample ID: 4009-10

Lab Sample ID: 220-11678-6 Date Sampled: 03/15/2010 1805
Client Matrix: Water Date Received: 03/16/2010 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36714 Instrument ID: MSW
Preparation: 5030B Lab File ID: W1578.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/16/2010 1854 Final Weight/Volume: 5 mL
Date Prepared: 03/16/2010 1854

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	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	112		65 - 136
4-Bromofluorobenzene	80		51 - 142
Dibromofluoromethane	95		68 - 132
Toluene-d8 (Surr)	71		63 - 127

Client: Malcolm Pirnie, Inc. Job Number: 220-11678-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DBFM %Rec	DCA %Rec	TOL %Rec	BFB %Rec
220-11678-1	4009-12	96	95	100	90
220-11678-2	4009-12A	96	108	72	83
220-11678-3	4009-11	94	106	72	82
220-11678-4	4009-11A	96	109	71	83
220-11678-5	4009-9	94	108	72	80
220-11678-6	4009-10	95	112	71	80
MB 220-36714/3		96	109	71	76
MB 220-36736/15		98	94	101	93
LCS 220-36714/2		89	98	74	74
LCS 220-36736/14		92	89	105	94

Surrogate	Acceptance Limits
DBFM = Dibromofluoromethane	68-132
DCA = 1,2-Dichloroethane-d4 (Surr)	65-136
TOL = Toluene-d8 (Surr)	63-127
BFB = 4-Bromofluorobenzene	51-142

Client: Malcolm Pirnie, Inc. Job Number: 220-11678-1

Method Blank - Batch: 220-36714

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-36714/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/16/2010 1533
Date Prepared: 03/16/2010 1533

Analysis Batch: 220-36714
Prep Batch: N/A
Units: ug/L

Instrument ID: MSW
Lab File ID: W1570.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	1.32	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)	109	65 - 136
4-Bromofluorobenzene	76	51 - 142
Dibromofluoromethane	96	68 - 132
Toluene-d8 (Surr)	71	63 - 127

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11678-1

Lab Control Sample - Batch: 220-36714

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-36714/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/16/2010 1443
Date Prepared: 03/16/2010 1443

Analysis Batch: 220-36714
Prep Batch: N/A
Units: ug/L

Instrument ID: MSW
Lab File ID: W1568.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	10.0	12.0	120	41 - 150	
Benzene	10.0	10.1	101	66 - 131	
Bromodichloromethane	10.0	11.5	115	78 - 120	
Bromoform	10.0	9.82	98	66 - 120	
Bromomethane	10.0	10.3	103	47 - 150	
Methyl Ethyl Ketone	10.0	10.1	101	42 - 150	
Carbon disulfide	10.0	10.3	103	55 - 150	
Carbon tetrachloride	10.0	12.2	122	69 - 135	
Chlorobenzene	10.0	9.25	92	68 - 120	
Chloroethane	10.0	18.5	185	49 - 150	*
Chloroform	10.0	11.7	117	77 - 126	
Chloromethane	10.0	11.2	112	33 - 150	
Dibromochloromethane	10.0	10.2	102	75 - 120	
1,1-Dichloroethane	10.0	11.2	112	75 - 130	
1,2-Dichloroethane	10.0	12.8	128	73 - 127	*
1,1-Dichloroethene	10.0	9.92	99	65 - 142	
1,2-Dichloropropane	10.0	9.95	99	69 - 129	
cis-1,3-Dichloropropene	10.0	9.21	92	63 - 120	
trans-1,3-Dichloropropene	10.0	9.61	96	73 - 120	
Ethylbenzene	10.0	8.79	88	62 - 120	
2-Hexanone	10.0	8.96	90	46 - 150	J
Methylene Chloride	10.0	10.9	109	56 - 138	
methyl isobutyl ketone	10.0	8.32	83	70 - 122	J
Styrene	10.0	8.29	83	47 - 120	
1,1,2,2-Tetrachloroethane	10.0	9.18	92	75 - 124	
Tetrachloroethene	10.0	8.72	87	50 - 120	
Toluene	10.0	9.06	91	66 - 120	
1,1,1-Trichloroethane	10.0	11.8	118	73 - 135	
1,1,2-Trichloroethane	10.0	10.1	101	76 - 125	
Trichloroethene	10.0	9.98	100	60 - 122	
Vinyl chloride	10.0	12.3	123	61 - 150	
Xylenes, Total	30.0	25.3	84	58 - 120	
cis-1,2-Dichloroethene	10.0	9.23	92	65 - 120	
trans-1,2-Dichloroethene	10.0	9.69	97	58 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98	65 - 136
4-Bromofluorobenzene	74	51 - 142
Dibromofluoromethane	89	68 - 132
Toluene-d8 (Surr)	74	63 - 127

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11678-1

Method Blank - Batch: 220-36736

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-36736/15
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/17/2010 1942
Date Prepared: 03/17/2010 1942

Analysis Batch: 220-36736
Prep Batch: N/A
Units: ug/L

Instrument ID: MSW
Lab File ID: W1621.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	1.10	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)	94	65 - 136
4-Bromofluorobenzene	93	51 - 142
Dibromofluoromethane	98	68 - 132
Toluene-d8 (Surr)	101	63 - 127

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11678-1

Lab Control Sample - Batch: 220-36736

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-36736/14
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/17/2010 1828
Date Prepared: 03/17/2010 1828

Analysis Batch: 220-36736
Prep Batch: N/A
Units: ug/L

Instrument ID: MSW
Lab File ID: W1618.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	10.0	9.56	96	41 - 150	J
Benzene	10.0	9.51	95	66 - 131	
Bromodichloromethane	10.0	9.35	94	78 - 120	
Bromoform	10.0	9.83	98	66 - 120	
Bromomethane	10.0	9.32	93	47 - 150	
Methyl Ethyl Ketone	10.0	10.4	104	42 - 150	
Carbon disulfide	10.0	9.34	93	55 - 150	
Carbon tetrachloride	10.0	9.20	92	69 - 135	
Chlorobenzene	10.0	9.69	97	68 - 120	
Chloroethane	10.0	10.2	102	49 - 150	
Chloroform	10.0	9.34	93	77 - 126	
Chloromethane	10.0	9.29	93	33 - 150	
Dibromochloromethane	10.0	10.3	103	75 - 120	
1,1-Dichloroethane	10.0	9.58	96	75 - 130	
1,2-Dichloroethane	10.0	9.36	94	73 - 127	
1,1-Dichloroethene	10.0	9.11	91	65 - 142	
1,2-Dichloropropane	10.0	9.17	92	69 - 129	
cis-1,3-Dichloropropene	10.0	9.32	93	63 - 120	
trans-1,3-Dichloropropene	10.0	8.85	89	73 - 120	
Ethylbenzene	10.0	9.81	98	62 - 120	
2-Hexanone	10.0	9.95	99	46 - 150	J
Methylene Chloride	10.0	10.4	104	56 - 138	
methyl isobutyl ketone	10.0	10.3	103	70 - 122	
Styrene	10.0	8.28	83	47 - 120	
1,1,2,2-Tetrachloroethane	10.0	10.2	102	75 - 124	
Tetrachloroethene	10.0	9.05	90	50 - 120	
Toluene	10.0	10.6	106	66 - 120	
1,1,1-Trichloroethane	10.0	9.21	92	73 - 135	
1,1,2-Trichloroethane	10.0	9.57	96	76 - 125	
Trichloroethene	10.0	9.13	91	60 - 122	
Vinyl chloride	10.0	9.38	94	61 - 150	
Xylenes, Total	30.0	25.4	85	58 - 120	
cis-1,2-Dichloroethene	10.0	9.35	94	65 - 120	
trans-1,2-Dichloroethene	10.0	9.33	93	58 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	89	65 - 136
4-Bromofluorobenzene	94	51 - 142
Dibromofluoromethane	92	68 - 132
Toluene-d8 (Surr)	105	63 - 127

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

DATA REPORTING QUALIFIERS

Client: Malcolm Pirnie, Inc. Job Number: 220-11678-1

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: 220-11678-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:220-36714					
LCS 220-36714/2	Lab Control Sample	T	Water	8260B	
MB 220-36714/3	Method Blank	T	Water	8260B	
220-11678-2	4009-12A	T	Water	8260B	
220-11678-3	4009-11	T	Water	8260B	
220-11678-4	4009-11A	T	Water	8260B	
220-11678-5	4009-9	T	Water	8260B	
220-11678-6	4009-10	T	Water	8260B	
Analysis Batch:220-36736					
LCS 220-36736/14	Lab Control Sample	T	Water	8260B	
MB 220-36736/15	Method Blank	T	Water	8260B	
220-11678-1	4009-12	T	Water	8260B	

Report Basis
T = Total

Client: Malcolm Pirnie, Inc. Job Number: 220-11678-1

Laboratory Chronicle

Lab ID: 220-11678-1 **Client ID: 4009-12**

Sample Date/Time: 03/15/2010 12:35 Received Date/Time: 03/16/2010 09:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11678-B-1		220-36736		03/17/2010 21:45	2	TAL CT	BK
A:8260B	220-11678-B-1		220-36736		03/17/2010 21:45	2	TAL CT	BK

Lab ID: 220-11678-2 **Client ID: 4009-12A**

Sample Date/Time: 03/15/2010 12:55 Received Date/Time: 03/16/2010 09:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11678-C-2		220-36714		03/16/2010 20:08	1	TAL CT	BK
A:8260B	220-11678-C-2		220-36714		03/16/2010 20:08	1	TAL CT	BK

Lab ID: 220-11678-3 **Client ID: 4009-11**

Sample Date/Time: 03/15/2010 15:45 Received Date/Time: 03/16/2010 09:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11678-B-3		220-36714		03/16/2010 17:13	1	TAL CT	BK
A:8260B	220-11678-B-3		220-36714		03/16/2010 17:13	1	TAL CT	BK

Lab ID: 220-11678-4 **Client ID: 4009-11A**

Sample Date/Time: 03/15/2010 15:50 Received Date/Time: 03/16/2010 09:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11678-B-4		220-36714		03/16/2010 17:39	1	TAL CT	BK
A:8260B	220-11678-B-4		220-36714		03/16/2010 17:39	1	TAL CT	BK

Lab ID: 220-11678-5 **Client ID: 4009-9**

Sample Date/Time: 03/15/2010 17:45 Received Date/Time: 03/16/2010 09:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11678-A-5		220-36714		03/16/2010 18:04	1	TAL CT	BK
A:8260B	220-11678-A-5		220-36714		03/16/2010 18:04	1	TAL CT	BK

Lab ID: 220-11678-6 **Client ID: 4009-10**

Sample Date/Time: 03/15/2010 18:05 Received Date/Time: 03/16/2010 09:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11678-A-6		220-36714		03/16/2010 18:54	1	TAL CT	BK
A:8260B	220-11678-A-6		220-36714		03/16/2010 18:54	1	TAL CT	BK

Client: Malcolm Pirnie, Inc. Job Number: 220-11678-1

Laboratory Chronicle

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 220-36714/3		220-36714		03/16/2010 15:33	1	TAL CT	BK
A:8260B	MB 220-36714/3		220-36714		03/16/2010 15:33	1	TAL CT	BK
P:5030B	MB 220-36736/15		220-36736		03/17/2010 19:42	1	TAL CT	BK
A:8260B	MB 220-36736/15		220-36736		03/17/2010 19:42	1	TAL CT	BK

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 220-36714/2		220-36714		03/16/2010 14:43	1	TAL CT	BK
A:8260B	LCS 220-36714/2		220-36714		03/16/2010 14:43	1	TAL CT	BK
P:5030B	LCS 220-36736/14		220-36736		03/17/2010 18:28	1	TAL CT	BK
A:8260B	LCS 220-36736/14		220-36736		03/17/2010 18:28	1	TAL CT	BK

Lab References:
TAL CT = TestAmerica Connecticut

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 220-11679-1

Job Description: NYSDEC Standby - Vestal Water Supply

For:
Malcolm Pirnie, Inc.
855 Route 146
Suite 210
Clifton Park, NY 12065

Attention: Mr. Jeremy Wyckoff

Approved for release.
Cheryl Cascella
Data Review Analyst I
3/25/2010 11:35 AM

Designee for
Johanna Dubauskas
Project Manager I
johanna.dubauskas@testamericainc.com
03/25/2010

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Project Manager.

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

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Comments
No additional comments.

Receipt
The following field QC sample was received at the laboratory without a sample collection time documented on the chain of custody: TRIP BLANK (220-11679-3). As a result, a sample collection time of 12:00am, on the date of collection, has been used.

The following volatile sample was received with headspace in sample containers 220-11679-A-3 and 220-11679-B-3 and were not used for analysis: TRIP BLANK (220-11679-3)

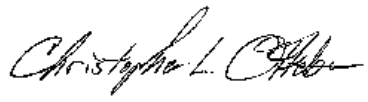
All other samples were received in good condition within temperature requirements.

GC/MS VOA
No analytical or quality issues were noted.

Case Narrative for Job: 220-11679

Client: MPI
Date: March 25, 2010

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.



Christopher L. Otterbein
Laboratory Director

March 25, 2010

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: 220-11679-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-11679-1	Well I-IA INF	Water	03/15/2010 1440	03/16/2010 0940
220-11679-2	Well I-IA EFF	Water	03/15/2010 1445	03/16/2010 0940
220-11679-3TB	TRIP BLANK	Water	03/15/2010 0000	03/16/2010 0940

EXECUTIVE SUMMARY - Detections

Client: Malcolm Pirnie, Inc. Job Number: 220-11679-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
220-11679-1	**WELL I-IA INF**					
1,1-Dichloroethane		14		5.0	ug/L	8260B
1,1-Dichloroethene		7.5		5.0	ug/L	8260B
1,1,1-Trichloroethane		91		5.0	ug/L	8260B
Trichloroethene		23		5.0	ug/L	8260B
Vinyl chloride		3.5	J	5.0	ug/L	8260B
cis-1,2-Dichloroethene		22		5.0	ug/L	8260B

METHOD SUMMARY

Client: Malcolm Pirnie, Inc. Job Number: 220-11679-1

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

Lab References:

TAL CT = TestAmerica Connecticut

Method References:

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: 220-11679-1

Method	Analyst	Analyst ID
SW846 8260B	Kostrzewska, Barbara	BK

Client: Malcolm Pirnie, Inc. Job Number: 220-11679-1

Client Sample ID: **Well I-IA INF**

Lab Sample ID: 220-11679-1 Date Sampled: 03/15/2010 1440
Client Matrix: Water Date Received: 03/16/2010 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36714 Instrument ID: MSW
Preparation: 5030B Lab File ID: W1577.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/16/2010 1830 Final Weight/Volume: 5 mL
Date Prepared: 03/16/2010 1830

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	14		1.0	5.0
1,2-Dichloroethane	5.0	U *	0.72	5.0
1,1-Dichloroethene	7.5		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	91		0.69	5.0
1,1,2-Trichloroethane	5.0	U	0.65	5.0
Trichloroethene	23		0.62	5.0
Vinyl chloride	3.5	J	0.99	5.0
Xylenes, Total	5.0	U	2.3	5.0
cis-1,2-Dichloroethene	22		0.99	5.0
trans-1,2-Dichloroethene	5.0	U	0.76	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109		65 - 136
4-Bromofluorobenzene	80		51 - 142
Dibromofluoromethane	96		68 - 132
Toluene-d8 (Surr)	72		63 - 127

Client: Malcolm Pirnie, Inc. Job Number: 220-11679-1

Client Sample ID: **Well I-IA EFF**

Lab Sample ID: 220-11679-2 Date Sampled: 03/15/2010 1445
Client Matrix: Water Date Received: 03/16/2010 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36714 Instrument ID: MSW
Preparation: 5030B Lab File ID: W1579.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/16/2010 1919 Final Weight/Volume: 5 mL
Date Prepared: 03/16/2010 1919

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	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109		65 - 136
4-Bromofluorobenzene	82		51 - 142
Dibromofluoromethane	95		68 - 132
Toluene-d8 (Surr)	72		63 - 127

Client: Malcolm Pirnie, Inc. Job Number: 220-11679-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 220-11679-3TB Date Sampled: 03/15/2010 0000
Client Matrix: Water Date Received: 03/16/2010 0940

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36714 Instrument ID: MSW
Preparation: 5030B Lab File ID: W1571.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/16/2010 1557 Final Weight/Volume: 5 mL
Date Prepared: 03/16/2010 1557

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	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110		65 - 136
4-Bromofluorobenzene	76		51 - 142
Dibromofluoromethane	94		68 - 132
Toluene-d8 (Surr)	72		63 - 127

Client: Malcolm Pirnie, Inc. Job Number: 220-11679-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DBFM %Rec	DCA %Rec	TOL %Rec	BFB %Rec
220-11679-1	Well I-IA INF	96	109	72	80
220-11679-2	Well I-IA EFF	95	109	72	82
220-11679-3	TRIP BLANK	94	110	72	76
MB 220-36714/3		96	109	71	76
LCS 220-36714/2		89	98	74	74

Surrogate	Acceptance Limits
DBFM = Dibromofluoromethane	68-132
DCA = 1,2-Dichloroethane-d4 (Surr)	65-136
TOL = Toluene-d8 (Surr)	63-127
BFB = 4-Bromofluorobenzene	51-142

Client: Malcolm Pirnie, Inc. Job Number: 220-11679-1

Method Blank - Batch: 220-36714

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-36714/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/16/2010 1533
Date Prepared: 03/16/2010 1533

Analysis Batch: 220-36714
Prep Batch: N/A
Units: ug/L

Instrument ID: MSW
Lab File ID: W1570.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	1.32	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)	109	65 - 136
4-Bromofluorobenzene	76	51 - 142
Dibromofluoromethane	96	68 - 132
Toluene-d8 (Surr)	71	63 - 127

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11679-1

Lab Control Sample - Batch: 220-36714

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-36714/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/16/2010 1443
Date Prepared: 03/16/2010 1443

Analysis Batch: 220-36714
Prep Batch: N/A
Units: ug/L

Instrument ID: MSW
Lab File ID: W1568.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	10.0	12.0	120	41 - 150	
Benzene	10.0	10.1	101	66 - 131	
Bromodichloromethane	10.0	11.5	115	78 - 120	
Bromoform	10.0	9.82	98	66 - 120	
Bromomethane	10.0	10.3	103	47 - 150	
Methyl Ethyl Ketone	10.0	10.1	101	42 - 150	
Carbon disulfide	10.0	10.3	103	55 - 150	
Carbon tetrachloride	10.0	12.2	122	69 - 135	
Chlorobenzene	10.0	9.25	92	68 - 120	
Chloroethane	10.0	18.5	185	49 - 150	*
Chloroform	10.0	11.7	117	77 - 126	
Chloromethane	10.0	11.2	112	33 - 150	
Dibromochloromethane	10.0	10.2	102	75 - 120	
1,1-Dichloroethane	10.0	11.2	112	75 - 130	
1,2-Dichloroethane	10.0	12.8	128	73 - 127	*
1,1-Dichloroethene	10.0	9.92	99	65 - 142	
1,2-Dichloropropane	10.0	9.95	99	69 - 129	
cis-1,3-Dichloropropene	10.0	9.21	92	63 - 120	
trans-1,3-Dichloropropene	10.0	9.61	96	73 - 120	
Ethylbenzene	10.0	8.79	88	62 - 120	
2-Hexanone	10.0	8.96	90	46 - 150	J
Methylene Chloride	10.0	10.9	109	56 - 138	
methyl isobutyl ketone	10.0	8.32	83	70 - 122	J
Styrene	10.0	8.29	83	47 - 120	
1,1,2,2-Tetrachloroethane	10.0	9.18	92	75 - 124	
Tetrachloroethene	10.0	8.72	87	50 - 120	
Toluene	10.0	9.06	91	66 - 120	
1,1,1-Trichloroethane	10.0	11.8	118	73 - 135	
1,1,2-Trichloroethane	10.0	10.1	101	76 - 125	
Trichloroethene	10.0	9.98	100	60 - 122	
Vinyl chloride	10.0	12.3	123	61 - 150	
Xylenes, Total	30.0	25.3	84	58 - 120	
cis-1,2-Dichloroethene	10.0	9.23	92	65 - 120	
trans-1,2-Dichloroethene	10.0	9.69	97	58 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98	65 - 136
4-Bromofluorobenzene	74	51 - 142
Dibromofluoromethane	89	68 - 132
Toluene-d8 (Surr)	74	63 - 127

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

DATA REPORTING QUALIFIERS

Client: Malcolm Pirnie, Inc. Job Number: 220-11679-1

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11679-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:220-36714					
LCS 220-36714/2	Lab Control Sample	T	Water	8260B	
MB 220-36714/3	Method Blank	T	Water	8260B	
220-11679-1	Well I-IA INF	T	Water	8260B	
220-11679-2	Well I-IA EFF	T	Water	8260B	
220-11679-3TB	TRIP BLANK	T	Water	8260B	

Report Basis
T = Total

Client: Malcolm Pirnie, Inc. Job Number: 220-11679-1

Laboratory Chronicle

Lab ID: 220-11679-1 **Client ID: Well I-IA INF**

Sample Date/Time: 03/15/2010 14:40 Received Date/Time: 03/16/2010 09:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11679-A-1		220-36714		03/16/2010 18:30	1	TAL CT	BK
A:8260B	220-11679-A-1		220-36714		03/16/2010 18:30	1	TAL CT	BK

Lab ID: 220-11679-2 **Client ID: Well I-IA EFF**

Sample Date/Time: 03/15/2010 14:45 Received Date/Time: 03/16/2010 09:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11679-B-2		220-36714		03/16/2010 19:19	1	TAL CT	BK
A:8260B	220-11679-B-2		220-36714		03/16/2010 19:19	1	TAL CT	BK

Lab ID: 220-11679-3 **Client ID: TRIP BLANK**

Sample Date/Time: 03/15/2010 00:00 Received Date/Time: 03/16/2010 09:40

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11679-C-3		220-36714		03/16/2010 15:57	1	TAL CT	BK
A:8260B	220-11679-C-3		220-36714		03/16/2010 15:57	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 220-36714/3		220-36714		03/16/2010 15:33	1	TAL CT	BK
A:8260B	MB 220-36714/3		220-36714		03/16/2010 15:33	1	TAL CT	BK

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 220-36714/2		220-36714		03/16/2010 14:43	1	TAL CT	BK
A:8260B	LCS 220-36714/2		220-36714		03/16/2010 14:43	1	TAL CT	BK

Lab References:
TAL CT = TestAmerica Connecticut

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 220-11692-1

Job Description: NYSDEC Standby - Vestal Water Supply

For:
Malcolm Pirnie, Inc.
855 Route 146
Suite 210
Clifton Park, NY 12065

Attention: Mr. Jeremy Wyckoff

Approved for release.
Cheryl Cascella
Data Review Analyst I
3/26/2010 2:58 PM

Designee for
Johanna Dubauskas
Project Manager I
johanna.dubauskas@testamericainc.com
03/26/2010

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Project Manager.

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

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Job Narrative
220-11692-1

Comments
No additional comments.

Receipt
The following field QC samples were received at the laboratory without a sample collection time documented on the chain of custody: 4009-X (220-11692-6), TRIP BLANK (220-11692-7). As a result, a sample collection time of 12:00am, on the date of collection, has been used. In addition, a collection date of 3/16/2010 was used for the TRIP BLANK.

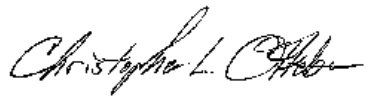
All other samples were received in good condition within temperature requirements.

GC/MS VOA
No analytical or quality issues were noted.

Case Narrative for Job: 220-11692

Client: MPI
Date: March 26, 2010

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.



Christopher L. Otterbein
Laboratory Director

March 26, 2010

FORMULAS FOR NYSDEC SAMPLE CALCULATIONS

Volatiles

$$\frac{(Ax)(IS)(DF)}{(AIS)(RRF)(V)(\%\ solids)} = C$$

$$\frac{(AX)(IS)(VT)(1000)(DF)}{(AIS)(RRF)(VA)(V)(\%\ solids)} = C \quad \text{(for medium level soils)}$$

SemiVolatiles

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

Pesticides

$$\frac{(AX)(VE)(DF)}{(RRF)(V)(\%\ solids)(volume\ injected)} = C$$

PCBs for compound/retention time

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

DRO/CTETPH

$$\frac{(AX)(VE)(DF)}{(RRF)(V)(\%\ solids)(volume\ injected)} = C$$

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: 220-11692-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-11692-1	4009-1	Water	03/16/2010 1325	03/17/2010 1005
220-11692-2	4009-8	Water	03/16/2010 1430	03/17/2010 1005
220-11692-3	4009-2	Water	03/16/2010 1500	03/17/2010 1005
220-11692-4	4009-6	Water	03/16/2010 1620	03/17/2010 1005
220-11692-4MS	4009-6	Water	03/16/2010 1620	03/17/2010 1005
220-11692-4MSD	4009-6	Water	03/16/2010 1620	03/17/2010 1005
220-11692-5	4009-3	Water	03/16/2010 1650	03/17/2010 1005
220-11692-6	4009-X	Water	03/16/2010 0000	03/17/2010 1005
220-11692-7TB	TRIP BLANK	Water	03/16/2010 0000	03/17/2010 1005

EXECUTIVE SUMMARY - Detections

Client: Malcolm Pirnie, Inc. Job Number: 220-11692-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
220-11692-1	**4009-1**					
Acetone		1.7	J B	2.0	ug/L	8260B
1,1-Dichloroethane		2.0		0.50	ug/L	8260B
cis-1,2-Dichloroethene		1.8		0.50	ug/L	8260B
Tetrachloroethene		0.97		0.50	ug/L	8260B
Trichloroethene		1.5		0.50	ug/L	8260B
220-11692-2	**4009-8**					
Acetone		52	B	20	ug/L	8260B
Benzene		1.5	J	5.0	ug/L	8260B
1,1-Dichloroethane		52		5.0	ug/L	8260B
1,1-Dichloroethene		22		5.0	ug/L	8260B
cis-1,2-Dichloroethene		240		5.0	ug/L	8260B
Methylene Chloride		3.5	J	20	ug/L	8260B
1,1,1-Trichloroethane		630		5.0	ug/L	8260B
Trichloroethene		130		5.0	ug/L	8260B
Vinyl chloride		94		5.0	ug/L	8260B
220-11692-3	**4009-2**					
1,1-Dichloroethane		3.1		0.50	ug/L	8260B
cis-1,2-Dichloroethene		34		0.50	ug/L	8260B
trans-1,2-Dichloroethene		1.3		0.50	ug/L	8260B
Ethylbenzene		0.20	J	0.50	ug/L	8260B
Tetrachloroethene		0.38	J	0.50	ug/L	8260B
Trichloroethene		3.7		0.50	ug/L	8260B
Vinyl chloride		18		0.50	ug/L	8260B
220-11692-4	**4009-6**					
Trichloroethene		0.59		0.50	ug/L	8260B
220-11692-5	**4009-3**					
1,1-Dichloroethane		21		0.50	ug/L	8260B
1,1-Dichloroethene		1.1		0.50	ug/L	8260B
cis-1,2-Dichloroethene		33		0.50	ug/L	8260B
trans-1,2-Dichloroethene		0.96		0.50	ug/L	8260B
1,1,1-Trichloroethane		16		0.50	ug/L	8260B
Trichloroethene		13		0.50	ug/L	8260B
Vinyl chloride		49		0.50	ug/L	8260B

EXECUTIVE SUMMARY - Detections

Client: Malcolm Pirnie, Inc. Job Number: 220-11692-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
220-11692-6	**4009-X**				
Trichloroethene		0.52	0.50	ug/L	8260B

METHOD SUMMARY

Client: Malcolm Pirnie, Inc. Job Number: 220-11692-1

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

Lab References:

TAL CT = TestAmerica Connecticut

Method References:

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: 220-11692-1

Method	Analyst	Analyst ID
SW846 8260B	Kostrzewska, Barbara	BK

Client Sample ID: 4009-1

Lab Sample ID: 220-11692-1 Date Sampled: 03/16/2010 1325
Client Matrix: Water Date Received: 03/17/2010 1005

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36791 Instrument ID: MSW
Preparation: 5030B Lab File ID: W1658.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/18/2010 1313 Final Weight/Volume: 5 mL
Date Prepared: 03/18/2010 1313

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	1.7	J B	0.58	2.0
Benzene	0.50	U	0.14	0.50
Bromodichloromethane	0.50	U	0.078	0.50
Bromoform	0.50	U	0.13	0.50
Bromomethane	1.0	U	0.21	1.0
Methyl Ethyl Ketone	2.0	U	0.32	2.0
Carbon disulfide	0.50	U	0.077	0.50
Carbon tetrachloride	0.50	U	0.10	0.50
Chlorobenzene	0.50	U	0.057	0.50
Chloroethane	1.0	U	0.15	1.0
Chloroform	0.50	U	0.12	0.50
Chloromethane	0.50	U	0.20	0.50
Dibromochloromethane	0.50	U	0.088	0.50
1,1-Dichloroethane	2.0		0.13	0.50
1,2-Dichloroethane	0.50	U	0.12	0.50
1,1-Dichloroethene	0.50	U	0.19	0.50
cis-1,2-Dichloroethene	1.8		0.21	0.50
trans-1,2-Dichloroethene	0.50	U	0.24	0.50
1,2-Dichloropropane	0.50	U	0.11	0.50
cis-1,3-Dichloropropene	0.50	U	0.13	0.50
trans-1,3-Dichloropropene	0.50	U	0.19	0.50
Ethylbenzene	0.50	U	0.14	0.50
2-Hexanone	2.0	U	0.51	2.0
Methylene Chloride	2.0	U	0.091	2.0
methyl isobutyl ketone	2.0	U	0.30	2.0
Styrene	0.50	U	0.17	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50
Tetrachloroethene	0.97		0.11	0.50
Toluene	0.50	U *	0.18	0.50
1,1,1-Trichloroethane	0.50	U	0.16	0.50
1,1,2-Trichloroethane	0.50	U	0.11	0.50
Trichloroethene	1.5		0.11	0.50
Vinyl chloride	0.50	U	0.14	0.50
Xylenes, Total	1.0	U	0.30	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96		57 - 121
4-Bromofluorobenzene	86		57 - 121
Dibromofluoromethane	99		67 - 133
Toluene-d8 (Surr)	98		62 - 121

Client: Malcolm Pirnie, Inc. Job Number: 220-11692-1

Client Sample ID: 4009-8

Lab Sample ID: 220-11692-2 Date Sampled: 03/16/2010 1430
Client Matrix: Water Date Received: 03/17/2010 1005

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36843 Instrument ID: MSW
Preparation: 5030B Lab File ID: W1698.D
Dilution: 10 Initial Weight/Volume: 5 mL
Date Analyzed: 03/19/2010 1302 Final Weight/Volume: 5 mL
Date Prepared: 03/19/2010 1302

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	52	B	5.8	20
Benzene	1.5	J	1.4	5.0
Bromodichloromethane	5.0	U	0.78	5.0
Bromoform	5.0	U	1.3	5.0
Bromomethane	10	U	2.1	10
Methyl Ethyl Ketone	20	U	3.2	20
Carbon disulfide	5.0	U	0.77	5.0
Carbon tetrachloride	5.0	U	1.0	5.0
Chlorobenzene	5.0	U	0.57	5.0
Chloroethane	10	U	1.5	10
Chloroform	5.0	U	1.2	5.0
Chloromethane	5.0	U	2.0	5.0
Dibromochloromethane	5.0	U	0.88	5.0
1,1-Dichloroethane	52		1.3	5.0
1,2-Dichloroethane	5.0	U	1.2	5.0
1,1-Dichloroethene	22		1.9	5.0
cis-1,2-Dichloroethene	240		2.1	5.0
trans-1,2-Dichloroethene	5.0	U	2.4	5.0
1,2-Dichloropropane	5.0	U	1.1	5.0
cis-1,3-Dichloropropene	5.0	U	1.3	5.0
trans-1,3-Dichloropropene	5.0	U	1.9	5.0
Ethylbenzene	5.0	U	1.4	5.0
2-Hexanone	20	U	5.1	20
Methylene Chloride	3.5	J	0.91	20
methyl isobutyl ketone	20	U	3.0	20
Styrene	5.0	U	1.7	5.0
1,1,2,2-Tetrachloroethane	5.0	U	1.5	5.0
Tetrachloroethene	5.0	U	1.1	5.0
Toluene	5.0	U	1.8	5.0
1,1,1-Trichloroethane	630		1.6	5.0
1,1,2-Trichloroethane	5.0	U	1.1	5.0
Trichloroethene	130		1.1	5.0
Vinyl chloride	94		1.4	5.0
Xylenes, Total	10	U	3.0	10

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	92		57 - 121
4-Bromofluorobenzene	89		57 - 121
Dibromofluoromethane	97		67 - 133
Toluene-d8 (Surr)	97		62 - 121

Client: Malcolm Pirnie, Inc. Job Number: 220-11692-1

Client Sample ID: 4009-2

Lab Sample ID: 220-11692-3 Date Sampled: 03/16/2010 1500
Client Matrix: Water Date Received: 03/17/2010 1005

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 220-36791	Instrument ID: MSW
Preparation:	5030B		Lab File ID: W1659.D
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	03/18/2010 1339		Final Weight/Volume: 5 mL
Date Prepared:	03/18/2010 1339		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	2.0	U	0.58	2.0
Benzene	0.50	U	0.14	0.50
Bromodichloromethane	0.50	U	0.078	0.50
Bromoform	0.50	U	0.13	0.50
Bromomethane	1.0	U	0.21	1.0
Methyl Ethyl Ketone	2.0	U	0.32	2.0
Carbon disulfide	0.50	U	0.077	0.50
Carbon tetrachloride	0.50	U	0.10	0.50
Chlorobenzene	0.50	U	0.057	0.50
Chloroethane	1.0	U	0.15	1.0
Chloroform	0.50	U	0.12	0.50
Chloromethane	0.50	U	0.20	0.50
Dibromochloromethane	0.50	U	0.088	0.50
1,1-Dichloroethane	3.1		0.13	0.50
1,2-Dichloroethane	0.50	U	0.12	0.50
1,1-Dichloroethene	0.50	U	0.19	0.50
cis-1,2-Dichloroethene	34		0.21	0.50
trans-1,2-Dichloroethene	1.3		0.24	0.50
1,2-Dichloropropane	0.50	U	0.11	0.50
cis-1,3-Dichloropropene	0.50	U	0.13	0.50
trans-1,3-Dichloropropene	0.50	U	0.19	0.50
Ethylbenzene	0.20	J	0.14	0.50
2-Hexanone	2.0	U	0.51	2.0
Methylene Chloride	2.0	U	0.091	2.0
methyl isobutyl ketone	2.0	U	0.30	2.0
Styrene	0.50	U	0.17	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50
Tetrachloroethene	0.38	J	0.11	0.50
Toluene	0.50	U *	0.18	0.50
1,1,1-Trichloroethane	0.50	U	0.16	0.50
1,1,2-Trichloroethane	0.50	U	0.11	0.50
Trichloroethene	3.7		0.11	0.50
Vinyl chloride	18		0.14	0.50
Xylenes, Total	1.0	U	0.30	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	93		57 - 121
4-Bromofluorobenzene	92		57 - 121
Dibromofluoromethane	96		67 - 133
Toluene-d8 (Surr)	98		62 - 121

Client: Malcolm Pirnie, Inc. Job Number: 220-11692-1

Client Sample ID: 4009-6

Lab Sample ID: 220-11692-4 Date Sampled: 03/16/2010 1620
Client Matrix: Water Date Received: 03/17/2010 1005

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36791 Instrument ID: MSW
Preparation: 5030B Lab File ID: W1660.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/18/2010 1404 Final Weight/Volume: 5 mL
Date Prepared: 03/18/2010 1404

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	2.0	U	0.58	2.0
Benzene	0.50	U	0.14	0.50
Bromodichloromethane	0.50	U	0.078	0.50
Bromoform	0.50	U	0.13	0.50
Bromomethane	1.0	U	0.21	1.0
Methyl Ethyl Ketone	2.0	U	0.32	2.0
Carbon disulfide	0.50	U	0.077	0.50
Carbon tetrachloride	0.50	U	0.10	0.50
Chlorobenzene	0.50	U	0.057	0.50
Chloroethane	1.0	U	0.15	1.0
Chloroform	0.50	U	0.12	0.50
Chloromethane	0.50	U	0.20	0.50
Dibromochloromethane	0.50	U	0.088	0.50
1,1-Dichloroethane	0.50	U	0.13	0.50
1,2-Dichloroethane	0.50	U	0.12	0.50
1,1-Dichloroethene	0.50	U	0.19	0.50
cis-1,2-Dichloroethene	0.50	U	0.21	0.50
trans-1,2-Dichloroethene	0.50	U	0.24	0.50
1,2-Dichloropropane	0.50	U	0.11	0.50
cis-1,3-Dichloropropene	0.50	U	0.13	0.50
trans-1,3-Dichloropropene	0.50	U	0.19	0.50
Ethylbenzene	0.50	U	0.14	0.50
2-Hexanone	2.0	U	0.51	2.0
Methylene Chloride	2.0	U	0.091	2.0
methyl isobutyl ketone	2.0	U	0.30	2.0
Styrene	0.50	U	0.17	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50
Tetrachloroethene	0.50	U	0.11	0.50
Toluene	0.50	U *	0.18	0.50
1,1,1-Trichloroethane	0.50	U	0.16	0.50
1,1,2-Trichloroethane	0.50	U	0.11	0.50
Trichloroethene	0.59		0.11	0.50
Vinyl chloride	0.50	U	0.14	0.50
Xylenes, Total	1.0	U	0.30	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96		57 - 121
4-Bromofluorobenzene	93		57 - 121
Dibromofluoromethane	97		67 - 133
Toluene-d8 (Surr)	97		62 - 121

Client: Malcolm Pirnie, Inc. Job Number: 220-11692-1

Client Sample ID: 4009-3

Lab Sample ID: 220-11692-5 Date Sampled: 03/16/2010 1650
Client Matrix: Water Date Received: 03/17/2010 1005

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36791 Instrument ID: MSW
Preparation: 5030B Lab File ID: W1661.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/18/2010 1430 Final Weight/Volume: 5 mL
Date Prepared: 03/18/2010 1430

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	2.0	U	0.58	2.0
Benzene	0.50	U	0.14	0.50
Bromodichloromethane	0.50	U	0.078	0.50
Bromoform	0.50	U	0.13	0.50
Bromomethane	1.0	U	0.21	1.0
Methyl Ethyl Ketone	2.0	U	0.32	2.0
Carbon disulfide	0.50	U	0.077	0.50
Carbon tetrachloride	0.50	U	0.10	0.50
Chlorobenzene	0.50	U	0.057	0.50
Chloroethane	1.0	U	0.15	1.0
Chloroform	0.50	U	0.12	0.50
Chloromethane	0.50	U	0.20	0.50
Dibromochloromethane	0.50	U	0.088	0.50
1,1-Dichloroethane	21		0.13	0.50
1,2-Dichloroethane	0.50	U	0.12	0.50
1,1-Dichloroethene	1.1		0.19	0.50
cis-1,2-Dichloroethene	33		0.21	0.50
trans-1,2-Dichloroethene	0.96		0.24	0.50
1,2-Dichloropropane	0.50	U	0.11	0.50
cis-1,3-Dichloropropene	0.50	U	0.13	0.50
trans-1,3-Dichloropropene	0.50	U	0.19	0.50
Ethylbenzene	0.50	U	0.14	0.50
2-Hexanone	2.0	U	0.51	2.0
Methylene Chloride	2.0	U	0.091	2.0
methyl isobutyl ketone	2.0	U	0.30	2.0
Styrene	0.50	U	0.17	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50
Tetrachloroethene	0.50	U	0.11	0.50
Toluene	0.50	U *	0.18	0.50
1,1,1-Trichloroethane	16		0.16	0.50
1,1,2-Trichloroethane	0.50	U	0.11	0.50
Trichloroethene	13		0.11	0.50
Vinyl chloride	49		0.14	0.50
Xylenes, Total	1.0	U	0.30	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	93		57 - 121
4-Bromofluorobenzene	91		57 - 121
Dibromofluoromethane	98		67 - 133
Toluene-d8 (Surr)	98		62 - 121

Client: Malcolm Pirnie, Inc. Job Number: 220-11692-1

Client Sample ID: 4009-X

Lab Sample ID: 220-11692-6 Date Sampled: 03/16/2010 0000
Client Matrix: Water Date Received: 03/17/2010 1005

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36791 Instrument ID: MSW
Preparation: 5030B Lab File ID: W1666.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/18/2010 1647 Final Weight/Volume: 5 mL
Date Prepared: 03/18/2010 1647

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	2.0	U	0.58	2.0
Benzene	0.50	U	0.14	0.50
Bromodichloromethane	0.50	U	0.078	0.50
Bromoform	0.50	U	0.13	0.50
Bromomethane	1.0	U	0.21	1.0
Methyl Ethyl Ketone	2.0	U	0.32	2.0
Carbon disulfide	0.50	U	0.077	0.50
Carbon tetrachloride	0.50	U	0.10	0.50
Chlorobenzene	0.50	U	0.057	0.50
Chloroethane	1.0	U	0.15	1.0
Chloroform	0.50	U	0.12	0.50
Chloromethane	0.50	U	0.20	0.50
Dibromochloromethane	0.50	U	0.088	0.50
1,1-Dichloroethane	0.50	U	0.13	0.50
1,2-Dichloroethane	0.50	U	0.12	0.50
1,1-Dichloroethene	0.50	U	0.19	0.50
cis-1,2-Dichloroethene	0.50	U	0.21	0.50
trans-1,2-Dichloroethene	0.50	U	0.24	0.50
1,2-Dichloropropane	0.50	U	0.11	0.50
cis-1,3-Dichloropropene	0.50	U	0.13	0.50
trans-1,3-Dichloropropene	0.50	U	0.19	0.50
Ethylbenzene	0.50	U	0.14	0.50
2-Hexanone	2.0	U	0.51	2.0
Methylene Chloride	2.0	U	0.091	2.0
methyl isobutyl ketone	2.0	U	0.30	2.0
Styrene	0.50	U	0.17	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50
Tetrachloroethene	0.50	U	0.11	0.50
Toluene	0.50	U *	0.18	0.50
1,1,1-Trichloroethane	0.50	U	0.16	0.50
1,1,2-Trichloroethane	0.50	U	0.11	0.50
Trichloroethene	0.52		0.11	0.50
Vinyl chloride	0.50	U	0.14	0.50
Xylenes, Total	1.0	U	0.30	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96		57 - 121
4-Bromofluorobenzene	88		57 - 121
Dibromofluoromethane	98		67 - 133
Toluene-d8 (Surr)	99		62 - 121

Client: Malcolm Pirnie, Inc. Job Number: 220-11692-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 220-11692-7TB Date Sampled: 03/16/2010 0000
Client Matrix: Water Date Received: 03/17/2010 1005

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36791 Instrument ID: MSW
Preparation: 5030B Lab File ID: W1665.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/18/2010 1621 Final Weight/Volume: 5 mL
Date Prepared: 03/18/2010 1621

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	2.0	U	0.58	2.0
Benzene	0.50	U	0.14	0.50
Bromodichloromethane	0.50	U	0.078	0.50
Bromoform	0.50	U	0.13	0.50
Bromomethane	1.0	U	0.21	1.0
Methyl Ethyl Ketone	2.0	U	0.32	2.0
Carbon disulfide	0.50	U	0.077	0.50
Carbon tetrachloride	0.50	U	0.10	0.50
Chlorobenzene	0.50	U	0.057	0.50
Chloroethane	1.0	U	0.15	1.0
Chloroform	0.50	U	0.12	0.50
Chloromethane	0.50	U	0.20	0.50
Dibromochloromethane	0.50	U	0.088	0.50
1,1-Dichloroethane	0.50	U	0.13	0.50
1,2-Dichloroethane	0.50	U	0.12	0.50
1,1-Dichloroethene	0.50	U	0.19	0.50
cis-1,2-Dichloroethene	0.50	U	0.21	0.50
trans-1,2-Dichloroethene	0.50	U	0.24	0.50
1,2-Dichloropropane	0.50	U	0.11	0.50
cis-1,3-Dichloropropene	0.50	U	0.13	0.50
trans-1,3-Dichloropropene	0.50	U	0.19	0.50
Ethylbenzene	0.50	U	0.14	0.50
2-Hexanone	2.0	U	0.51	2.0
Methylene Chloride	2.0	U	0.091	2.0
methyl isobutyl ketone	2.0	U	0.30	2.0
Styrene	0.50	U	0.17	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50
Tetrachloroethene	0.50	U	0.11	0.50
Toluene	0.50	U *	0.18	0.50
1,1,1-Trichloroethane	0.50	U	0.16	0.50
1,1,2-Trichloroethane	0.50	U	0.11	0.50
Trichloroethene	0.50	U	0.11	0.50
Vinyl chloride	0.50	U	0.14	0.50
Xylenes, Total	1.0	U	0.30	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94		57 - 121
4-Bromofluorobenzene	91		57 - 121
Dibromofluoromethane	97		67 - 133
Toluene-d8 (Surr)	98		62 - 121

Client: Malcolm Pirnie, Inc. Job Number: 220-11692-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DBFM %Rec	DCA %Rec	TOL %Rec	BFB %Rec
220-11692-1	4009-1	99	96	98	86
220-11692-2	4009-8	97	92	97	89
220-11692-3	4009-2	96	93	98	92
220-11692-4	4009-6	97	96	97	93
220-11692-5	4009-3	98	93	98	91
220-11692-6	4009-X	98	96	99	88
220-11692-7	TRIP BLANK	97	94	98	91
MB 220-36791/3		98	93	98	90
MB 220-36843/3		96	92	100	92
LCS 220-36791/2		91	87	104	92
LCS 220-36843/2		91	89	101	91
220-11692-4 MS	4009-6 MS	91	87	99	93
220-11692-4 MSD	4009-6 MSD	91	87	101	93

Surrogate	Acceptance Limits
DBFM = Dibromofluoromethane	67-133
DCA = 1,2-Dichloroethane-d4 (Surr)	57-121
TOL = Toluene-d8 (Surr)	62-121
BFB = 4-Bromofluorobenzene	57-121

Client: Malcolm Pirnie, Inc. Job Number: 220-11692-1

Method Blank - Batch: 220-36791

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-36791/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/18/2010 1133
Date Prepared: 03/18/2010 1133

Analysis Batch: 220-36791
Prep Batch: N/A
Units: ug/L

Instrument ID: MSW
Lab File ID: W1654.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	1.46	J	0.58	2.0
Benzene	0.50	U	0.14	0.50
Bromodichloromethane	0.50	U	0.078	0.50
Bromoform	0.50	U	0.13	0.50
Bromomethane	1.0	U	0.21	1.0
Methyl Ethyl Ketone	2.0	U	0.32	2.0
Carbon disulfide	0.50	U	0.077	0.50
Carbon tetrachloride	0.50	U	0.10	0.50
Chlorobenzene	0.50	U	0.057	0.50
Chloroethane	1.0	U	0.15	1.0
Chloroform	0.50	U	0.12	0.50
Chloromethane	0.50	U	0.20	0.50
Dibromochloromethane	0.50	U	0.088	0.50
1,1-Dichloroethane	0.50	U	0.13	0.50
1,2-Dichloroethane	0.50	U	0.12	0.50
1,1-Dichloroethene	0.50	U	0.19	0.50
cis-1,2-Dichloroethene	0.50	U	0.21	0.50
trans-1,2-Dichloroethene	0.50	U	0.24	0.50
1,2-Dichloropropane	0.50	U	0.11	0.50
cis-1,3-Dichloropropene	0.50	U	0.13	0.50
trans-1,3-Dichloropropene	0.50	U	0.19	0.50
Ethylbenzene	0.50	U	0.14	0.50
2-Hexanone	2.0	U	0.51	2.0
Methylene Chloride	1.66	J	0.091	2.0
methyl isobutyl ketone	2.0	U	0.30	2.0
Styrene	0.50	U	0.17	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50
Tetrachloroethene	0.50	U	0.11	0.50
Toluene	0.50	U	0.18	0.50
1,1,1-Trichloroethane	0.50	U	0.16	0.50
1,1,2-Trichloroethane	0.50	U	0.11	0.50
Trichloroethene	0.50	U	0.11	0.50
Vinyl chloride	0.50	U	0.14	0.50
Xylenes, Total	1.0	U	0.30	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	93	57 - 121
4-Bromofluorobenzene	90	57 - 121
Dibromofluoromethane	98	67 - 133
Toluene-d8 (Surr)	98	62 - 121

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11692-1

Lab Control Sample - Batch: 220-36791

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-36791/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/18/2010 1043
Date Prepared: 03/18/2010 1043

Analysis Batch: 220-36791
Prep Batch: N/A
Units: ug/L

Instrument ID: MSW
Lab File ID: W1652.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	10.0	11.0	110	33 - 150	
Benzene	10.0	11.0	110	72 - 123	
Bromodichloromethane	10.0	10.3	103	71 - 128	
Bromoform	10.0	10.7	107	66 - 120	
Bromomethane	10.0	10.1	101	35 - 150	
Methyl Ethyl Ketone	10.0	10.4	104	30 - 150	
Carbon disulfide	10.0	11.2	112	51 - 140	
Carbon tetrachloride	10.0	10.9	109	67 - 134	
Chlorobenzene	10.0	10.8	108	68 - 120	
Chloroethane	10.0	11.0	110	35 - 150	
Chloroform	10.0	10.6	106	72 - 131	
Chloromethane	10.0	10.1	101	30 - 150	
Dibromochloromethane	10.0	10.8	108	66 - 120	
1,1-Dichloroethane	10.0	10.8	108	74 - 127	
1,2-Dichloroethane	10.0	10.4	104	64 - 136	
1,1-Dichloroethene	10.0	11.3	113	70 - 134	
cis-1,2-Dichloroethene	10.0	11.1	111	70 - 120	
trans-1,2-Dichloroethene	10.0	10.9	109	63 - 120	
1,2-Dichloropropane	10.0	10.1	101	71 - 120	
cis-1,3-Dichloropropene	10.0	10.3	103	66 - 120	
trans-1,3-Dichloropropene	10.0	9.60	96	70 - 120	
Ethylbenzene	10.0	11.5	115	63 - 120	
2-Hexanone	10.0	9.01	90	29 - 150	
Methylene Chloride	10.0	11.9	119	47 - 150	
methyl isobutyl ketone	10.0	10.2	102	52 - 137	
Styrene	10.0	9.45	95	52 - 120	
1,1,2,2-Tetrachloroethane	10.0	10.7	107	62 - 129	
Tetrachloroethene	10.0	11.2	112	55 - 120	
Toluene	10.0	12.2	122	64 - 120	*
1,1,1-Trichloroethane	10.0	10.7	107	70 - 134	
1,1,2-Trichloroethane	10.0	10.2	102	73 - 126	
Trichloroethene	10.0	11.0	110	66 - 120	
Vinyl chloride	10.0	10.8	108	48 - 150	
Xylenes, Total	30.0	29.5	98	61 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	87	57 - 121
4-Bromofluorobenzene	92	57 - 121
Dibromofluoromethane	91	67 - 133
Toluene-d8 (Surr)	104	62 - 121

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11692-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 220-36791

Method: 8260B
Preparation: 5030B

MS Lab Sample ID: 220-11692-4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/18/2010 1505
Date Prepared: 03/18/2010 1505

Analysis Batch: 220-36791
Prep Batch: N/A

Instrument ID: MSW
Lab File ID: W1662.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

MSD Lab Sample ID: 220-11692-4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/18/2010 1530
Date Prepared: 03/18/2010 1530

Analysis Batch: 220-36791
Prep Batch: N/A

Instrument ID: MSW
Lab File ID: W1663.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	77	72	33 - 150	6	20		
Benzene	102	94	72 - 123	9	20		
Bromodichloromethane	96	88	71 - 128	9	20		
Bromoform	98	89	66 - 120	9	20		
Bromomethane	109	101	35 - 150	7	20		
Methyl Ethyl Ketone	93	90	30 - 150	3	20		
Carbon disulfide	103	93	51 - 140	11	20		
Carbon tetrachloride	100	90	67 - 134	10	20		
Chlorobenzene	99	92	68 - 120	8	20		
Chloroethane	117	100	35 - 150	15	20		
Chloroform	99	89	72 - 131	11	20		
Chloromethane	101	93	30 - 150	8	20		
Dibromochloromethane	100	90	66 - 120	10	20		
1,1-Dichloroethane	99	91	74 - 127	9	20		
1,2-Dichloroethane	96	87	64 - 136	9	20		
1,1-Dichloroethene	104	93	70 - 134	11	20		
cis-1,2-Dichloroethene	101	95	70 - 120	6	20		
trans-1,2-Dichloroethene	101	93	63 - 120	8	20		
1,2-Dichloropropane	96	86	71 - 120	11	20		
cis-1,3-Dichloropropene	93	83	66 - 120	12	20		
trans-1,3-Dichloropropene	87	81	70 - 120	8	20		
Ethylbenzene	109	99	63 - 120	9	20		
2-Hexanone	85	83	29 - 150	2	20		
Methylene Chloride	77	66	47 - 150	14	20		
methyl isobutyl ketone	93	87	52 - 137	7	20		
Styrene	94	84	52 - 120	11	20		
1,1,2,2-Tetrachloroethane	95	85	62 - 129	11	20		
Tetrachloroethene	100	91	55 - 120	10	20		
Toluene	110	99	64 - 120	10	20		
1,1,1-Trichloroethane	99	91	70 - 134	9	20		

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11692-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 220-36791

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	220-11692-4	Analysis Batch:	220-36791	Instrument ID:	MSW
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	W1662.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Date Analyzed:	03/18/2010 1505			Final Weight/Volume:	5 mL
Date Prepared:	03/18/2010 1505				

MSD Lab Sample ID:	220-11692-4	Analysis Batch:	220-36791	Instrument ID:	MSW
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	W1663.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Date Analyzed:	03/18/2010 1530			Final Weight/Volume:	5 mL
Date Prepared:	03/18/2010 1530				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,2-Trichloroethane	99	89	73 - 126	10	20		
Trichloroethene	104	94	66 - 120	10	20		
Vinyl chloride	103	92	48 - 150	11	20		
Xylenes, Total	93	85	61 - 120	10	20		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	87	87	57 - 121
4-Bromofluorobenzene	93	93	57 - 121
Dibromofluoromethane	91	91	67 - 133
Toluene-d8 (Surr)	99	101	62 - 121

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11692-1

Matrix Spike/
Matrix Spike Duplicate Data Report - Batch: 220-36791

Method: 8260B
Preparation: 5030B

MS Lab Sample ID: 220-11692-4 Units: ug/L MSD Lab Sample ID: 220-11692-4
Client Matrix: Water Client Matrix: Water
Dilution: 1.0 Dilution: 1.0
Date Analyzed: 03/18/2010 1505 Date Analyzed: 03/18/2010 1530
Date Prepared: 03/18/2010 1505 Date Prepared: 03/18/2010 1530

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Acetone	2.0	U	20.0	20.0	15.3	14.5
Benzene	0.50	U	20.0	20.0	20.5	18.7
Bromodichloromethane	0.50	U	20.0	20.0	19.3	17.6
Bromoform	0.50	U	20.0	20.0	19.5	17.9
Bromomethane	1.0	U	20.0	20.0	21.7	20.2
Methyl Ethyl Ketone	2.0	U	20.0	20.0	18.7	18.1
Carbon disulfide	0.50	U	20.0	20.0	20.7	18.6
Carbon tetrachloride	0.50	U	20.0	20.0	20.0	18.1
Chlorobenzene	0.50	U	20.0	20.0	19.8	18.3
Chloroethane	1.0	U	20.0	20.0	23.4	20.1
Chloroform	0.50	U	20.0	20.0	19.8	17.7
Chloromethane	0.50	U	20.0	20.0	20.1	18.5
Dibromochloromethane	0.50	U	20.0	20.0	20.0	18.0
1,1-Dichloroethane	0.50	U	20.0	20.0	19.9	18.1
1,2-Dichloroethane	0.50	U	20.0	20.0	19.1	17.5
1,1-Dichloroethene	0.50	U	20.0	20.0	20.8	18.5
cis-1,2-Dichloroethene	0.50	U	20.0	20.0	20.2	19.0
trans-1,2-Dichloroethene	0.50	U	20.0	20.0	20.2	18.6
1,2-Dichloropropane	0.50	U	20.0	20.0	19.1	17.1
cis-1,3-Dichloropropene	0.50	U	20.0	20.0	18.7	16.6
trans-1,3-Dichloropropene	0.50	U	20.0	20.0	17.4	16.1
Ethylbenzene	0.50	U	20.0	20.0	21.8	19.9
2-Hexanone	2.0	U	20.0	20.0	16.9	16.5
Methylene Chloride	2.0	U	20.0	20.0	15.3	13.3
methyl isobutyl ketone	2.0	U	20.0	20.0	18.7	17.5
Styrene	0.50	U	20.0	20.0	18.8	16.9
1,1,2,2-Tetrachloroethane	0.50	U	20.0	20.0	19.0	17.1
Tetrachloroethene	0.50	U	20.0	20.0	20.0	18.2
Toluene	0.50	U	20.0	20.0	21.9	19.8
1,1,1-Trichloroethane	0.50	U	20.0	20.0	19.7	18.1
1,1,2-Trichloroethane	0.50	U	20.0	20.0	19.8	17.9
Trichloroethene	0.59		20.0	20.0	21.3	19.3
Vinyl chloride	0.50	U	20.0	20.0	20.7	18.5
Xylenes, Total	1.0	U	60.0	60.0	56.0	50.9

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11692-1

Method Blank - Batch: 220-36843

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-36843/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/19/2010 1148
Date Prepared: 03/19/2010 1148

Analysis Batch: 220-36843
Prep Batch: N/A
Units: ug/L

Instrument ID: MSW
Lab File ID: W1695.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	1.66	J	0.58	2.0
Benzene	0.50	U	0.14	0.50
Bromodichloromethane	0.50	U	0.078	0.50
Bromoform	0.50	U	0.13	0.50
Bromomethane	1.0	U	0.21	1.0
Methyl Ethyl Ketone	2.0	U	0.32	2.0
Carbon disulfide	0.50	U	0.077	0.50
Carbon tetrachloride	0.50	U	0.10	0.50
Chlorobenzene	0.50	U	0.057	0.50
Chloroethane	1.0	U	0.15	1.0
Chloroform	0.50	U	0.12	0.50
Chloromethane	0.50	U	0.20	0.50
Dibromochloromethane	0.50	U	0.088	0.50
1,1-Dichloroethane	0.50	U	0.13	0.50
1,2-Dichloroethane	0.50	U	0.12	0.50
1,1-Dichloroethene	0.50	U	0.19	0.50
cis-1,2-Dichloroethene	0.50	U	0.21	0.50
trans-1,2-Dichloroethene	0.50	U	0.24	0.50
1,2-Dichloropropane	0.50	U	0.11	0.50
cis-1,3-Dichloropropene	0.50	U	0.13	0.50
trans-1,3-Dichloropropene	0.50	U	0.19	0.50
Ethylbenzene	0.50	U	0.14	0.50
2-Hexanone	2.0	U	0.51	2.0
Methylene Chloride	2.0	U	0.091	2.0
methyl isobutyl ketone	2.0	U	0.30	2.0
Styrene	0.50	U	0.17	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50
Tetrachloroethene	0.50	U	0.11	0.50
Toluene	0.50	U	0.18	0.50
1,1,1-Trichloroethane	0.50	U	0.16	0.50
1,1,2-Trichloroethane	0.50	U	0.11	0.50
Trichloroethene	0.50	U	0.11	0.50
Vinyl chloride	0.50	U	0.14	0.50
Xylenes, Total	1.0	U	0.30	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	92	57 - 121
4-Bromofluorobenzene	92	57 - 121
Dibromofluoromethane	96	67 - 133
Toluene-d8 (Surr)	100	62 - 121

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11692-1

Lab Control Sample - Batch: 220-36843

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-36843/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/19/2010 1058
Date Prepared: 03/19/2010 1058

Analysis Batch: 220-36843
Prep Batch: N/A
Units: ug/L

Instrument ID: MSW
Lab File ID: W1693.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	10.0	9.07	91	33 - 150	
Benzene	10.0	8.87	89	72 - 123	
Bromodichloromethane	10.0	8.67	87	71 - 128	
Bromoform	10.0	8.73	87	66 - 120	
Bromomethane	10.0	12.6	126	35 - 150	
Methyl Ethyl Ketone	10.0	8.05	80	30 - 150	
Carbon disulfide	10.0	9.14	91	51 - 140	
Carbon tetrachloride	10.0	8.62	86	67 - 134	
Chlorobenzene	10.0	8.56	86	68 - 120	
Chloroethane	10.0	11.3	113	35 - 150	
Chloroform	10.0	8.81	88	72 - 131	
Chloromethane	10.0	11.5	115	30 - 150	
Dibromochloromethane	10.0	8.87	89	66 - 120	
1,1-Dichloroethane	10.0	8.61	86	74 - 127	
1,2-Dichloroethane	10.0	8.34	83	64 - 136	
1,1-Dichloroethene	10.0	9.14	91	70 - 134	
cis-1,2-Dichloroethene	10.0	8.58	86	70 - 120	
trans-1,2-Dichloroethene	10.0	8.61	86	63 - 120	
1,2-Dichloropropane	10.0	8.24	82	71 - 120	
cis-1,3-Dichloropropene	10.0	8.20	82	66 - 120	
trans-1,3-Dichloropropene	10.0	7.60	76	70 - 120	
Ethylbenzene	10.0	8.77	88	63 - 120	
2-Hexanone	10.0	6.99	70	29 - 150	
Methylene Chloride	10.0	6.31	63	47 - 150	
methyl isobutyl ketone	10.0	8.21	82	52 - 137	
Styrene	10.0	7.45	74	52 - 120	
1,1,2,2-Tetrachloroethane	10.0	8.84	88	62 - 129	
Tetrachloroethene	10.0	8.71	87	55 - 120	
Toluene	10.0	9.28	93	64 - 120	
1,1,1-Trichloroethane	10.0	8.51	85	70 - 134	
1,1,2-Trichloroethane	10.0	8.86	89	73 - 126	
Trichloroethene	10.0	8.75	87	66 - 120	
Vinyl chloride	10.0	11.5	115	48 - 150	
Xylenes, Total	30.0	23.1	77	61 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	89	57 - 121
4-Bromofluorobenzene	91	57 - 121
Dibromofluoromethane	91	67 - 133
Toluene-d8 (Surr)	101	62 - 121

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

DATA REPORTING QUALIFIERS

Client: Malcolm Pirnie, Inc. Job Number: 220-11692-1

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: 220-11692-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:220-36791					
LCS 220-36791/2	Lab Control Sample	T	Water	8260B	
MB 220-36791/3	Method Blank	T	Water	8260B	
220-11692-1	4009-1	T	Water	8260B	
220-11692-3	4009-2	T	Water	8260B	
220-11692-4	4009-6	T	Water	8260B	
220-11692-4MS	Matrix Spike	T	Water	8260B	
220-11692-4MSD	Matrix Spike Duplicate	T	Water	8260B	
220-11692-5	4009-3	T	Water	8260B	
220-11692-6	4009-X	T	Water	8260B	
220-11692-7TB	TRIP BLANK	T	Water	8260B	
Analysis Batch:220-36843					
LCS 220-36843/2	Lab Control Sample	T	Water	8260B	
MB 220-36843/3	Method Blank	T	Water	8260B	
220-11692-2	4009-8	T	Water	8260B	

Report Basis
T = Total

Client: Malcolm Pirnie, Inc. Job Number: 220-11692-1

Laboratory Chronicle

Lab ID: 220-11692-1 **Client ID: 4009-1**

Sample Date/Time: 03/16/2010 13:25 Received Date/Time: 03/17/2010 10:05

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11692-B-1		220-36791		03/18/2010 13:13	1	TAL CT	BK
A:8260B	220-11692-B-1		220-36791		03/18/2010 13:13	1	TAL CT	BK

Lab ID: 220-11692-2 **Client ID: 4009-8**

Sample Date/Time: 03/16/2010 14:30 Received Date/Time: 03/17/2010 10:05

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11692-B-2		220-36843		03/19/2010 13:02	10	TAL CT	BK
A:8260B	220-11692-B-2		220-36843		03/19/2010 13:02	10	TAL CT	BK

Lab ID: 220-11692-3 **Client ID: 4009-2**

Sample Date/Time: 03/16/2010 15:00 Received Date/Time: 03/17/2010 10:05

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11692-A-3		220-36791		03/18/2010 13:39	1	TAL CT	BK
A:8260B	220-11692-A-3		220-36791		03/18/2010 13:39	1	TAL CT	BK

Lab ID: 220-11692-4 **Client ID: 4009-6**

Sample Date/Time: 03/16/2010 16:20 Received Date/Time: 03/17/2010 10:05

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11692-B-4		220-36791		03/18/2010 14:04	1	TAL CT	BK
A:8260B	220-11692-B-4		220-36791		03/18/2010 14:04	1	TAL CT	BK

Lab ID: 220-11692-4 **Client ID: 4009-6**

Sample Date/Time: 03/16/2010 16:20 Received Date/Time: 03/17/2010 10:05

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11692-B-4 MS		220-36791		03/18/2010 15:05	1	TAL CT	BK
A:8260B	220-11692-B-4 MS		220-36791		03/18/2010 15:05	1	TAL CT	BK

Lab ID: 220-11692-4 **Client ID: 4009-6**

Sample Date/Time: 03/16/2010 16:20 Received Date/Time: 03/17/2010 10:05

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11692-B-4 MSD		220-36791		03/18/2010 15:30	1	TAL CT	BK
A:8260B	220-11692-B-4 MSD		220-36791		03/18/2010 15:30	1	TAL CT	BK

Client: Malcolm Pirnie, Inc. Job Number: 220-11692-1

Laboratory Chronicle

Lab ID: 220-11692-5 **Client ID: 4009-3**

Sample Date/Time: 03/16/2010 16:50 Received Date/Time: 03/17/2010 10:05

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11692-B-5		220-36791		03/18/2010 14:30	1	TAL CT	BK
A:8260B	220-11692-B-5		220-36791		03/18/2010 14:30	1	TAL CT	BK

Lab ID: 220-11692-6 **Client ID: 4009-X**

Sample Date/Time: 03/16/2010 00:00 Received Date/Time: 03/17/2010 10:05

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11692-A-6		220-36791		03/18/2010 16:47	1	TAL CT	BK
A:8260B	220-11692-A-6		220-36791		03/18/2010 16:47	1	TAL CT	BK

Lab ID: 220-11692-7 **Client ID: TRIP BLANK**

Sample Date/Time: 03/16/2010 00:00 Received Date/Time: 03/17/2010 10:05

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11692-A-7		220-36791		03/18/2010 16:21	1	TAL CT	BK
A:8260B	220-11692-A-7		220-36791		03/18/2010 16:21	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 220-36791/3		220-36791		03/18/2010 11:33	1	TAL CT	BK
A:8260B	MB 220-36791/3		220-36791		03/18/2010 11:33	1	TAL CT	BK
P:5030B	MB 220-36843/3		220-36843		03/19/2010 11:48	1	TAL CT	BK
A:8260B	MB 220-36843/3		220-36843		03/19/2010 11:48	1	TAL CT	BK

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 220-36791/2		220-36791		03/18/2010 10:43	1	TAL CT	BK
A:8260B	LCS 220-36791/2		220-36791		03/18/2010 10:43	1	TAL CT	BK
P:5030B	LCS 220-36843/2		220-36843		03/19/2010 10:58	1	TAL CT	BK
A:8260B	LCS 220-36843/2		220-36843		03/19/2010 10:58	1	TAL CT	BK

Lab References:
TAL CT = TestAmerica Connecticut

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 220-11703-1

Job Description: NYSDEC Standby - Vestal Water Supply

For:
Malcolm Pirnie, Inc.
855 Route 146
Suite 210
Clifton Park, NY 12065

Attention: Mr. Jeremy Wyckoff

Approved for release.
Cheryl Cascella
Data Review Analyst I
3/30/2010 11:10 AM

Designee for
Johanna Dubauskas
Project Manager I
johanna.dubauskas@testamericainc.com
03/30/2010

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Project Manager.

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

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Job Narrative
220-11703-1

Comments
No additional comments.

Receipt
The following field QC sample was received at the laboratory without a sample collection time documented on the chain of custody: TRIP BLANK (220-11703-8). As a result, a sample collection time of 12:00am, on the date of collection, has been used.

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

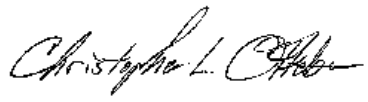
GC/MS VOA
No analytical or quality issues were noted.

Subcontract Work
Method(s) ILM05.3 Dissolved TAL Metals, ILM05.3 Total TAL Metals: The sample has been subcontracted to TestAmerica Buffalo the subcontract certifications are different from those listed on the TestAmerica cover page of this final report.

Case Narrative for Job: 220-11703

Client: MPI
Date: March 30, 2010

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.



Christopher L. Otterbein
Laboratory Director

March 30, 2010

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: 220-11703-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-11703-1	4009-15	Water	03/17/2010 0935	03/18/2010 1000
220-11703-2	4009-14	Water	03/17/2010 1010	03/18/2010 1000
220-11703-3	4009-13A	Water	03/17/2010 1125	03/18/2010 1000
220-11703-4	4009-13	Water	03/17/2010 1230	03/18/2010 1000
220-11703-5	4009-4	Water	03/17/2010 1510	03/18/2010 1000
220-11703-6	4009-5	Water	03/17/2010 1515	03/18/2010 1000
220-11703-7	4009-7	Water	03/17/2010 1630	03/18/2010 1000
220-11703-8	TRIP BLANK	Water	03/17/2010 0000	03/18/2010 1000
220-11703-9	4009-15	Water	03/17/2010 0935	03/18/2010 1000
220-11703-10	4009-13	Water	03/17/2010 1230	03/18/2010 1000

EXECUTIVE SUMMARY - Detections

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
220-11703-1	**4009-15**					
Acetone		1.3	J B	2.0	ug/L	8260B
Methyl Ethyl Ketone		0.45	J	2.0	ug/L	8260B
1,1-Dichloroethane		0.71		0.50	ug/L	8260B
cis-1,2-Dichloroethene		0.65		0.50	ug/L	8260B
1,1,1-Trichloroethane		2.9		0.50	ug/L	8260B
Trichloroethene		0.22	J B	0.50	ug/L	8260B
220-11703-2	**4009-14**					
Acetone		1.1	J B	2.0	ug/L	8260B
Methyl Ethyl Ketone		0.40	J	2.0	ug/L	8260B
Carbon disulfide		0.12	J	0.50	ug/L	8260B
Toluene		0.36	J	0.50	ug/L	8260B
Trichloroethene		0.28	J B	0.50	ug/L	8260B
220-11703-3	**4009-13A**					
Acetone		1.1	J B	2.0	ug/L	8260B
Methyl Ethyl Ketone		0.62	J B	2.0	ug/L	8260B
1,1,1-Trichloroethane		0.35	J	0.50	ug/L	8260B
Trichloroethene		0.18	J B	0.50	ug/L	8260B
220-11703-4	**4009-13**					
Acetone		1.5	J B	2.0	ug/L	8260B
Methyl Ethyl Ketone		0.59	J B	2.0	ug/L	8260B
1,1-Dichloroethane		0.13	J	0.50	ug/L	8260B
Trichloroethene		0.13	J B	0.50	ug/L	8260B
220-11703-5	**4009-4**					
Acetone		1.4	J B	2.0	ug/L	8260B
Methyl Ethyl Ketone		0.55	J B	2.0	ug/L	8260B
1,1-Dichloroethane		0.28	J	0.50	ug/L	8260B
cis-1,2-Dichloroethene		42		0.50	ug/L	8260B
trans-1,2-Dichloroethene		0.31	J	0.50	ug/L	8260B
Methylene Chloride		0.13	J B	2.0	ug/L	8260B
Trichloroethene		2.6		0.50	ug/L	8260B
Vinyl chloride		0.41	J	0.50	ug/L	8260B

EXECUTIVE SUMMARY - Detections

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
220-11703-6	**4009-5**					
Acetone		1.3	J B	2.0	ug/L	8260B
Methyl Ethyl Ketone		0.54	J B	2.0	ug/L	8260B
1,1-Dichloroethane		4.6		0.50	ug/L	8260B
1,1-Dichloroethene		3.1		0.50	ug/L	8260B
cis-1,2-Dichloroethene		21		0.50	ug/L	8260B
trans-1,2-Dichloroethene		0.46	J	0.50	ug/L	8260B
Toluene		0.19	J	0.50	ug/L	8260B
1,1,1-Trichloroethane		0.32	J	0.50	ug/L	8260B
Trichloroethene		56	B	0.50	ug/L	8260B
Vinyl chloride		25		0.50	ug/L	8260B
220-11703-7	**4009-7**					
Benzene		0.52	J	1.0	ug/L	8260B
1,1-Dichloroethane		24		1.0	ug/L	8260B
1,1-Dichloroethene		4.0		1.0	ug/L	8260B
cis-1,2-Dichloroethene		110		1.0	ug/L	8260B
trans-1,2-Dichloroethene		0.76	J	1.0	ug/L	8260B
1,1,1-Trichloroethane		9.0		1.0	ug/L	8260B
Trichloroethene		20		1.0	ug/L	8260B
Vinyl chloride		120		1.0	ug/L	8260B
220-11703-8	**TRIP BLANK**					
Acetone		1.6	J B	2.0	ug/L	8260B
Methyl Ethyl Ketone		0.47	J	2.0	ug/L	8260B
Trichloroethene		0.28	J B	0.50	ug/L	8260B

METHOD SUMMARY

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

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: 220-11703-1

Method	Analyst	Analyst ID
SW846 8260B	Kostrzewska, Barbara	BK

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Client Sample ID: 4009-15

Lab Sample ID: 220-11703-1 Date Sampled: 03/17/2010 0935
Client Matrix: Water Date Received: 03/18/2010 1000

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36842 Instrument ID: MSV
Preparation: 5030B Lab File ID: V0890.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/18/2010 1903 Final Weight/Volume: 5 mL
Date Prepared: 03/18/2010 1903

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	1.3	J B	0.58	2.0
Benzene	0.50	U	0.14	0.50
Bromodichloromethane	0.50	U	0.078	0.50
Bromoform	0.50	U	0.13	0.50
Bromomethane	1.0	U	0.21	1.0
Methyl Ethyl Ketone	0.45	J	0.32	2.0
Carbon disulfide	0.50	U	0.077	0.50
Carbon tetrachloride	0.50	U	0.10	0.50
Chlorobenzene	0.50	U	0.057	0.50
Chloroethane	1.0	U	0.15	1.0
Chloroform	0.50	U	0.12	0.50
Chloromethane	0.50	U	0.20	0.50
Dibromochloromethane	0.50	U	0.088	0.50
1,1-Dichloroethane	0.71		0.13	0.50
1,2-Dichloroethane	0.50	U	0.12	0.50
1,1-Dichloroethene	0.50	U	0.19	0.50
cis-1,2-Dichloroethene	0.65		0.21	0.50
trans-1,2-Dichloroethene	0.50	U	0.24	0.50
1,2-Dichloropropane	0.50	U	0.11	0.50
cis-1,3-Dichloropropene	0.50	U	0.13	0.50
trans-1,3-Dichloropropene	0.50	U	0.19	0.50
Ethylbenzene	0.50	U	0.14	0.50
2-Hexanone	2.0	U	0.51	2.0
Methylene Chloride	2.0	U *	0.091	2.0
methyl isobutyl ketone	2.0	U	0.30	2.0
Styrene	0.50	U	0.17	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50
Tetrachloroethene	0.50	U	0.11	0.50
Toluene	0.50	U	0.18	0.50
1,1,1-Trichloroethane	2.9		0.16	0.50
1,1,2-Trichloroethane	0.50	U	0.11	0.50
Trichloroethene	0.22	J B	0.11	0.50
Vinyl chloride	0.50	U	0.14	0.50
Xylenes, Total	1.0	U	0.30	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100		57 - 121
4-Bromofluorobenzene	96		57 - 121
Dibromofluoromethane	98		67 - 133
Toluene-d8 (Surr)	95		62 - 121

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Client Sample ID: 4009-14

Lab Sample ID: 220-11703-2 Date Sampled: 03/17/2010 1010
Client Matrix: Water Date Received: 03/18/2010 1000

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36842 Instrument ID: MSV
Preparation: 5030B Lab File ID: V0891.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/18/2010 1930 Final Weight/Volume: 5 mL
Date Prepared: 03/18/2010 1930

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	1.1	J B	0.58	2.0
Benzene	0.50	U	0.14	0.50
Bromodichloromethane	0.50	U	0.078	0.50
Bromoform	0.50	U	0.13	0.50
Bromomethane	1.0	U	0.21	1.0
Methyl Ethyl Ketone	0.40	J	0.32	2.0
Carbon disulfide	0.12	J	0.077	0.50
Carbon tetrachloride	0.50	U	0.10	0.50
Chlorobenzene	0.50	U	0.057	0.50
Chloroethane	1.0	U	0.15	1.0
Chloroform	0.50	U	0.12	0.50
Chloromethane	0.50	U	0.20	0.50
Dibromochloromethane	0.50	U	0.088	0.50
1,1-Dichloroethane	0.50	U	0.13	0.50
1,2-Dichloroethane	0.50	U	0.12	0.50
1,1-Dichloroethene	0.50	U	0.19	0.50
cis-1,2-Dichloroethene	0.50	U	0.21	0.50
trans-1,2-Dichloroethene	0.50	U	0.24	0.50
1,2-Dichloropropane	0.50	U	0.11	0.50
cis-1,3-Dichloropropene	0.50	U	0.13	0.50
trans-1,3-Dichloropropene	0.50	U	0.19	0.50
Ethylbenzene	0.50	U	0.14	0.50
2-Hexanone	2.0	U	0.51	2.0
Methylene Chloride	2.0	U *	0.091	2.0
methyl isobutyl ketone	2.0	U	0.30	2.0
Styrene	0.50	U	0.17	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50
Tetrachloroethene	0.50	U	0.11	0.50
Toluene	0.36	J	0.18	0.50
1,1,1-Trichloroethane	0.50	U	0.16	0.50
1,1,2-Trichloroethane	0.50	U	0.11	0.50
Trichloroethene	0.28	J B	0.11	0.50
Vinyl chloride	0.50	U	0.14	0.50
Xylenes, Total	1.0	U	0.30	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100		57 - 121
4-Bromofluorobenzene	96		57 - 121
Dibromofluoromethane	98		67 - 133
Toluene-d8 (Surr)	95		62 - 121

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Client Sample ID: 4009-13A

Lab Sample ID: 220-11703-3 Date Sampled: 03/17/2010 1125
Client Matrix: Water Date Received: 03/18/2010 1000

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36841 Instrument ID: MSV
Preparation: 5030B Lab File ID: V0916.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/19/2010 1208 Final Weight/Volume: 5 mL
Date Prepared: 03/19/2010 1208

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	1.1	J B	0.58	2.0
Benzene	0.50	U	0.14	0.50
Bromodichloromethane	0.50	U	0.078	0.50
Bromoform	0.50	U	0.13	0.50
Bromomethane	1.0	U	0.21	1.0
Methyl Ethyl Ketone	0.62	J B	0.32	2.0
Carbon disulfide	0.50	U	0.077	0.50
Carbon tetrachloride	0.50	U	0.10	0.50
Chlorobenzene	0.50	U	0.057	0.50
Chloroethane	1.0	U	0.15	1.0
Chloroform	0.50	U	0.12	0.50
Chloromethane	0.50	U	0.20	0.50
Dibromochloromethane	0.50	U	0.088	0.50
1,1-Dichloroethane	0.50	U	0.13	0.50
1,2-Dichloroethane	0.50	U	0.12	0.50
1,1-Dichloroethene	0.50	U	0.19	0.50
cis-1,2-Dichloroethene	0.50	U	0.21	0.50
trans-1,2-Dichloroethene	0.50	U	0.24	0.50
1,2-Dichloropropane	0.50	U	0.11	0.50
cis-1,3-Dichloropropene	0.50	U	0.13	0.50
trans-1,3-Dichloropropene	0.50	U	0.19	0.50
Ethylbenzene	0.50	U	0.14	0.50
2-Hexanone	2.0	U	0.51	2.0
Methylene Chloride	2.0	U	0.091	2.0
methyl isobutyl ketone	2.0	U	0.30	2.0
Styrene	0.50	U	0.17	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50
Tetrachloroethene	0.50	U	0.11	0.50
Toluene	0.50	U	0.18	0.50
1,1,1-Trichloroethane	0.35	J	0.16	0.50
1,1,2-Trichloroethane	0.50	U	0.11	0.50
Trichloroethene	0.18	J B	0.11	0.50
Vinyl chloride	0.50	U	0.14	0.50
Xylenes, Total	1.0	U	0.30	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	104		57 - 121
4-Bromofluorobenzene	96		57 - 121
Dibromofluoromethane	102		67 - 133
Toluene-d8 (Surr)	97		62 - 121

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Client Sample ID: 4009-13

Lab Sample ID: 220-11703-4 Date Sampled: 03/17/2010 1230
Client Matrix: Water Date Received: 03/18/2010 1000

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36841 Instrument ID: MSV
Preparation: 5030B Lab File ID: V0917.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/19/2010 1235 Final Weight/Volume: 5 mL
Date Prepared: 03/19/2010 1235

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	1.5	J B	0.58	2.0
Benzene	0.50	U	0.14	0.50
Bromodichloromethane	0.50	U	0.078	0.50
Bromoform	0.50	U	0.13	0.50
Bromomethane	1.0	U	0.21	1.0
Methyl Ethyl Ketone	0.59	J B	0.32	2.0
Carbon disulfide	0.50	U	0.077	0.50
Carbon tetrachloride	0.50	U	0.10	0.50
Chlorobenzene	0.50	U	0.057	0.50
Chloroethane	1.0	U	0.15	1.0
Chloroform	0.50	U	0.12	0.50
Chloromethane	0.50	U	0.20	0.50
Dibromochloromethane	0.50	U	0.088	0.50
1,1-Dichloroethane	0.13	J	0.13	0.50
1,2-Dichloroethane	0.50	U	0.12	0.50
1,1-Dichloroethene	0.50	U	0.19	0.50
cis-1,2-Dichloroethene	0.50	U	0.21	0.50
trans-1,2-Dichloroethene	0.50	U	0.24	0.50
1,2-Dichloropropane	0.50	U	0.11	0.50
cis-1,3-Dichloropropene	0.50	U	0.13	0.50
trans-1,3-Dichloropropene	0.50	U	0.19	0.50
Ethylbenzene	0.50	U	0.14	0.50
2-Hexanone	2.0	U	0.51	2.0
Methylene Chloride	2.0	U	0.091	2.0
methyl isobutyl ketone	2.0	U	0.30	2.0
Styrene	0.50	U	0.17	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50
Tetrachloroethene	0.50	U	0.11	0.50
Toluene	0.50	U	0.18	0.50
1,1,1-Trichloroethane	0.50	U	0.16	0.50
1,1,2-Trichloroethane	0.50	U	0.11	0.50
Trichloroethene	0.13	J B	0.11	0.50
Vinyl chloride	0.50	U	0.14	0.50
Xylenes, Total	1.0	U	0.30	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102		57 - 121
4-Bromofluorobenzene	95		57 - 121
Dibromofluoromethane	100		67 - 133
Toluene-d8 (Surr)	97		62 - 121

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Client Sample ID: 4009-4

Lab Sample ID: 220-11703-5 Date Sampled: 03/17/2010 1510
Client Matrix: Water Date Received: 03/18/2010 1000

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36950 Instrument ID: MSV
Preparation: 5030B Lab File ID: V1001.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/23/2010 1237 Final Weight/Volume: 5 mL
Date Prepared: 03/23/2010 1237

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	1.4	J B	0.58	2.0
Benzene	0.50	U	0.14	0.50
Bromodichloromethane	0.50	U	0.078	0.50
Bromoform	0.50	U	0.13	0.50
Bromomethane	1.0	U	0.21	1.0
Methyl Ethyl Ketone	0.55	J B	0.32	2.0
Carbon disulfide	0.50	U	0.077	0.50
Carbon tetrachloride	0.50	U	0.10	0.50
Chlorobenzene	0.50	U	0.057	0.50
Chloroethane	1.0	U	0.15	1.0
Chloroform	0.50	U	0.12	0.50
Chloromethane	0.50	U	0.20	0.50
Dibromochloromethane	0.50	U	0.088	0.50
1,1-Dichloroethane	0.28	J	0.13	0.50
1,2-Dichloroethane	0.50	U	0.12	0.50
1,1-Dichloroethene	0.50	U	0.19	0.50
cis-1,2-Dichloroethene	42		0.21	0.50
trans-1,2-Dichloroethene	0.31	J	0.24	0.50
1,2-Dichloropropane	0.50	U	0.11	0.50
cis-1,3-Dichloropropene	0.50	U	0.13	0.50
trans-1,3-Dichloropropene	0.50	U	0.19	0.50
Ethylbenzene	0.50	U	0.14	0.50
2-Hexanone	2.0	U	0.51	2.0
Methylene Chloride	0.13	J B	0.091	2.0
methyl isobutyl ketone	2.0	U	0.30	2.0
Styrene	0.50	U	0.17	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50
Tetrachloroethene	0.50	U	0.11	0.50
Toluene	0.50	U	0.18	0.50
1,1,1-Trichloroethane	0.50	U	0.16	0.50
1,1,2-Trichloroethane	0.50	U	0.11	0.50
Trichloroethene	2.6		0.11	0.50
Vinyl chloride	0.41	J	0.14	0.50
Xylenes, Total	1.0	U	0.30	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	92		57 - 121
4-Bromofluorobenzene	93		57 - 121
Dibromofluoromethane	95		67 - 133
Toluene-d8 (Surr)	98		62 - 121

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Client Sample ID: 4009-5

Lab Sample ID: 220-11703-6 Date Sampled: 03/17/2010 1515
Client Matrix: Water Date Received: 03/18/2010 1000

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36841 Instrument ID: MSV
Preparation: 5030B Lab File ID: V0919.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/19/2010 1329 Final Weight/Volume: 5 mL
Date Prepared: 03/19/2010 1329

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	1.3	J B	0.58	2.0
Benzene	0.50	U	0.14	0.50
Bromodichloromethane	0.50	U	0.078	0.50
Bromoform	0.50	U	0.13	0.50
Bromomethane	1.0	U	0.21	1.0
Methyl Ethyl Ketone	0.54	J B	0.32	2.0
Carbon disulfide	0.50	U	0.077	0.50
Carbon tetrachloride	0.50	U	0.10	0.50
Chlorobenzene	0.50	U	0.057	0.50
Chloroethane	1.0	U	0.15	1.0
Chloroform	0.50	U	0.12	0.50
Chloromethane	0.50	U	0.20	0.50
Dibromochloromethane	0.50	U	0.088	0.50
1,1-Dichloroethane	4.6		0.13	0.50
1,2-Dichloroethane	0.50	U	0.12	0.50
1,1-Dichloroethene	3.1		0.19	0.50
cis-1,2-Dichloroethene	21		0.21	0.50
trans-1,2-Dichloroethene	0.46	J	0.24	0.50
1,2-Dichloropropane	0.50	U	0.11	0.50
cis-1,3-Dichloropropene	0.50	U	0.13	0.50
trans-1,3-Dichloropropene	0.50	U	0.19	0.50
Ethylbenzene	0.50	U	0.14	0.50
2-Hexanone	2.0	U	0.51	2.0
Methylene Chloride	2.0	U	0.091	2.0
methyl isobutyl ketone	2.0	U	0.30	2.0
Styrene	0.50	U	0.17	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50
Tetrachloroethene	0.50	U	0.11	0.50
Toluene	0.19	J	0.18	0.50
1,1,1-Trichloroethane	0.32	J	0.16	0.50
1,1,2-Trichloroethane	0.50	U	0.11	0.50
Trichloroethene	56	B	0.11	0.50
Vinyl chloride	25		0.14	0.50
Xylenes, Total	1.0	U	0.30	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	103		57 - 121
4-Bromofluorobenzene	94		57 - 121
Dibromofluoromethane	100		67 - 133
Toluene-d8 (Surr)	97		62 - 121

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Client Sample ID: 4009-7

Lab Sample ID: 220-11703-7 Date Sampled: 03/17/2010 1630
Client Matrix: Water Date Received: 03/18/2010 1000

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36843 Instrument ID: MSW
Preparation: 5030B Lab File ID: W1706.D
Dilution: 2.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/19/2010 1625 Final Weight/Volume: 5 mL
Date Prepared: 03/19/2010 1625

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	4.0	U	1.2	4.0
Benzene	0.52	J	0.28	1.0
Bromodichloromethane	1.0	U	0.16	1.0
Bromoform	1.0	U	0.26	1.0
Bromomethane	2.0	U	0.42	2.0
Methyl Ethyl Ketone	4.0	U	0.64	4.0
Carbon disulfide	1.0	U	0.15	1.0
Carbon tetrachloride	1.0	U	0.20	1.0
Chlorobenzene	1.0	U	0.11	1.0
Chloroethane	2.0	U	0.30	2.0
Chloroform	1.0	U	0.24	1.0
Chloromethane	1.0	U	0.40	1.0
Dibromochloromethane	1.0	U	0.18	1.0
1,1-Dichloroethane	24		0.26	1.0
1,2-Dichloroethane	1.0	U	0.24	1.0
1,1-Dichloroethene	4.0		0.38	1.0
cis-1,2-Dichloroethene	110		0.42	1.0
trans-1,2-Dichloroethene	0.76	J	0.48	1.0
1,2-Dichloropropane	1.0	U	0.22	1.0
cis-1,3-Dichloropropene	1.0	U	0.26	1.0
trans-1,3-Dichloropropene	1.0	U	0.38	1.0
Ethylbenzene	1.0	U	0.28	1.0
2-Hexanone	4.0	U	1.0	4.0
Methylene Chloride	4.0	U	0.18	4.0
methyl isobutyl ketone	4.0	U	0.60	4.0
Styrene	1.0	U	0.34	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.30	1.0
Tetrachloroethene	1.0	U	0.22	1.0
Toluene	1.0	U	0.36	1.0
1,1,1-Trichloroethane	9.0		0.32	1.0
1,1,2-Trichloroethane	1.0	U	0.22	1.0
Trichloroethene	20		0.22	1.0
Vinyl chloride	120		0.28	1.0
Xylenes, Total	2.0	U	0.60	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94		57 - 121
4-Bromofluorobenzene	88		57 - 121
Dibromofluoromethane	97		67 - 133
Toluene-d8 (Surr)	97		62 - 121

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 220-11703-8 Date Sampled: 03/17/2010 0000
Client Matrix: Water Date Received: 03/18/2010 1000

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B Analysis Batch: 220-36842 Instrument ID: MSV
Preparation: 5030B Lab File ID: V0889.D
Dilution: 1.0 Initial Weight/Volume: 5 mL
Date Analyzed: 03/18/2010 1836 Final Weight/Volume: 5 mL
Date Prepared: 03/18/2010 1836

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	1.6	J B	0.58	2.0
Benzene	0.50	U	0.14	0.50
Bromodichloromethane	0.50	U	0.078	0.50
Bromoform	0.50	U	0.13	0.50
Bromomethane	1.0	U	0.21	1.0
Methyl Ethyl Ketone	0.47	J	0.32	2.0
Carbon disulfide	0.50	U	0.077	0.50
Carbon tetrachloride	0.50	U	0.10	0.50
Chlorobenzene	0.50	U	0.057	0.50
Chloroethane	1.0	U	0.15	1.0
Chloroform	0.50	U	0.12	0.50
Chloromethane	0.50	U	0.20	0.50
Dibromochloromethane	0.50	U	0.088	0.50
1,1-Dichloroethane	0.50	U	0.13	0.50
1,2-Dichloroethane	0.50	U	0.12	0.50
1,1-Dichloroethene	0.50	U	0.19	0.50
cis-1,2-Dichloroethene	0.50	U	0.21	0.50
trans-1,2-Dichloroethene	0.50	U	0.24	0.50
1,2-Dichloropropane	0.50	U	0.11	0.50
cis-1,3-Dichloropropene	0.50	U	0.13	0.50
trans-1,3-Dichloropropene	0.50	U	0.19	0.50
Ethylbenzene	0.50	U	0.14	0.50
2-Hexanone	2.0	U	0.51	2.0
Methylene Chloride	2.0	U *	0.091	2.0
methyl isobutyl ketone	2.0	U	0.30	2.0
Styrene	0.50	U	0.17	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50
Tetrachloroethene	0.50	U	0.11	0.50
Toluene	0.50	U	0.18	0.50
1,1,1-Trichloroethane	0.50	U	0.16	0.50
1,1,2-Trichloroethane	0.50	U	0.11	0.50
Trichloroethene	0.28	J B	0.11	0.50
Vinyl chloride	0.50	U	0.14	0.50
Xylenes, Total	1.0	U	0.30	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101		57 - 121
4-Bromofluorobenzene	95		57 - 121
Dibromofluoromethane	97		67 - 133
Toluene-d8 (Surr)	96		62 - 121

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DBFM %Rec	DCA %Rec	TOL %Rec	BFB %Rec
220-11703-1	4009-15	98	100	95	96
220-11703-2	4009-14	98	100	95	96
220-11703-3	4009-13A	102	104	97	96
220-11703-4	4009-13	100	102	97	95
220-11703-5	4009-4	95	92	98	93
220-11703-6	4009-5	100	103	97	94
220-11703-7	4009-7	97	94	97	88
220-11703-8	TRIP BLANK	97	101	96	95
MB 220-36841/3		101	101	97	95
MB 220-36842/3		98	102	96	96
MB 220-36843/3		96	92	100	92
MB 220-36950/3		94	91	97	93
LCS 220-36841/2		97	95	97	94
LCS 220-36842/2		91	95	95	95
LCS 220-36843/2		91	89	101	91
LCS 220-36950/2		95	89	96	91
220-11691-A-6 MS		102	100	96	93
220-11691-A-6 MSD		98	99	95	94

Surrogate	Acceptance Limits
DBFM = Dibromofluoromethane	67-133
DCA = 1,2-Dichloroethane-d4 (Surr)	57-121
TOL = Toluene-d8 (Surr)	62-121
BFB = 4-Bromofluorobenzene	57-121

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Method Blank - Batch: 220-36841

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-36841/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/19/2010 1141
Date Prepared: 03/19/2010 1141

Analysis Batch: 220-36841
Prep Batch: N/A
Units: ug/L

Instrument ID: MSV
Lab File ID: V0915.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	1.67	J	0.58	2.0
Benzene	0.50	U	0.14	0.50
Bromodichloromethane	0.50	U	0.078	0.50
Bromoform	0.50	U	0.13	0.50
Bromomethane	1.0	U	0.21	1.0
Methyl Ethyl Ketone	0.485	J	0.32	2.0
Carbon disulfide	0.50	U	0.077	0.50
Carbon tetrachloride	0.50	U	0.10	0.50
Chlorobenzene	0.50	U	0.057	0.50
Chloroethane	1.0	U	0.15	1.0
Chloroform	0.50	U	0.12	0.50
Chloromethane	0.50	U	0.20	0.50
Dibromochloromethane	0.50	U	0.088	0.50
1,1-Dichloroethane	0.50	U	0.13	0.50
1,2-Dichloroethane	0.50	U	0.12	0.50
1,1-Dichloroethene	0.50	U	0.19	0.50
cis-1,2-Dichloroethene	0.50	U	0.21	0.50
trans-1,2-Dichloroethene	0.50	U	0.24	0.50
1,2-Dichloropropane	0.50	U	0.11	0.50
cis-1,3-Dichloropropene	0.50	U	0.13	0.50
trans-1,3-Dichloropropene	0.50	U	0.19	0.50
Ethylbenzene	0.50	U	0.14	0.50
2-Hexanone	2.0	U	0.51	2.0
Methylene Chloride	0.846	J	0.091	2.0
methyl isobutyl ketone	2.0	U	0.30	2.0
Styrene	0.50	U	0.17	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50
Tetrachloroethene	0.50	U	0.11	0.50
Toluene	0.50	U	0.18	0.50
1,1,1-Trichloroethane	0.50	U	0.16	0.50
1,1,2-Trichloroethane	0.50	U	0.11	0.50
Trichloroethene	0.165	J	0.11	0.50
Vinyl chloride	0.50	U	0.14	0.50
Xylenes, Total	1.0	U	0.30	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101	57 - 121
4-Bromofluorobenzene	95	57 - 121
Dibromofluoromethane	101	67 - 133
Toluene-d8 (Surr)	97	62 - 121

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Lab Control Sample - Batch: 220-36841

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-36841/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/19/2010 1047
Date Prepared: 03/19/2010 1047

Analysis Batch: 220-36841
Prep Batch: N/A
Units: ug/L

Instrument ID: MSV
Lab File ID: V0913.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	10.0	11.5	115	33 - 150	
Benzene	10.0	10.1	101	72 - 123	
Bromodichloromethane	10.0	10.0	100	71 - 128	
Bromoform	10.0	9.80	98	66 - 120	
Bromomethane	10.0	6.42	64	35 - 150	
Methyl Ethyl Ketone	10.0	10.4	104	30 - 150	
Carbon disulfide	10.0	9.09	91	51 - 140	
Carbon tetrachloride	10.0	11.1	111	67 - 134	
Chlorobenzene	10.0	9.87	99	68 - 120	
Chloroethane	10.0	9.61	96	35 - 150	
Chloroform	10.0	10.3	103	72 - 131	
Chloromethane	10.0	11.9	119	30 - 150	
Dibromochloromethane	10.0	9.37	94	66 - 120	
1,1-Dichloroethane	10.0	10.6	106	74 - 127	
1,2-Dichloroethane	10.0	10.6	106	64 - 136	
1,1-Dichloroethene	10.0	8.97	90	70 - 134	
cis-1,2-Dichloroethene	10.0	9.54	95	70 - 120	
trans-1,2-Dichloroethene	10.0	9.65	97	63 - 120	
1,2-Dichloropropane	10.0	10.8	108	71 - 120	
cis-1,3-Dichloropropene	10.0	9.42	94	66 - 120	
trans-1,3-Dichloropropene	10.0	9.88	99	70 - 120	
Ethylbenzene	10.0	9.82	98	63 - 120	
2-Hexanone	10.0	9.64	96	29 - 150	
Methylene Chloride	10.0	11.1	111	47 - 150	
methyl isobutyl ketone	10.0	8.93	89	52 - 137	
Styrene	10.0	9.06	91	52 - 120	
1,1,2,2-Tetrachloroethane	10.0	9.56	96	62 - 129	
Tetrachloroethene	10.0	9.99	100	55 - 120	
Toluene	10.0	10.1	101	64 - 120	
1,1,1-Trichloroethane	10.0	10.5	105	70 - 134	
1,1,2-Trichloroethane	10.0	10.0	100	73 - 126	
Trichloroethene	10.0	9.94	99	66 - 120	
Vinyl chloride	10.0	9.86	99	48 - 150	
Xylenes, Total	30.0	28.3	94	61 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95	57 - 121
4-Bromofluorobenzene	94	57 - 121
Dibromofluoromethane	97	67 - 133
Toluene-d8 (Surr)	97	62 - 121

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 220-36841

Method: 8260B
Preparation: 5030B

MS Lab Sample ID: 220-11691-A-6 MS
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/19/2010 2109
Date Prepared: 03/19/2010 2109

Analysis Batch: 220-36841
Prep Batch: N/A

Instrument ID: MSV
Lab File ID: V0936.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

MSD Lab Sample ID: 220-11691-A-6 MSD
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/19/2010 2135
Date Prepared: 03/19/2010 2135

Analysis Batch: 220-36841
Prep Batch: N/A

Instrument ID: MSV
Lab File ID: V0937.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	81	88	33 - 150	8	20		
Benzene	107	103	72 - 123	4	20		
Bromodichloromethane	108	105	71 - 128	3	20		
Bromoform	110	117	66 - 120	6	20		
Bromomethane	60	57	35 - 150	5	20		
Methyl Ethyl Ketone	108	117	30 - 150	8	20		
Carbon disulfide	92	93	51 - 140	1	20		
Carbon tetrachloride	116	114	67 - 134	2	20		
Chlorobenzene	99	97	68 - 120	2	20		
Chloroethane	101	88	35 - 150	15	20		
Chloroform	109	106	72 - 131	3	20		
Chloromethane	117	106	30 - 150	9	20		
Dibromochloromethane	101	101	66 - 120	1	20		
1,1-Dichloroethane	112	109	74 - 127	3	20		
1,2-Dichloroethane	111	110	64 - 136	1	20		
1,1-Dichloroethene	92	90	70 - 134	2	20		
cis-1,2-Dichloroethene	101	100	70 - 120	1	20		
trans-1,2-Dichloroethene	99	97	63 - 120	1	20		
1,2-Dichloropropane	113	112	71 - 120	1	20		
cis-1,3-Dichloropropene	103	101	66 - 120	2	20		
trans-1,3-Dichloropropene	110	109	70 - 120	0	20		
Ethylbenzene	102	100	63 - 120	2	20		
2-Hexanone	108	118	29 - 150	9	20		
Methylene Chloride	94	95	47 - 150	1	20		
methyl isobutyl ketone	105	112	52 - 137	7	20		
Styrene	88	87	52 - 120	1	20		
1,1,2,2-Tetrachloroethane	100	109	62 - 129	8	20		
Tetrachloroethene	99	97	55 - 120	2	20		
Toluene	102	99	64 - 120	3	20		
1,1,1-Trichloroethane	109	106	70 - 134	3	20		

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 220-36841

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	220-11691-A-6 MS	Analysis Batch: 220-36841	Instrument ID: MSV
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: V0936.D
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	03/19/2010 2109		Final Weight/Volume: 5 mL
Date Prepared:	03/19/2010 2109		

MSD Lab Sample ID:	220-11691-A-6 MSD	Analysis Batch: 220-36841	Instrument ID: MSV
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: V0937.D
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	03/19/2010 2135		Final Weight/Volume: 5 mL
Date Prepared:	03/19/2010 2135		

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,2-Trichloroethane	107	109	73 - 126	1	20		
Trichloroethene	103	100	66 - 120	3	20		
Vinyl chloride	103	93	48 - 150	10	20		
Xylenes, Total	101	99	61 - 120	1	20		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100	99	57 - 121
4-Bromofluorobenzene	93	94	57 - 121
Dibromofluoromethane	102	98	67 - 133
Toluene-d8 (Surr)	96	95	62 - 121

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Matrix Spike/
Matrix Spike Duplicate Data Report - Batch: 220-36841

Method: 8260B
Preparation: 5030B

MS Lab Sample ID: 220-11691-A-6 MS
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/19/2010 2109
Date Prepared: 03/19/2010 2109

Units: ug/L

MSD Lab Sample ID: 220-11691-A-6 MSD
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/19/2010 2135
Date Prepared: 03/19/2010 2135

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Acetone	0.69	J	20.0	20.0	17.0	18.4
Benzene	0.50	U	20.0	20.0	21.5	20.7
Bromodichloromethane	0.50	U	20.0	20.0	21.6	21.1
Bromoform	0.50	U	20.0	20.0	21.9	23.3
Bromomethane	1.0	U	20.0	20.0	12.0	11.4
Methyl Ethyl Ketone	2.0	U	20.0	20.0	21.5	23.3
Carbon disulfide	0.50	U	20.0	20.0	18.4	18.6
Carbon tetrachloride	0.50	U	20.0	20.0	23.2	22.7
Chlorobenzene	0.50	U	20.0	20.0	19.8	19.4
Chloroethane	1.0	U	20.0	20.0	20.3	17.5
Chloroform	0.50	U	20.0	20.0	21.8	21.2
Chloromethane	0.50	U	20.0	20.0	23.4	21.3
Dibromochloromethane	0.50	U	20.0	20.0	20.1	20.3
1,1-Dichloroethane	0.50	U	20.0	20.0	22.4	21.8
1,2-Dichloroethane	0.50	U	20.0	20.0	22.2	21.9
1,1-Dichloroethene	0.50	U	20.0	20.0	18.3	18.0
cis-1,2-Dichloroethene	0.50	U	20.0	20.0	20.2	20.0
trans-1,2-Dichloroethene	0.50	U	20.0	20.0	19.7	19.4
1,2-Dichloropropane	0.50	U	20.0	20.0	22.7	22.5
cis-1,3-Dichloropropene	0.50	U	20.0	20.0	20.5	20.2
trans-1,3-Dichloropropene	0.50	U	20.0	20.0	21.9	21.9
Ethylbenzene	0.50	U	20.0	20.0	20.4	20.0
2-Hexanone	2.0	U	20.0	20.0	21.7	23.6
Methylene Chloride	2.0	U	20.0	20.0	18.8	19.0
methyl isobutyl ketone	2.0	U	20.0	20.0	20.9	22.4
Styrene	0.50	U	20.0	20.0	17.5	17.3
1,1,2,2-Tetrachloroethane	0.50	U	20.0	20.0	20.1	21.8
Tetrachloroethene	0.58		20.0	20.0	20.4	20.0
Toluene	0.50	U	20.0	20.0	20.4	19.8
1,1,1-Trichloroethane	0.50	U	20.0	20.0	21.8	21.2
1,1,2-Trichloroethane	0.50	U	20.0	20.0	21.5	21.8
Trichloroethene	0.23	J	20.0	20.0	20.9	20.2
Vinyl chloride	0.50	U	20.0	20.0	20.6	18.6
Xylenes, Total	1.0	U	60.0	60.0	60.5	59.6

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Method Blank - Batch: 220-36842

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-36842/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/18/2010 1219
Date Prepared: 03/18/2010 1219

Analysis Batch: 220-36842
Prep Batch: N/A
Units: ug/L

Instrument ID: MSV
Lab File ID: V0875.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	1.43	J	0.58	2.0
Benzene	0.50	U	0.14	0.50
Bromodichloromethane	0.50	U	0.078	0.50
Bromoform	0.50	U	0.13	0.50
Bromomethane	1.0	U	0.21	1.0
Methyl Ethyl Ketone	2.0	U	0.32	2.0
Carbon disulfide	0.50	U	0.077	0.50
Carbon tetrachloride	0.50	U	0.10	0.50
Chlorobenzene	0.50	U	0.057	0.50
Chloroethane	1.0	U	0.15	1.0
Chloroform	0.50	U	0.12	0.50
Chloromethane	0.50	U	0.20	0.50
Dibromochloromethane	0.50	U	0.088	0.50
1,1-Dichloroethane	0.50	U	0.13	0.50
1,2-Dichloroethane	0.50	U	0.12	0.50
1,1-Dichloroethene	0.50	U	0.19	0.50
cis-1,2-Dichloroethene	0.50	U	0.21	0.50
trans-1,2-Dichloroethene	0.50	U	0.24	0.50
1,2-Dichloropropane	0.50	U	0.11	0.50
cis-1,3-Dichloropropene	0.50	U	0.13	0.50
trans-1,3-Dichloropropene	0.50	U	0.19	0.50
Ethylbenzene	0.50	U	0.14	0.50
2-Hexanone	2.0	U	0.51	2.0
Methylene Chloride	5.66		0.091	2.0
methyl isobutyl ketone	2.0	U	0.30	2.0
Styrene	0.50	U	0.17	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50
Tetrachloroethene	0.50	U	0.11	0.50
Toluene	0.50	U	0.18	0.50
1,1,1-Trichloroethane	0.50	U	0.16	0.50
1,1,2-Trichloroethane	0.50	U	0.11	0.50
Trichloroethene	0.321	J	0.11	0.50
Vinyl chloride	0.50	U	0.14	0.50
Xylenes, Total	1.0	U	0.30	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102	57 - 121
4-Bromofluorobenzene	96	57 - 121
Dibromofluoromethane	98	67 - 133
Toluene-d8 (Surr)	96	62 - 121

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Lab Control Sample - Batch: 220-36842

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-36842/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/18/2010 1058
Date Prepared: 03/18/2010 1058

Analysis Batch: 220-36842
Prep Batch: N/A
Units: ug/L

Instrument ID: MSV
Lab File ID: V0872.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	10.0	11.0	110	33 - 150	
Benzene	10.0	10.6	106	72 - 123	
Bromodichloromethane	10.0	10.7	107	71 - 128	
Bromoform	10.0	9.95	99	66 - 120	
Bromomethane	10.0	7.44	74	35 - 150	
Methyl Ethyl Ketone	10.0	10.6	106	30 - 150	
Carbon disulfide	10.0	9.72	97	51 - 140	
Carbon tetrachloride	10.0	11.5	115	67 - 134	
Chlorobenzene	10.0	9.99	100	68 - 120	
Chloroethane	10.0	11.6	116	35 - 150	
Chloroform	10.0	10.8	108	72 - 131	
Chloromethane	10.0	11.5	115	30 - 150	
Dibromochloromethane	10.0	9.56	96	66 - 120	
1,1-Dichloroethane	10.0	11.2	112	74 - 127	
1,2-Dichloroethane	10.0	11.0	110	64 - 136	
1,1-Dichloroethene	10.0	9.28	93	70 - 134	
cis-1,2-Dichloroethene	10.0	9.80	98	70 - 120	
trans-1,2-Dichloroethene	10.0	9.53	95	63 - 120	
1,2-Dichloropropane	10.0	11.1	111	71 - 120	
cis-1,3-Dichloropropene	10.0	10.1	101	66 - 120	
trans-1,3-Dichloropropene	10.0	10.5	105	70 - 120	
Ethylbenzene	10.0	10.3	103	63 - 120	
2-Hexanone	10.0	9.45	95	29 - 150	
Methylene Chloride	10.0	15.1	151	47 - 150	*
methyl isobutyl ketone	10.0	9.02	90	52 - 137	
Styrene	10.0	9.40	94	52 - 120	
1,1,2,2-Tetrachloroethane	10.0	9.30	93	62 - 129	
Tetrachloroethene	10.0	9.78	98	55 - 120	
Toluene	10.0	10.7	107	64 - 120	
1,1,1-Trichloroethane	10.0	10.8	108	70 - 134	
1,1,2-Trichloroethane	10.0	9.95	99	73 - 126	
Trichloroethene	10.0	10.3	103	66 - 120	
Vinyl chloride	10.0	10.7	107	48 - 150	
Xylenes, Total	30.0	29.7	99	61 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95	57 - 121
4-Bromofluorobenzene	95	57 - 121
Dibromofluoromethane	91	67 - 133
Toluene-d8 (Surr)	95	62 - 121

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Method Blank - Batch: 220-36843

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-36843/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/19/2010 1148
Date Prepared: 03/19/2010 1148

Analysis Batch: 220-36843
Prep Batch: N/A
Units: ug/L

Instrument ID: MSW
Lab File ID: W1695.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	1.66	J	0.58	2.0
Benzene	0.50	U	0.14	0.50
Bromodichloromethane	0.50	U	0.078	0.50
Bromoform	0.50	U	0.13	0.50
Bromomethane	1.0	U	0.21	1.0
Methyl Ethyl Ketone	2.0	U	0.32	2.0
Carbon disulfide	0.50	U	0.077	0.50
Carbon tetrachloride	0.50	U	0.10	0.50
Chlorobenzene	0.50	U	0.057	0.50
Chloroethane	1.0	U	0.15	1.0
Chloroform	0.50	U	0.12	0.50
Chloromethane	0.50	U	0.20	0.50
Dibromochloromethane	0.50	U	0.088	0.50
1,1-Dichloroethane	0.50	U	0.13	0.50
1,2-Dichloroethane	0.50	U	0.12	0.50
1,1-Dichloroethene	0.50	U	0.19	0.50
cis-1,2-Dichloroethene	0.50	U	0.21	0.50
trans-1,2-Dichloroethene	0.50	U	0.24	0.50
1,2-Dichloropropane	0.50	U	0.11	0.50
cis-1,3-Dichloropropene	0.50	U	0.13	0.50
trans-1,3-Dichloropropene	0.50	U	0.19	0.50
Ethylbenzene	0.50	U	0.14	0.50
2-Hexanone	2.0	U	0.51	2.0
Methylene Chloride	2.0	U	0.091	2.0
methyl isobutyl ketone	2.0	U	0.30	2.0
Styrene	0.50	U	0.17	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50
Tetrachloroethene	0.50	U	0.11	0.50
Toluene	0.50	U	0.18	0.50
1,1,1-Trichloroethane	0.50	U	0.16	0.50
1,1,2-Trichloroethane	0.50	U	0.11	0.50
Trichloroethene	0.50	U	0.11	0.50
Vinyl chloride	0.50	U	0.14	0.50
Xylenes, Total	1.0	U	0.30	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	92	57 - 121
4-Bromofluorobenzene	92	57 - 121
Dibromofluoromethane	96	67 - 133
Toluene-d8 (Surr)	100	62 - 121

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Lab Control Sample - Batch: 220-36843

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-36843/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/19/2010 1058
Date Prepared: 03/19/2010 1058

Analysis Batch: 220-36843
Prep Batch: N/A
Units: ug/L

Instrument ID: MSW
Lab File ID: W1693.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	10.0	9.07	91	33 - 150	
Benzene	10.0	8.87	89	72 - 123	
Bromodichloromethane	10.0	8.67	87	71 - 128	
Bromoform	10.0	8.73	87	66 - 120	
Bromomethane	10.0	12.6	126	35 - 150	
Methyl Ethyl Ketone	10.0	8.05	80	30 - 150	
Carbon disulfide	10.0	9.14	91	51 - 140	
Carbon tetrachloride	10.0	8.62	86	67 - 134	
Chlorobenzene	10.0	8.56	86	68 - 120	
Chloroethane	10.0	11.3	113	35 - 150	
Chloroform	10.0	8.81	88	72 - 131	
Chloromethane	10.0	11.5	115	30 - 150	
Dibromochloromethane	10.0	8.87	89	66 - 120	
1,1-Dichloroethane	10.0	8.61	86	74 - 127	
1,2-Dichloroethane	10.0	8.34	83	64 - 136	
1,1-Dichloroethene	10.0	9.14	91	70 - 134	
cis-1,2-Dichloroethene	10.0	8.58	86	70 - 120	
trans-1,2-Dichloroethene	10.0	8.61	86	63 - 120	
1,2-Dichloropropane	10.0	8.24	82	71 - 120	
cis-1,3-Dichloropropene	10.0	8.20	82	66 - 120	
trans-1,3-Dichloropropene	10.0	7.60	76	70 - 120	
Ethylbenzene	10.0	8.77	88	63 - 120	
2-Hexanone	10.0	6.99	70	29 - 150	
Methylene Chloride	10.0	6.31	63	47 - 150	
methyl isobutyl ketone	10.0	8.21	82	52 - 137	
Styrene	10.0	7.45	74	52 - 120	
1,1,2,2-Tetrachloroethane	10.0	8.84	88	62 - 129	
Tetrachloroethene	10.0	8.71	87	55 - 120	
Toluene	10.0	9.28	93	64 - 120	
1,1,1-Trichloroethane	10.0	8.51	85	70 - 134	
1,1,2-Trichloroethane	10.0	8.86	89	73 - 126	
Trichloroethene	10.0	8.75	87	66 - 120	
Vinyl chloride	10.0	11.5	115	48 - 150	
Xylenes, Total	30.0	23.1	77	61 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	89	57 - 121
4-Bromofluorobenzene	91	57 - 121
Dibromofluoromethane	91	67 - 133
Toluene-d8 (Surr)	101	62 - 121

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Method Blank - Batch: 220-36950

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-36950/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/23/2010 1115
Date Prepared: 03/23/2010 1115

Analysis Batch: 220-36950
Prep Batch: N/A
Units: ug/L

Instrument ID: MSV
Lab File ID: V0998.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
Acetone	1.42	J	0.58	2.0
Benzene	0.50	U	0.14	0.50
Bromodichloromethane	0.50	U	0.078	0.50
Bromoform	0.50	U	0.13	0.50
Bromomethane	1.0	U	0.21	1.0
Methyl Ethyl Ketone	0.612	J	0.32	2.0
Carbon disulfide	0.50	U	0.077	0.50
Carbon tetrachloride	0.50	U	0.10	0.50
Chlorobenzene	0.50	U	0.057	0.50
Chloroethane	1.0	U	0.15	1.0
Chloroform	0.50	U	0.12	0.50
Chloromethane	0.50	U	0.20	0.50
Dibromochloromethane	0.50	U	0.088	0.50
1,1-Dichloroethane	0.50	U	0.13	0.50
1,2-Dichloroethane	0.50	U	0.12	0.50
1,1-Dichloroethene	0.50	U	0.19	0.50
cis-1,2-Dichloroethene	0.50	U	0.21	0.50
trans-1,2-Dichloroethene	0.50	U	0.24	0.50
1,2-Dichloropropane	0.50	U	0.11	0.50
cis-1,3-Dichloropropene	0.50	U	0.13	0.50
trans-1,3-Dichloropropene	0.50	U	0.19	0.50
Ethylbenzene	0.50	U	0.14	0.50
2-Hexanone	2.0	U	0.51	2.0
Methylene Chloride	1.06	J	0.091	2.0
methyl isobutyl ketone	2.0	U	0.30	2.0
Styrene	0.50	U	0.17	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.15	0.50
Tetrachloroethene	0.50	U	0.11	0.50
Toluene	0.50	U	0.18	0.50
1,1,1-Trichloroethane	0.50	U	0.16	0.50
1,1,2-Trichloroethane	0.50	U	0.11	0.50
Trichloroethene	0.50	U	0.11	0.50
Vinyl chloride	0.50	U	0.14	0.50
Xylenes, Total	1.0	U	0.30	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	91	57 - 121
4-Bromofluorobenzene	93	57 - 121
Dibromofluoromethane	94	67 - 133
Toluene-d8 (Surr)	97	62 - 121

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

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Lab Control Sample - Batch: 220-36950

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-36950/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/23/2010 1021
Date Prepared: 03/23/2010 1021

Analysis Batch: 220-36950
Prep Batch: N/A
Units: ug/L

Instrument ID: MSV
Lab File ID: V0996.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	10.0	10.0	100	33 - 150	
Benzene	10.0	10.8	108	72 - 123	
Bromodichloromethane	10.0	10.6	106	71 - 128	
Bromoform	10.0	10.2	102	66 - 120	
Bromomethane	10.0	11.3	113	35 - 150	
Methyl Ethyl Ketone	10.0	9.69	97	30 - 150	
Carbon disulfide	10.0	11.2	112	51 - 140	
Carbon tetrachloride	10.0	10.7	107	67 - 134	
Chlorobenzene	10.0	10.3	103	68 - 120	
Chloroethane	10.0	13.3	133	35 - 150	
Chloroform	10.0	10.8	108	72 - 131	
Chloromethane	10.0	12.6	126	30 - 150	
Dibromochloromethane	10.0	10.3	103	66 - 120	
1,1-Dichloroethane	10.0	10.9	109	74 - 127	
1,2-Dichloroethane	10.0	10.4	104	64 - 136	
1,1-Dichloroethene	10.0	10.5	105	70 - 134	
cis-1,2-Dichloroethene	10.0	10.4	104	70 - 120	
trans-1,2-Dichloroethene	10.0	10.5	105	63 - 120	
1,2-Dichloropropane	10.0	10.5	105	71 - 120	
cis-1,3-Dichloropropene	10.0	10.4	104	66 - 120	
trans-1,3-Dichloropropene	10.0	10.4	104	70 - 120	
Ethylbenzene	10.0	10.8	108	63 - 120	
2-Hexanone	10.0	10.1	101	29 - 150	
Methylene Chloride	10.0	10.3	103	47 - 150	
methyl isobutyl ketone	10.0	9.92	99	52 - 137	
Styrene	10.0	9.88	99	52 - 120	
1,1,2,2-Tetrachloroethane	10.0	10.4	104	62 - 129	
Tetrachloroethene	10.0	10.5	105	55 - 120	
Toluene	10.0	11.0	110	64 - 120	
1,1,1-Trichloroethane	10.0	11.0	110	70 - 134	
1,1,2-Trichloroethane	10.0	10.2	102	73 - 126	
Trichloroethene	10.0	10.2	102	66 - 120	
Vinyl chloride	10.0	13.5	135	48 - 150	
Xylenes, Total	30.0	31.6	105	61 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	89	57 - 121
4-Bromofluorobenzene	91	57 - 121
Dibromofluoromethane	95	67 - 133
Toluene-d8 (Surr)	96	62 - 121

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

DATA REPORTING QUALIFIERS

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

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: 220-11703-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:220-36841					
LCS 220-36841/2	Lab Control Sample	T	Water	8260B	
MB 220-36841/3	Method Blank	T	Water	8260B	
220-11691-A-6 MS	Matrix Spike	T	Water	8260B	
220-11691-A-6 MSD	Matrix Spike Duplicate	T	Water	8260B	
220-11703-3	4009-13A	T	Water	8260B	
220-11703-4	4009-13	T	Water	8260B	
220-11703-6	4009-5	T	Water	8260B	
Analysis Batch:220-36842					
LCS 220-36842/2	Lab Control Sample	T	Water	8260B	
MB 220-36842/3	Method Blank	T	Water	8260B	
220-11703-1	4009-15	T	Water	8260B	
220-11703-2	4009-14	T	Water	8260B	
220-11703-8	TRIP BLANK	T	Water	8260B	
Analysis Batch:220-36843					
LCS 220-36843/2	Lab Control Sample	T	Water	8260B	
MB 220-36843/3	Method Blank	T	Water	8260B	
220-11703-7	4009-7	T	Water	8260B	
Analysis Batch:220-36950					
LCS 220-36950/2	Lab Control Sample	T	Water	8260B	
MB 220-36950/3	Method Blank	T	Water	8260B	
220-11703-5	4009-4	T	Water	8260B	

Report Basis
T = Total

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Laboratory Chronicle

Lab ID: 220-11703-1 **Client ID: 4009-15**

Sample Date/Time: 03/17/2010 09:35 Received Date/Time: 03/18/2010 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11703-B-1		220-36842		03/18/2010 19:03	1	TAL CT	BK
A:8260B	220-11703-B-1		220-36842		03/18/2010 19:03	1	TAL CT	BK

Lab ID: 220-11703-2 **Client ID: 4009-14**

Sample Date/Time: 03/17/2010 10:10 Received Date/Time: 03/18/2010 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11703-C-2		220-36842		03/18/2010 19:30	1	TAL CT	BK
A:8260B	220-11703-C-2		220-36842		03/18/2010 19:30	1	TAL CT	BK

Lab ID: 220-11703-3 **Client ID: 4009-13A**

Sample Date/Time: 03/17/2010 11:25 Received Date/Time: 03/18/2010 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11703-B-3		220-36841		03/19/2010 12:08	1	TAL CT	BK
A:8260B	220-11703-B-3		220-36841		03/19/2010 12:08	1	TAL CT	BK

Lab ID: 220-11703-4 **Client ID: 4009-13**

Sample Date/Time: 03/17/2010 12:30 Received Date/Time: 03/18/2010 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11703-C-4		220-36841		03/19/2010 12:35	1	TAL CT	BK
A:8260B	220-11703-C-4		220-36841		03/19/2010 12:35	1	TAL CT	BK

Lab ID: 220-11703-5 **Client ID: 4009-4**

Sample Date/Time: 03/17/2010 15:10 Received Date/Time: 03/18/2010 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11703-A-5		220-36950		03/23/2010 12:37	1	TAL CT	BK
A:8260B	220-11703-A-5		220-36950		03/23/2010 12:37	1	TAL CT	BK

Lab ID: 220-11703-6 **Client ID: 4009-5**

Sample Date/Time: 03/17/2010 15:15 Received Date/Time: 03/18/2010 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11703-B-6		220-36841		03/19/2010 13:29	1	TAL CT	BK
A:8260B	220-11703-B-6		220-36841		03/19/2010 13:29	1	TAL CT	BK

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Laboratory Chronicle

Lab ID: 220-11703-7 **Client ID: 4009-7**

Sample Date/Time: 03/17/2010 16:30 Received Date/Time: 03/18/2010 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11703-A-7		220-36843		03/19/2010 16:25	2	TAL CT	BK
A:8260B	220-11703-A-7		220-36843		03/19/2010 16:25	2	TAL CT	BK

Lab ID: 220-11703-8 **Client ID: TRIP BLANK**

Sample Date/Time: 03/17/2010 00:00 Received Date/Time: 03/18/2010 10:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11703-B-8		220-36842		03/18/2010 18:36	1	TAL CT	BK
A:8260B	220-11703-B-8		220-36842		03/18/2010 18:36	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 220-36842/3		220-36842		03/18/2010 12:19	1	TAL CT	BK
A:8260B	MB 220-36842/3		220-36842		03/18/2010 12:19	1	TAL CT	BK
P:5030B	MB 220-36841/3		220-36841		03/19/2010 11:41	1	TAL CT	BK
A:8260B	MB 220-36841/3		220-36841		03/19/2010 11:41	1	TAL CT	BK
P:5030B	MB 220-36843/3		220-36843		03/19/2010 11:48	1	TAL CT	BK
A:8260B	MB 220-36843/3		220-36843		03/19/2010 11:48	1	TAL CT	BK
P:5030B	MB 220-36950/3		220-36950		03/23/2010 11:15	1	TAL CT	BK
A:8260B	MB 220-36950/3		220-36950		03/23/2010 11:15	1	TAL CT	BK

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 220-36842/2		220-36842		03/18/2010 10:58	1	TAL CT	BK
A:8260B	LCS 220-36842/2		220-36842		03/18/2010 10:58	1	TAL CT	BK
P:5030B	LCS 220-36841/2		220-36841		03/19/2010 10:47	1	TAL CT	BK
A:8260B	LCS 220-36841/2		220-36841		03/19/2010 10:47	1	TAL CT	BK
P:5030B	LCS 220-36843/2		220-36843		03/19/2010 10:58	1	TAL CT	BK
A:8260B	LCS 220-36843/2		220-36843		03/19/2010 10:58	1	TAL CT	BK
P:5030B	LCS 220-36950/2		220-36950		03/23/2010 10:21	1	TAL CT	BK
A:8260B	LCS 220-36950/2		220-36950		03/23/2010 10:21	1	TAL CT	BK

Client: Malcolm Pirnie, Inc. Job Number: 220-11703-1

Laboratory Chronicle

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

Sample Date/Time: 03/11/2010 12:20 Received Date/Time: 03/17/2010 10:05

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11691-A-6 MS		220-36841		03/19/2010 21:09	1	TAL CT	BK
A:8260B	220-11691-A-6 MS		220-36841		03/19/2010 21:09	1	TAL CT	BK

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

Sample Date/Time: 03/11/2010 12:20 Received Date/Time: 03/17/2010 10:05

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11691-A-6 MSD		220-36841		03/19/2010 21:35	1	TAL CT	BK
A:8260B	220-11691-A-6 MSD		220-36841		03/19/2010 21:35	1	TAL CT	BK

Lab References:
TAL CT = TestAmerica Connecticut

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

Appendix D

Groundwater Monitoring Well Inspection Forms

MALCOLM PIRNIE

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: VESTAL PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: JSR/GB

WELL DESIGNATION: 4009 - 1

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	_____ inches	N/A [ ]	
Approximate Stickup Height	3 feet	N/A [ ]	
Integrity of Protective Casing	Describe: GOOD		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [✓]	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [✓] Other _____
Integrity of Surface Seal/Apron	Describe: _____		
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	0 ppm		
Depth to Water (to top of casing)	7.21 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:

_____

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MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: VESTAL PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: JSR/GB

WELL DESIGNATION: 4009-2

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	_____ inches	N/A [ ]	
Approximate Stickup Height	3 feet	N/A [ ]	
Integrity of Protective Casing	Describe: GOOD		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	6 inches		
Weep Hole in Protective Casing	Yes [ ]	No [✓]	
Surface Seal/Apron Material	Cement [✓]	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: NONE		
Surface Water in Casing?	Yes [ ]	No [✓]	Describe: _____
Well Casing Diameter	4 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	0 ppm		
Depth to Water (to top of casing)	17.35 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: SOFT		

Additional Comments:

NO EXPANSION PLUG

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: VESTAL PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: JSR/GB

WELL DESIGNATION: 4009-3

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	____ inches	N/A [ ]	
Approximate Stickup Height	3 feet	N/A [ ]	
Integrity of Protective Casing	Describe: GOOD		
Protective Casing Material	Steel [~~✓~~]	Stainless Steel [✓]	Other ____
Protective Casing Width or Dia.	6 inches		
Weep Hole in Protective Casing	Yes [ ]	No [✓]	
Surface Seal/Apron Material	Cement [✓]	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	0.4 ppm		
Depth to Water (to top of casing)	12.75 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	30.55 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 PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: JSR/GB

WELL DESIGNATION: 4009-4

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	____ inches	N/A [ ]	
Approximate Stickup Height	0.5 feet	N/A [ ]	
Integrity of Protective Casing	Describe: GOOD		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [✓]	
Surface Seal/Apron Material	Cement [✓]	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	0 ppm		
Depth to Water (to top of casing)	8.86 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	43.39 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: SOFT		

Additional Comments:

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: VESTAL PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: JSR/GB

WELL DESIGNATION: 4009-5

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	____ inches	N/A [ ]		
Approximate Stickup Height	2 feet	N/A [ ]		
Integrity of Protective Casing	Describe: GOOD			
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____	
Protective Casing Width or Dia.	6 inches			
Weep Hole in Protective Casing	Yes [ ]	No [✓]		
Surface Seal/Apron Material	Cement [✓]	Bentonite [ ]	Not apparent [ ]	Other ____
Integrity of Surface Seal/Apron	Describe: CRACKED - SPLIT IN HALF AT WELL			
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	4 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	0.4 ppm			
Depth to Water (tq top of casing)	13.84 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:

_____

_____

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_____

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MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: VESTAL PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: JSR/GB

WELL DESIGNATION: 4009-6

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	____ inches	N/A [ ]	
Approximate Stickup Height	2 feet	N/A [ ]	
Integrity of Protective Casing	Describe: GOOD		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [✓]	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [✓] Other ____
Integrity of Surface Seal/Apron	Describe: ____		
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	0 ppm		
Depth to Water (to top of casing)	17.52 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:

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MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: VESTAL PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: _____

WELL DESIGNATION: 4009 - 7

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	_____ inches	N/A [ ]		
Approximate Stickup Height	3 feet	N/A [ ]		
Integrity of Protective Casing	Describe: GOOD			
Protective Casing Material	Steel [ ]	Stainless Steel [✓]	Other _____	
Protective Casing Width or Dia.	4 inches			
Weep Hole in Protective Casing	Yes [ ]	No [✓]		
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [✓]	Other _____
Integrity of Surface Seal/Apron	Describe: _____			
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: NO LOCK - NO HOLE FOR LATCH	
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	8.4 ppm			
Depth to Water (to top of casing)	15.09 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: SOFT			

Additional Comments:

NO HOLE FOR LOCK LATCH ON BOTTOM PORTION OF LOCKING LID (PROTECTIVE CASING)

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: VESTAL | PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 | INSPECTOR: JSR/GB

WELL DESIGNATION: 4009-8

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	_____ inches	N/A [ ]	
Approximate Stickup Height	3 feet	N/A [ ]	
Integrity of Protective Casing	Describe: _____		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [✓]	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [✓] Other _____
Integrity of Surface Seal/Apron	Describe: _____		
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	2.9 ppm		
Depth to Water (to top of casing)	15.29 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: SOFT		

Additional Comments:

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MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: VESTAL PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: JSR/GB

WELL DESIGNATION: 4009-9

WELL LOCATION:

Outward Appearance

Flushmount Diameter	12 inches	N/A [ ]	
Approximate Stickup Height	____ feet	N/A [ ]	
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 [✓]	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	4 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	0 ppm		
Depth to Water (to top of casing)	16.08 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:

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: NESTAL PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: DSR/GB

WELL DESIGNATION: 4009-10

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	12 inches	N/A [ ]	
Approximate Stickup Height	_____ feet	N/A [ ]	
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 [ ]	Bentonite [ ]	Not apparent [✓] Other _____
Integrity of Surface Seal/Apron	Describe: _____		
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	4 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	0.5 ppm		
Depth to Water (to top of casing)	22.41 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:

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MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: VESTAL PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: BR/GB

WELL DESIGNATION: 4009-11

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	8 inches	N/A [ ]	
Approximate Stickup Height	_____ feet	N/A [ ]	
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 [✓]	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	1.7 ppm		
Depth to Water (to top of casing)	19.81 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 PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: JSR/GB

WELL DESIGNATION: 4009-11A

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	8 inches	N/A [ ]	
Approximate Stickup Height	_____ feet	N/A [ ]	
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 [✓]	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	0 ppm		
Depth to Water (to top of casing)	13.89 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:

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MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: VESTAL PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: JSR/GB

WELL DESIGNATION: 4009-12

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	8 inches	N/A [ ]	
Approximate Stickup Height	_____ feet	N/A [ ]	
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 [✓]	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	0 ppm		
Depth to Water (to top of casing)	12.82 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: SOFT		

Additional Comments:

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MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: VESTAL PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: JSR/GB

WELL DESIGNATION: 4009-12A

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	8 inches	N/A [ ]	
Approximate Stickup Height	_____ feet	N/A [ ]	
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 [✓]	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	0 ppm		
Depth to Water (to top of casing)	13.30 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 PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: JSR/GB

WELL DESIGNATION: 4009-13

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	8 inches	N/A [ ]	
Approximate Stickup Height	_____ feet	N/A [ ]	
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 [✓]	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	1.4 ppm		
Depth to Water (to top of casing)	6.24 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:

6.24 DTW

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: YESTAL PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: JSR/GB

WELL DESIGNATION: 4009-13A

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	8 inches	N/A [ ]	
Approximate Stickup Height	_____ feet	N/A [ ]	
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 [✓]	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	0.8 ppm		
Depth to Water (to top of casing)	6.31 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 PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: JSR / GB

WELL DESIGNATION: 4009-14

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	____ inches	N/A [ ]	
Approximate Stickup Height	3 feet	N/A [ ]	
Integrity of Protective Casing	Describe: GOOD		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [✓]	
Surface Seal/Apron Material	Cement [✓]	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	0 ppm 10.49		
Depth to Water (to top of casing)	20.49 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	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: VESTAL PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: JSR

WELL DESIGNATION: 4009-15

WELL LOCATION:

Outward Appearance

Flushmount Diameter	____ inches	N/A [✓]	
Approximate Stickup Height	3 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [✓]	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [✓] Other ____
Integrity of Surface Seal/Apron	Describe:		
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	0 ppm		
Depth to Water (to top of casing)	16.17 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	128.50 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: SOFT		

Additional Comments:

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: VESTAL PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: JSR / GB

WELL DESIGNATION: 4009 - 16

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	____ inches	N/A [✓]	
Approximate Stickup Height	3 feet	N/A [ ]	
Integrity of Protective Casing	Describe: GOOD		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [✓]	
Surface Seal/Apron Material	Cement [✓]	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	16.82 0 ppm		
Depth to Water (to top of casing)	~~36.82~~ 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:

_____

_____

_____

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_____

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: VESTAL PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: JSR/GB

WELL DESIGNATION: 4009 - 16A

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	____ inches	N/A [✓]		
Approximate Stickup Height	3 feet	N/A [ ]		
Integrity of Protective Casing	Describe: GOOD			
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____	
Protective Casing Width or Dia.	4 inches			
Weep Hole in Protective Casing	Yes [ ]	No [✓]		
Surface Seal/Apron Material	Cement [✓]	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	16.41 0 ppm		
Depth to Water (to top of casing)	~~26.41~~ feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	147.90 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 PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: JSR/GB

WELL DESIGNATION: 4009 - 17

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	_____ inches	N/A [✓]	
Approximate Stickup Height	1 feet	N/A [ ]	
Integrity of Protective Casing	Describe: NONE		
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 [ ]	Bentonite [ ]	Not apparent [✓] Other _____
Integrity of Surface Seal/Apron	Describe: _____		
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:	NA
Photograph Taken? Photo #	Yes [ ]	No [✓] Describe:	_____

Inner Appearance

Integrity of Well Casing	Describe: GOOD		
Integrity of Cap Seal	Describe: PVC CAP		
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	0 ppm	10.03	
Depth to Water (to top of casing)	~~10.03~~ feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	41.52 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 PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: JSF/GB

WELL DESIGNATION: 4009 - 18

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	____ inches	N/A [ ]		
Approximate Stickup Height	3 feet	N/A [ ]		
Integrity of Protective Casing	Describe: GOOD			
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____	
Protective Casing Width or Dia.	4 inches			
Weep Hole in Protective Casing	Yes [ ]	No [✓]		
Surface Seal/Apron Material	Cement [✓]	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: PVC SLIP CAP - 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	0 ppm	24.39	
Depth to Water (to top of casing)	~~34.39~~ 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: ~~SOFT~~		

Additional Comments:

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: VESTAL PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: JSR/GB

WELL DESIGNATION: 4009-19

WELL LOCATION:

Outward Appearance

Flushmount Diameter	____ inches	N/A [ ]	
Approximate Stickup Height	3 feet	N/A [ ]	
Integrity of Protective Casing	Describe: GOOD		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [✓]	
Surface Seal/Apron Material	Cement [✓]	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	0 ppm 14.63		
Depth to Water (to top of casing)	24.63 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	104.39 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: SOFT		

Additional Comments:

MALCOLM PIRNIE

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: VESTAL PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: JSR/GB

WELL DESIGNATION: 4009-20

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	____ inches	N/A [ ]	
Approximate Stickup Height	1 feet	N/A [ ]	
Integrity of Protective Casing	Describe: NONE		
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 [ ]	Bentonite [ ]	Not apparent [✓] Other ____
Integrity of Surface Seal/Apron	Describe: ____		
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: NA	
Photograph Taken? Photo #	Yes [ ]	No [✓] Describe: ____	

Inner Appearance

Integrity of Well Casing	Describe: GOOD		
Integrity of Cap Seal	Describe: PVC CAP		
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	0 ppm 11.80		
Depth to Water (to top of casing)	21.80 feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	49.81 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 PROJECT NUMBER: 0266352

DATE OF INSPECTION: 3/16/2010 INSPECTOR: JSR/GB

WELL DESIGNATION: 4009-21

WELL LOCATION: _____

Outward Appearance

Flushmount Diameter	____ inches	N/A [ ]	
Approximate Stickup Height	1.5 feet	N/A [ ]	
Integrity of Protective Casing	Describe: NONE		
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 [ ]	Bentonite [ ]	Not apparent [✓] Other ____
Integrity of Surface Seal/Apron	Describe: ____		
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: NA	
Photograph Taken? Photo #	Yes [ ]	No [✓] Describe: ____	

Inner Appearance

Integrity of Well Casing	Describe: GOOD		
Integrity of Cap Seal	Describe: PVC CAP		
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	0 ppm 12.96		
Depth to Water (to top of casing)	~~22.96~~ feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [ ]
Total Well Depth (to top of casing)	15.15 feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: SOFT		

Additional Comments:

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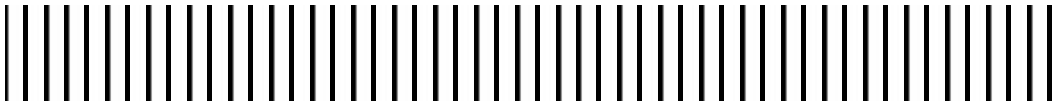
_____

_____

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

Appendix E

Water Level Data Form



0266352 / ALB

MALCOLM PIRNIE

GROUNDWATER LEVEL DATA FORM

PROJECT NAME: Vestal Water Supply
PROJECT NUMBER: 0266352

DATE: 3/16/2010
PERSONNEL: JR (MPI), GB (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	3/16/2010	0	-	7.21	TOC
4009-2	EB-33	3/16/2010	0	-	17.35	TOC
4009-3	S-7	3/16/2010	0.4	-	12.75	TOC
4009-4	S-6	3/16/2010	0	-	8.86	TOC
4009-5	EB-31	3/16/2010	0.4	-	13.84	TOC
4009-6	S-1	3/16/2010	0	-	17.52	TOC
4009-7	S-2	3/16/2010	8.4	-	15.09	TOC
4009-8	S-11	3/16/2010	2.9	-	15.29	TOC
4009-9	EB-41	3/16/2010	0	-	16.08	TOC
4009-10	EB-42	3/16/2010	0.5	-	22.41	TOC
4009-11	1-32	3/16/2010	1.7	-	19.81	TOC
4009-11A	1-32A	3/16/2010	0	-	13.89	TOC
4009-12	1-29	3/16/2010	0	-	12.82	TOC
4009-12A	1-29A	3/16/2010	0	-	13.30	TOC
4009-13	1-30	3/16/2010	1.4	-	6.24	TOC
4009-13A	1-30A	3/16/2010	0.8	-	6.31	TOC
4009-14	1-23	3/16/2010	0	-	10.49	TOC
4009-15	1-24	3/16/2010	0	-	16.17	TOC
4009-16	1-20	3/16/2010	0	-	16.82	TOC
4009-16A	1-20A	3/16/2010	0	-	16.41	TOC
4009-17	Piezo-levee*	3/16/2010	0	-	10.03	TOC
4009-18	well-west well house*	3/16/2010	0	-	24.39	TOC
4009-19	well-south well house*	3/16/2010	0	-	14.63	TOC
4009-20	Piezo-north*	3/16/2010	0	-	11.80	TOC
4009-21	Piezo-west*	3/16/2010	0	-	12.96	TOC
Well 1-1		3/16/2010	NM	-	21.89	TOC**
Well 1-1A		3/16/2010	NM	-	76.02	TOC

Notes:

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

** - Measured from top of Aqua Gard pipe.

TOC - Top of casing

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

Appendix F

Groundwater Sampling Purge Logs

MALCOLM PIRNIE

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009 - 1 DATE: 3/16/10

PROJECT NAME: Vestal

PROJECT NUMBER: 0266352

SAMPLERS: CB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 7.21

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"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	1340	1350	1360	1310	1320	1325						
Gallons	1/4	~~3~~ 1/2	~~2~~ 1	1 1/2	2 1/4	3						
Well Volume	7.60	7.62	7.62	7.70	7.70	7.70						
pH	6.53	6.50	6.50	6.50	6.50	6.50						
Conductivity (mohm/cm)	1.04	1.01	1.01	1.01	1.01	1.01						
Turbidity	103	66.5	53.2	33.4	24.3	23.5						
Dissolved Oxygen	0.12	0.05	0.00	0.00	0.00	0.00						
Temperature (°C)	9.87	10.61	10.32	10.03	9.91	9.85						
Salinity	0.6	0.0	0.6	0.0	0.0	0.0						
TDS	0.7	0.6	0.7	0.6	0.6	0.6						
REDOX (mV)	-65	-64	-66	-70	-73	-74						

Notes: started purging @ 1230
Sampled @ 1325

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009 - 2 DATE: 3/16/16

PROJECT NAME: Vestal

PROJECT NUMBER: 026635.2

SAMPLERS: GB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 17.22

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	1400	1410	1420	1430	1440	1445	1450	1455	1500			
Gallons	1/2	1	1 1/2	2	2 1/2		3		3 1/2			
Well Volume	17.65	17.74	17.82	17.92	17.95	18.00	18.00	18.02	18.02			
pH	6.60	6.62	6.63	6.65	6.65	6.66	6.67	6.64	6.64			
Conductivity (mohm/cm)	2.42	2.44	2.46	2.49	2.48	2.49	2.49	2.50	2.50			
Turbidity	46.0	29.5	19.2	19.0	12.5	7.2	25.5	25.8	23.7			
Dissolved Oxygen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Temperature (°C)	12.44	12.44	12.45	12.32	12.38	12.38	12.43	12.39	12.40			
Salinity	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
TDS	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6			
REDOX (mV)	-36	-41	-45	-48	-50	-49	-49	-50	-51			

Notes: Started purging @ 1350
Sampled @ 1500

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-3 DATE: 3/16/10

PROJECT NAME: Vestal

PROJECT NUMBER: 0266352

SAMPLERS: GB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 12.52

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	1535	1545	1555	1605	1615	1625	1635	1640	1645	1650		
Gallons			1½		3	3	4½			5		
Well Volume	13.12	13.14	13.14	13.14	3.14	3.14	3.14	3.14	3.14	3.14		
pH	6.22	6.05	6.13	6.27	6.36	6.39	6.43	6.43	6.44	6.45		
Conductivity (mohm/cm)	0.927	0.960	1.26	1.50	1.61	1.65	1.71	1.72	1.73	1.73		
Turbidity	347.0	405	194	39.7	25.6	26.5	26.2	39.0	41.8	42.4		
Dissolved Oxygen	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Temperature (°C)	12.05	12.12	12.06	12.17	12.13	12.06	12.05	12.07	12.01	11.94		
Salinity	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
TDS	0.53	0.55	0.8	1.0	1.0	1.1	1.1	1.1	1.1	1.1		
REDOX (mV)	15	7	-12	-48	-65	-72	-82	-82	-84	-85		

Notes: Started purging @ 1535
Sampled @ 1650

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-4 DATE: 3/17/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: 026352

SAMPLERS: JSR

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 8.63

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	1410	1420	1430	1440	1450	1500	1505	1510				
Gallons					2.5			3.5				
Well Volume	8.63	8.67	8.67	8.67	8.67	8.67	8.67	8.67				
pH	7.69	7.38	7.26	7.13	7.30	7.22	7.17	7.14				
Conductivity (mohm/cm)	.466	1.58	2.02	2.04	2.15	2.18	2.18	2.19				
Turbidity	70.0	91.5	75.8	78.8	73.1	71.4	71.3	71.4				
Dissolved Oxygen	10.10	5.06	2.67	0	0	0	0	0				
Temperature (°C)	12.02	11.90	11.84	12.09	12.16	12.23	12.22	12.04				
Salinity	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
TDS	0.30	1.0	1.3	1.3	1.4	1.4	1.4	1.4				
REDOX (mV)	25	-23	-70	-89	-128	-131	-132	-130				

Notes: 1410 START PURGE

1510 SAMPLED - VOCs

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-5 DATE: 3/17/16

PROJECT NAME: Vestal

PROJECT NUMBER: 0266352

SAMPLERS: GB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 13.57

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	1406	1415	1425	1435	1445	1455	1500	1505	1510	1515		
Gallons										3g		
Well Volume	13.64	13.90	14.30	14.73	15.02	15.29	15.41	15.56	15.69	15.73		
pH	6.90	6.64	6.55	6.53	6.52	6.53	6.53	6.53	6.54	6.53		
Conductivity (mohm/cm)	1.42	1.43	1.39	1.37	1.38	1.38	1.37	1.37	1.37	1.37		
Turbidity	851	184	110	35.2	25.1	26.8	26.7	16.2	15.9	16.0		
Dissolved Oxygen	5.83	2.97	0.29	0.16	0.00	0.60	0.00	0.00	0.00	0.00		
Temperature (°C)	14.03	14.38	13.79	13.84	14.24	14.21	14.15	14.09	14.04	14.03		
Salinity	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
TDS	0.9	0.9	0.9	0.5	0.9	0.9	0.9	0.9	0.5	0.9		
REDOX (mV)	1	15	9	-5	-9	-12	-15	-19	-21	-22		

Notes: Started purging @ 1400
Sampled @ 1515

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-6 DATE: 3/16/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: 026352

SAMPLERS: JSR

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 17.39

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	1505	1510	1520	1535	1545	1610	1615	1620				
Gallons				1.5		3						
Well Volume	17.80	17.74	17.77	17.76	17.80	17.80	17.81	17.80				
pH	6.40	6.36	6.48	6.76	6.71	6.58	6.55	6.53				
Conductivity (mohm/cm)	1.68	1.68	1.68	1.72	1.73	1.74	1.76	1.75				
Turbidity	384	92.7	78.4	66.7	55.4	58.8	61.5	62.1				
Dissolved Oxygen	6.49	6.05	5.68	5.37	4.85	0.36	0.39	0.33				
Temperature (°C)	11.17	11.42	11.35	11.47	11.62	12.27	11.87	11.90				
Salinity	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
TDS	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1				
REDOX (mV)	87	87	67	11	9	16	18	21				

Notes: 1505 START PURGE

1620 SAMPLED - VOCs

COLLECTED DUPLICATE - 4009-X

COLLECTED MS/MSD

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-7 DATE: 3/17/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: 0266352

SAMPLERS: GB/JSR

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 14.24

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	1545	1555	1605	1610	1620	1625	1630						
Gallons													
Well Volume	14.39	14.42	14.40	14.39	14.39	14.39	14.39						
pH	7.05	7.17	7.14	5.61	5.66	5.69	5.71						
Conductivity (mohm/cm)	8.76	8.64	8.79	13.9	13.5	13.4	13.3						
Turbidity	86.7	43.7	26.6	5.8	8.2	7.4	8.8						
Dissolved Oxygen	4.14	0	0	0	0	0	0						
Temperature (°C)	13.85	13.47	13.54	13.86	13.69	13.65	13.39						
Salinity	0.5	0.5	0.5	0.8	0.8	0.8	0.8						
TDS	5.5	5.4	5.8	9	8	8	8						
REDOX (mV)	58	37	-18	54	39	35	29						

Notes: 1545 START PURGE

1630 SAMPLED - VOCs

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-8 DATE: 3/16/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: 0266352

SAMPLERS: JSR

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 15.20

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	1340	1345	1355	1405	1415	1420	1425	1430				
Gallons			1				2.5					
Well Volume	15.24	15.22	15.22	15.22	15.22	15.22	15.22	15.22				
pH	6.62	6.64	7.61	7.86	7.95	7.87	7.80	7.77				
Conductivity (mohm/cm)	1.93	1.91	1.94	1.96	1.98	2.01	2.02	2.04				
Turbidity	114	133	92.1	55.7	35.9	37.4	33.9	34.6				
Dissolved Oxygen	4.54	5.80	1.39	0.1	0	0	0	0				
Temperature (°C)	13.41	13.61	13.44	13.48	13.59	13.64	13.62	13.44				
Salinity	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
TDS	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3				
REDOX (mV)	178	149	-12	-78	-109	-115	-117	-117				

Notes: 1340 START PURGE

1430 SAMPLED - VOCS

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4609-9 DATE: 3/15/10

PROJECT NAME: Vestal

PROJECT NUMBER: 026352

SAMPLERS: GB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 26.64

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	1650	1700	1710	1720	1725	1735	1740	1745			
Gallons		1	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2			
Well Volume	26.62	26.62	26.62	26.62	26.62	26.62	26.62	26.62	26.62			
pH	6.36	6.32	6.25	6.17	6.15	6.11	6.09	6.08	6.09			
Conductivity (mohm/cm)	2.14	2.14	2.14	2.15	2.15	2.15	2.15	2.15	2.15			
Turbidity	384.0	236.0	127.0	120	107.0	99.3	102.0	102.0	106			
Dissolved Oxygen	5.38	0.78	0.60	0.96	1.97	2.31	2.70	2.67	2.66			
Temperature (°C)	11.21	11.24	11.27	11.26	11.21	11.21	11.23	11.22	11.22			
Salinity	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
TDS	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4			
REDOX (mV)	25	27	34	42	46	51	52	53	53			

Notes: Started purging @ 1630
Sampled @ 1745

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009 - 10 DATE: 3/15/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: 026352

SAMPLERS: JSR

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 23.00

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	445	450	500	520	535	545	550	600	605			
Gallons			1.5	2.5	3.5		4		4.5			
Well Volume	23.00	23.00	22.99	22.98	22.97	22.96	22.96	22.95	22.95			
pH	6.83	6.81	6.82	6.82	6.82	6.81	6.79	6.78	6.78			
Conductivity (mohm/cm)	3.58	3.57	3.22	3.19	3.22	3.11	3.07	3.06	3.03			
Turbidity	320	270	114	98	88.9	46.0	78.0	68.8	67.2			
Dissolved Oxygen	1.59	0.58	2.25	2.62	2.82	3.27	2.97	3.86	3.93			
Temperature (°C)	11.20	11.27	11.42	11.42	11.30	11.31	11.26	11.18	11.18			
Salinity	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1			
TDS	2.3	2.3	2.1	2.0	2.1	2.0	2.0	2.0	1.9			
REDOX (mV)	69	69	62	62	62	56	58	51	49			

Notes: 445 START PURGE

605 SAMPLED - VOCs

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009 - 11 DATE: 3/15/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: 0266352

SAMPLERS: JSR

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 19.98

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	3:00	3:15	3:25	3:35	3:45								
Gallons		1	2		3								
Well Volume	20.03	20.05	20.05	20.05	20.05								
pH	7.03	6.72	6.71	6.72	6.73								
Conductivity (mohm/cm)	1.63	1.77	1.77	1.79	1.80								
Turbidity	12.6	3.7	43.4	39.4	40.3								
Dissolved Oxygen	0.02	0	0	0	0								
Temperature (°C)	11.05	10.97	11.15	11.08	11.03								
Salinity	0.1	0.1	0.1	0.1	0.1								
TDS	1.1	1.1	1.2	1.2	1.2								
REDOX (mV)	-82	-78	-79	-80	-81								

Notes: 3:00 START PURGE
3:45 SAMPLED FOR VOCs

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009 - 11A DATE: 3/15/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: D266352

SAMPLERS: GB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 23.91

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	1450	1500	1515	1530	1536	1535	1540	1545	1550			
Gallons			1g			2g			3g			
Well Volume	24.96	26.00	27.31	28.31	27.20	29.64	29.58	30.46	30.85			
pH	6.07	5.96	5.76	5.75	5.71	5.67	5.68	5.69	5.68			
Conductivity (mohm/cm)	1.43	1.41	1.23	1.22	1.24	1.24	1.28	1.28	1.28			
Turbidity	54.8	89.4	41.8	43.9	42.7	46.1	45.3	47.6	46.7			
Dissolved Oxygen	3.52	1.49	3.16	0.00	0.00	0.00	0.00	0.00	0.00			
Temperature (°C)	10.64	10.88	10.84	10.96	11.04	10.95	10.96	10.95	11.08			
Salinity	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
TDS	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8			
REDOX (mV)	52	56	71	75	84	91	91	90	91			

Notes: Start purging @ 1447

Sampled @ 1550

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 409 - 12 DATE: 3/15/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: 0266352

SAMPLERS: JSR

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 13.02

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	11:20	11:30	11:50	11:55	12:00	12:20	12:25	12:30	12:35			
Gallons	1	1.5	2.5	3	3	4	4	4.5	4.5			
Well Volume	12.75	12.75	12.73	12.71	12.71	12.69	12.69	12.69	12.68			
pH	7.10	6.97	6.96	6.95	6.95	6.95	6.95	6.95	6.95			
Conductivity (mohm/cm)	1.67	1.67	1.69	1.70	1.70	1.69	1.70	1.72	1.72			
Turbidity	73.6	37.4	26.8	13.2	9.5	13.7	9.3	9.3	9.6			
Dissolved Oxygen	0	0	0	0	0	0	0	0	0			
Temperature (°C)	9.72	9.93	10.18	10.17	9.77	9.79	9.83	9.81	9.97			
Salinity	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
TDS	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1			
REDOX (mV)	-139	-102	-97	-96	-92	-89	-87	-86	-83			

Notes: 11:00 START PURGE - TURBID - GRAY/BLACK

12:35 SAMPLED - VOCs / METALS - FILTERED & UNFILTERED

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-12A DATE: 3/15/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: 0266352

SAMPLERS: GB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 13.49

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

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

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	1125	1140	1156	1210	1205	1210	1215	1220	1225	1230	1235	1245
Gallons	½	1½	2½	3½	4	4½	4½	4½	4¾	5	5¼	5¼
Well Volume	~~1~~	13.45	13.45	13.50	13.45	13.45	13.45	13.45	13.45	13.40	13.40	13.40
pH	8.34	7.99	7.78	7.67	7.62	7.56	7.55	7.52	7.43	7.43	7.42	7.32
Conductivity (mohm/cm)	1.36	1.56	1.61	1.61	1.61	1.61	1.61	1.62	1.61	1.62	1.63	1.64
Turbidity	75.9	55.9	33.2	31.1	39.8	49.4	50.7	60.9	61.8	86.8	90.1	73.8
Dissolved Oxygen	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)	11.10	11.13	11.23	11.26	11.20	11.25	11.24	11.23	11.17	11.12	11.05	10.98
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
TDS	0.9	1.6	1.0	1.0	1.0	1.6	1.0	1.0	1.0	1.0	1.0	1.1
REDOX (mV)	-195	-156	-146	-145	-144	-144	-145	-145	-137	-140	-141	-132

Notes: Start Purge @ 1120

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-12A DATE: 3/15/2010

PROJECT NAME: Ucsf4

PROJECT NUMBER: 026352

SAMPLERS: GB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 13.49

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	1250	1255										
Gallons	5 1/2	5 1/2										
Well Volume	23.40	23.40										
pH	7.33	7.33										
Conductivity (mohm/cm)	1.64	1.64										
Turbidity	71.4	76.5										
Dissolved Oxygen	0.00	0.00										
Temperature (°C)	10.97	11.05										
Salinity	0.1	0.1										
TDS	1.0	1.0										
REDOX (mV)	-135	-137										

Notes: Page 2

Sampled @ 1255

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-13 DATE: 3/17/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: 0266 352

SAMPLERS: JSR

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 6.09

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	1100	1105	1115	1125	1135	1150	1200	1205	1210	1215	1220	1225	1230
Gallons				1.5		2.5	3					4.5	
Well Volume	6.09	7.30	7.61	7.90	8.09	7.91	7.75	7.75	7.75	7.78	7.80	7.80	7.80
pH	9.2	9.40	9.40	9.37	9.23	9.37	8.78	8.63	8.52	8.42	8.32	8.28	8.22
Conductivity (mohm/cm)	.853	.889	.909	.961	1.30	1.23	1.37	1.40	1.41	1.44	1.46	1.47	1.48
Turbidity	175	172	172	186	191	95.3	113	115	107	114	116	108	113
Dissolved Oxygen	0.12	0	0	0	0	0	0	0	0	0	0	0	0
Temperature (°C)	10.86	11.12	11.45	11.76	11.97	12.07	12.08	12.13	12.23	12.29	12.26	12.40	12.30
Salinity	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
TDS	0.55	0.57	0.58	0.62	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9
REDOX (mV)	-205	-228	-236	-256	-270	-297	-247	-244	-240	-236	-232	-229	-228

Notes: 11:00 START PURGE

12:30 SAMPLED - VOCs/METALS (TOTAL & DISSOLVED)

GRAY/BLACKISH WATER; CLEARED UP

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-13A DATE: 3/17/10

PROJECT NAME: Vestal

PROJECT NUMBER: 0266352

SAMPLERS: GB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 6.08

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	1025	1035	1045	1055	1105	1115	1126	1125	1130			
Gallons		1	X	2	X	3		4				
Well Volume	6.08	6.08	6.08	6.06	6.05	6.05	6.05	6.05				
pH	7.00	6.88	6.83	6.81	6.81	6.80	6.79	6.79				
Conductivity (mohm/cm)	2.30	2.26	2.24	2.24	2.23	2.22	2.22	2.23				
Turbidity	700	104	33.1	8.9	3.4	2.4	2.6	2.6				
Dissolved Oxygen	8.33	1.31	0.97	1.04	1.08	1.15	1.19	1.21				
Temperature (°C)	11.21	10.77	10.89	10.91	11.15	11.26	11.32	11.30				
Salinity	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
TDS	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4				
REDOX (mV)	-89	-58	-52	-39	-32	-23	-18	-16				

Notes: Started purging @ 1025
Sampled @ 1125

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: ~~VE~~ 4009 - 14 DATE: 3/17/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: 0266352

SAMPLERS: JSR

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 12.37

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	0820	0835	0845	0855	0905	0915	0925	0935	0945	0955	1000	1005	1010
Gallons			1.5			3			4				
Well Volume	12.37	12.92	14.68	14.34	13.84	13.22	12.74	12.47	12.25	12.12	12.05	12.00	11.97
pH	8.29	9.02	9.82	9.87	9.71	9.49	9.35	9.23	9.15	9.12	9.17	9.14	9.12
Conductivity (mohm/cm)	.433	.459	.482	.509	.593	.682	.695	.698	.702	.720	.722	.724	.726
Turbidity	195.0	105.0	181	237	155	126	105	92.8	83.8	78.2	60.8	64.3	62.8
Dissolved Oxygen	5.97	5.61	2.48	0	0	0	0	0	0	0	0	0	0
Temperature (°C)	9.19	9.28	10.93	10.80	10.35	9.68	9.54	9.77	9.90	9.97	10.14	10.12	10.23
Salinity	0	0	0	0	0	0	0	0	0	0	0	0	0
TDS	0.28	0.30	0.31	0.33	0.38	0.44	0.44	0.45	0.45	0.46	0.46	0.46	0.46
REDOX (mV)	-81	-163	-282	-292	-295	-281	-279	-280	-279	-278	-282	-282	-282

Notes: 08:20 START PURGE

8845 ADJUSTED PUMP SPEED LOWER; TROUBLE MAINTAINING FLOW

10:10 SAMPLED - VOCs

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-15 DATE: 3/17/10

PROJECT NAME: Vestal

PROJECT NUMBER: 0266352

SAMPLERS: GB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 17.14

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	0820	0830	0840	0850	0900	0910	0920	0925	0930	0935		
Gallons			1			2			3			
Well Volume	17.15	17.16	17.16	17.15	17.15	17.14	17.14	17.14	17.15	17.15		
pH	9.20	9.02	8.74	8.50	7.97	7.56	7.36	7.32	7.28	7.24		
Conductivity (mohm/cm)	.564	.567	.593	.615	.679	.746	.791	0.807	0.825	0.817		
Turbidity	11.5	10.7	11.3	10.0	5.5	1.2	1.5	1.6	1.8	1.6		
Dissolved Oxygen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Temperature (°C)	7.17	8.62	8.83	9.21	9.38	9.40	9.51	9.53	9.59	9.69		
Salinity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
TDS	0.35	0.36	0.38	0.39	0.44	0.48	0.51	0.52	0.53	0.54		
REDOX (mV)	-54	-167	-235	-253	-190	-156	-139	-131	-123	117		

Notes: Purging Started @ 0810
Sampled @ 0935

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009 - 1 DATE: 3/16/10

PROJECT NAME: Vestal

PROJECT NUMBER: 0266352

SAMPLERS: CB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 7.21

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"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	1340	1350	1360	1310	1320	1325						
Gallons	1/4	~~3~~ 1/2	~~2~~ 1	1 1/2	2 1/4	3						
Well Volume	7.60	7.62	7.62	7.70	7.70	7.70						
pH	6.53	6.50	6.50	6.50	6.50	6.50						
Conductivity (mohm/cm)	1.04	1.01	1.01	1.01	1.01	1.01						
Turbidity	103	66.5	53.2	33.4	24.3	23.5						
Dissolved Oxygen	0.12	0.05	0.00	0.00	0.00	0.00						
Temperature (°C)	9.87	10.61	10.32	10.03	9.91	9.85						
Salinity	0.6	0.0	0.6	0.0	0.0	0.0						
TDS	0.7	0.6	0.7	0.6	0.6	0.6						
REDOX (mV)	-65	-64	-66	-70	-73	-74						

Notes: started purging @ 1230
Sampled @ 1325

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009 - 2 DATE: 3/16/16

PROJECT NAME: Vestal

PROJECT NUMBER: 026635.2

SAMPLERS: GB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 17.22

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	1400	1410	1420	1430	1440	1445	1450	1455	1500			
Gallons	1/2	1	1 1/2	2	2 1/2		3		3 1/2			
Well Volume	17.65	17.74	17.82	17.92	17.95	18.00	18.00	18.02	18.02			
pH	6.60	6.62	6.63	6.65	6.65	6.66	6.67	6.64	6.64			
Conductivity (mohm/cm)	2.42	2.44	2.46	2.49	2.48	2.49	2.49	2.50	2.50			
Turbidity	46.0	29.5	19.2	19.0	12.5	7.2	25.5	25.8	23.7			
Dissolved Oxygen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Temperature (°C)	12.44	12.44	12.45	12.32	12.38	12.38	12.43	12.39	12.40			
Salinity	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
TDS	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6			
REDOX (mV)	-36	-41	-45	-48	-50	-49	-49	-50	-51			

Notes: Started purging @ 1350
Sampled @ 1500

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-3 DATE: 3/16/10

PROJECT NAME: Vestal

PROJECT NUMBER: 0266352

SAMPLERS: GB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 12.52

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	1535	1545	1555	1605	1615	1625	1635	1640	1645	1650		
Gallons			1½		3	3	4½			5		
Well Volume	13.12	13.14	13.14	13.14	3.14	3.14	3.14	3.14	3.14	3.14		
pH	6.22	6.05	6.13	6.27	6.36	6.39	6.43	6.43	6.44	6.45		
Conductivity (mohm/cm)	0.927	0.960	1.26	1.50	1.61	1.65	1.71	1.72	1.73	1.73		
Turbidity	347.0	405	194	39.7	25.6	26.5	26.2	39.0	41.8	42.4		
Dissolved Oxygen	1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Temperature (°C)	12.05	12.12	12.06	12.17	12.13	12.06	12.05	12.07	12.01	11.94		
Salinity	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
TDS	0.53	0.55	0.8	1.0	1.0	1.1	1.1	1.1	1.1	1.1		
REDOX (mV)	15	7	-12	-48	-65	-72	-82	-82	-84	-85		

Notes: Started purging @ 1535
Sampled @ 1650

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-4 DATE: 3/17/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: 026352

SAMPLERS: JSR

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 8.63

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	1410	1420	1430	1440	1450	1500	1505	1510				
Gallons					2.5			3.5				
Well Volume	8.63	8.67	8.67	8.67	8.67	8.67	8.67	8.67				
pH	7.69	7.38	7.26	7.13	7.30	7.22	7.17	7.14				
Conductivity (mohm/cm)	.466	1.58	2.02	2.04	2.15	2.18	2.18	2.19				
Turbidity	70.0	91.5	75.8	78.8	73.1	71.4	71.3	71.4				
Dissolved Oxygen	10.10	5.06	2.67	0	0	0	0	0				
Temperature (°C)	12.02	11.90	11.84	12.09	12.16	12.23	12.22	12.04				
Salinity	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
TDS	0.30	1.0	1.3	1.3	1.4	1.4	1.4	1.4				
REDOX (mV)	25	-23	-70	-89	-128	-131	-132	-130				

Notes: 1410 START PURGE

1510 SAMPLED - VOCs

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-5 DATE: 3/17/16

PROJECT NAME: Vestal

PROJECT NUMBER: 0266352

SAMPLERS: GB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 13.57

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	1406	1415	1425	1435	1445	1455	1500	1505	1510	1515		
Gallons										3g		
Well Volume	13.64	13.90	14.30	14.73	15.02	15.29	15.41	15.56	15.69	15.73		
pH	6.90	6.64	6.55	6.53	6.52	6.53	6.53	6.53	6.54	6.53		
Conductivity (mohm/cm)	1.42	1.43	1.39	1.37	1.38	1.38	1.37	1.37	1.37	1.37		
Turbidity	851	184	110	35.2	25.1	26.8	26.7	16.2	15.9	16.0		
Dissolved Oxygen	5.83	2.97	0.29	0.16	0.00	0.60	0.00	0.00	0.00	0.00		
Temperature (°C)	14.03	14.38	13.79	13.84	14.24	14.21	14.15	14.09	14.04	14.03		
Salinity	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
TDS	0.9	0.9	0.9	0.5	0.9	0.9	0.9	0.9	0.5	0.9		
REDOX (mV)	1	15	9	-5	-9	-12	-15	-19	-21	-22		

Notes: Started purging @ 1400
Sampled @ 1515

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-6 DATE: 3/16/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: 026352

SAMPLERS: JSR

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 17.39

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	1505	1510	1520	1535	1545	1610	1615	1620				
Gallons				1.5		3						
Well Volume	17.80	17.74	17.77	17.76	17.80	17.80	17.81	17.80				
pH	6.40	6.36	6.48	6.76	6.71	6.58	6.55	6.53				
Conductivity (mohm/cm)	1.68	1.68	1.68	1.72	1.73	1.74	1.76	1.75				
Turbidity	384	92.7	78.4	66.7	55.4	58.8	61.5	62.1				
Dissolved Oxygen	6.49	6.05	5.68	5.37	4.85	0.36	0.39	0.33				
Temperature (°C)	11.17	11.42	11.35	11.47	11.62	12.27	11.87	11.90				
Salinity	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
TDS	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1				
REDOX (mV)	87	87	67	11	9	16	18	21				

Notes: 1505 START PURGE

1620 SAMPLED - VOCs

COLLECTED DUPLICATE - 4009-X

COLLECTED MS/MSD

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-7 DATE: 3/17/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: 0266352

SAMPLERS: GB/JSR

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 14.24

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	1545	1555	1605	1610	1620	1625	1630						
Gallons													
Well Volume	14.39	14.42	14.40	14.39	14.39	14.39	14.39						
pH	7.05	7.17	7.14	5.61	5.66	5.69	5.71						
Conductivity (mohm/cm)	8.76	8.64	8.79	13.9	13.5	13.4	13.3						
Turbidity	86.7	43.7	26.6	5.8	8.2	7.4	8.8						
Dissolved Oxygen	4.14	0	0	0	0	0	0						
Temperature (°C)	13.85	13.47	13.54	13.86	13.69	13.65	13.39						
Salinity	0.5	0.5	0.5	0.8	0.8	0.8	0.8						
TDS	5.5	5.4	5.8	9	8	8	8						
REDOX (mV)	58	37	-18	54	39	35	29						

Notes: 1545 START PURGE

1630 SAMPLED - VOCs

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-8 DATE: 3/16/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: 0266352

SAMPLERS: JSR

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 15.20

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	1340	1345	1355	1405	1415	1420	1425	1430				
Gallons			1				2.5					
Well Volume	15.24	15.22	15.22	15.22	15.22	15.22	15.22	15.22				
pH	6.62	6.64	7.61	7.86	7.95	7.87	7.80	7.77				
Conductivity (mohm/cm)	1.93	1.91	1.94	1.96	1.98	2.01	2.02	2.04				
Turbidity	114	133	92.1	55.7	35.9	37.4	33.9	34.6				
Dissolved Oxygen	4.54	5.80	1.39	0.1	0	0	0	0				
Temperature (°C)	13.41	13.61	13.44	13.48	13.59	13.64	13.62	13.44				
Salinity	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
TDS	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3				
REDOX (mV)	178	149	-12	-78	-109	-115	-117	-117				

Notes: 1340 START PURGE

1430 SAMPLED - VOCS

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4609-9 DATE: 3/15/10

PROJECT NAME: Vestal

PROJECT NUMBER: 026352

SAMPLERS: GB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 26.64

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	1650	1700	1710	1720	1725	1735	1740	1745			
Gallons		1	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2			
Well Volume	26.62	26.62	26.62	26.62	26.62	26.62	26.62	26.62	26.62			
pH	6.36	6.32	6.25	6.17	6.15	6.11	6.09	6.08	6.09			
Conductivity (mohm/cm)	2.14	2.14	2.14	2.15	2.15	2.15	2.15	2.15	2.15			
Turbidity	384.0	236.0	127.0	120	107.0	99.3	102.0	102.0	106			
Dissolved Oxygen	5.38	0.78	0.60	0.96	1.97	2.31	2.70	2.67	2.66			
Temperature (°C)	11.21	11.24	11.27	11.26	11.21	11.21	11.23	11.22	11.22			
Salinity	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
TDS	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4			
REDOX (mV)	25	27	34	42	46	51	52	53	53			

Notes: Started purging @ 1630
Sampled @ 1745

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009 - 10 DATE: 3/15/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: 026352

SAMPLERS: JSR

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 23.00

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	445	450	500	520	535	545	550	600	605			
Gallons			1.5	2.5	3.5		4		4.5			
Well Volume	23.00	23.00	22.99	22.98	22.97	22.96	22.96	22.95	22.95			
pH	6.83	6.81	6.82	6.82	6.82	6.81	6.79	6.78	6.78			
Conductivity (mohm/cm)	3.58	3.57	3.22	3.19	3.22	3.11	3.07	3.06	3.03			
Turbidity	320	270	114	98	88.9	46.0	78.0	68.8	67.2			
Dissolved Oxygen	1.59	0.58	2.25	2.62	2.82	3.27	2.97	3.86	3.93			
Temperature (°C)	11.20	11.27	11.42	11.42	11.30	11.31	11.26	11.18	11.18			
Salinity	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1			
TDS	2.3	2.3	2.1	2.0	2.1	2.0	2.0	2.0	1.9			
REDOX (mV)	69	69	62	62	62	56	58	51	49			

Notes: 445 START PURGE

605 SAMPLED - VOCs

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009 - 11 DATE: 3/15/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: 0266352

SAMPLERS: JSR

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 19.98

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	3:00	3:15	3:25	3:35	3:45								
Gallons		1	2		3								
Well Volume	20.03	20.05	20.05	20.05	20.05								
pH	7.03	6.72	6.71	6.72	6.73								
Conductivity (mohm/cm)	1.63	1.77	1.77	1.79	1.80								
Turbidity	12.6	3.7	43.4	39.4	40.3								
Dissolved Oxygen	0.02	0	0	0	0								
Temperature (°C)	11.05	10.97	11.15	11.08	11.03								
Salinity	0.1	0.1	0.1	0.1	0.1								
TDS	1.1	1.1	1.2	1.2	1.2								
REDOX (mV)	-82	-78	-79	-80	-81								

Notes: 3:00 START PURGE
3:45 SAMPLED FOR VOCs

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009 - 11A DATE: 3/15/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: D266352

SAMPLERS: GB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 23.91

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	1450	1500	1515	1530	1536	1535	1540	1545	1550			
Gallons			1g			2g			3g			
Well Volume	24.96	26.00	27.31	28.31	27.20	29.64	29.58	30.46	30.85			
pH	6.07	5.96	5.76	5.75	5.71	5.67	5.68	5.69	5.68			
Conductivity (mohm/cm)	1.43	1.41	1.23	1.22	1.24	1.24	1.28	1.28	1.28			
Turbidity	54.8	89.4	41.8	43.9	42.7	46.1	45.3	47.6	46.7			
Dissolved Oxygen	3.52	1.49	3.16	0.00	0.00	0.00	0.00	0.00	0.00			
Temperature (°C)	10.64	10.88	10.84	10.96	11.04	10.95	10.96	10.95	11.08			
Salinity	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
TDS	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8			
REDOX (mV)	52	56	71	75	84	91	91	90	91			

Notes: Start purging @ 1447

Sampled @ 1550

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 409 - 12 DATE: 3/15/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: 0266352

SAMPLERS: JSR

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 13.02

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	11:20	11:30	11:50	11:55	12:00	12:20	12:25	12:30	12:35			
Gallons	1	1.5	2.5	3	3	4	4	4.5	4.5			
Well Volume	12.75	12.75	12.73	12.71	12.71	12.69	12.69	12.69	12.68			
pH	7.10	6.97	6.96	6.95	6.95	6.95	6.95	6.95	6.95			
Conductivity (mohm/cm)	1.67	1.67	1.69	1.70	1.70	1.69	1.70	1.72	1.72			
Turbidity	73.6	37.4	26.8	13.2	9.5	13.7	9.3	9.3	9.6			
Dissolved Oxygen	0	0	0	0	0	0	0	0	0			
Temperature (°C)	9.72	9.93	10.18	10.17	9.77	9.79	9.83	9.81	9.97			
Salinity	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
TDS	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1			
REDOX (mV)	-139	-102	-97	-96	-92	-89	-87	-86	-83			

Notes: 11:00 START PURGE - TURBID - GRAY/BLACK

12:35 SAMPLED - VOCs / METALS - FILTERED & UNFILTERED

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-12A DATE: 3/15/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: 0266352

SAMPLERS: GB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 13.49

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

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

PARAMETER	ACCUMULATED VOLUME PURGED											
Time	1125	1140	1156	1210	1205	1210	1215	1220	1225	1230	1235	1245
Gallons	½	1½	2½	3½	4	4½	4½	4½	4¾	5	5¼	5¼
Well Volume	~~1~~	13.45	13.45	13.50	13.45	13.45	13.45	13.45	13.45	13.40	13.40	13.40
pH	8.34	7.99	7.78	7.67	7.62	7.56	7.55	7.52	7.43	7.43	7.42	7.32
Conductivity (mohm/cm)	1.36	1.56	1.61	1.61	1.61	1.61	1.61	1.62	1.61	1.62	1.63	1.64
Turbidity	75.9	55.9	33.2	31.1	39.8	49.4	50.7	60.9	61.8	86.8	90.1	73.8
Dissolved Oxygen	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)	11.10	11.13	11.23	11.26	11.20	11.25	11.24	11.23	11.17	11.12	11.05	10.98
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
TDS	0.9	1.6	1.0	1.0	1.0	1.6	1.0	1.0	1.0	1.0	1.0	1.1
REDOX (mV)	-195	-156	-146	-145	-144	-144	-145	-145	-137	-140	-141	-132

Notes: Start Purge @ 1120

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-12A DATE: 3/15/2010

PROJECT NAME: Ucsf4

PROJECT NUMBER: 026352

SAMPLERS: GB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 13.49

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	1250	1255										
Gallons	5 1/2	5 1/2										
Well Volume	23.40	23.40										
pH	7.33	7.33										
Conductivity (mohm/cm)	1.64	1.64										
Turbidity	71.4	76.5										
Dissolved Oxygen	0.00	0.00										
Temperature (°C)	10.97	11.05										
Salinity	0.1	0.1										
TDS	1.0	1.0										
REDOX (mV)	-135	-137										

Notes: Page 2

Sampled @ 1255

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-13 DATE: 3/17/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: 0266 352

SAMPLERS: JSR

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 6.09

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	1100	1105	1115	1125	1135	1150	1200	1205	1210	1215	1220	1225	1230
Gallons				1.5		2.5	3					4.5	
Well Volume	6.09	7.30	7.61	7.90	8.09	7.91	7.75	7.75	7.75	7.78	7.80	7.80	7.80
pH	9.2	9.40	9.40	9.37	9.23	9.37	8.78	8.63	8.52	8.42	8.32	8.28	8.22
Conductivity (mohm/cm)	.853	.889	.909	.961	1.30	1.23	1.37	1.40	1.41	1.44	1.46	1.47	1.48
Turbidity	175	172	172	186	191	95.3	113	115	107	114	116	108	113
Dissolved Oxygen	0.12	0	0	0	0	0	0	0	0	0	0	0	0
Temperature (°C)	10.86	11.12	11.45	11.76	11.97	12.07	12.08	12.13	12.23	12.29	12.26	12.40	12.30
Salinity	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
TDS	0.55	0.57	0.58	0.62	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9
REDOX (mV)	-205	-228	-236	-256	-270	-297	-247	-244	-240	-236	-232	-229	-228

Notes: 11:00 START PURGE

12:30 SAMPLED - VOCs/METALS (TOTAL & DISSOLVED)

GRAY/BLACKISH WATER; CLEARED UP

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-13A DATE: 3/17/10

PROJECT NAME: Vestal

PROJECT NUMBER: 0266352

SAMPLERS: GB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 6.08

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	1025	1035	1045	1055	1105	1115	1126	1125	1130			
Gallons		1	X	2	X	3		4				
Well Volume	6.08	6.08	6.08	6.06	6.05	6.05	6.05	6.05				
pH	7.00	6.88	6.83	6.81	6.81	6.80	6.79	6.79				
Conductivity (mohm/cm)	2.30	2.26	2.24	2.24	2.23	2.22	2.22	2.23				
Turbidity	700	104	33.1	8.9	3.4	2.4	2.6	2.6				
Dissolved Oxygen	8.33	1.31	0.97	1.04	1.08	1.15	1.19	1.21				
Temperature (°C)	11.21	10.77	10.89	10.91	11.15	11.26	11.32	11.30				
Salinity	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1				
TDS	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4				
REDOX (mV)	-89	-58	-52	-39	-32	-23	-18	-16				

Notes: Started purging @ 1025
Sampled @ 1125

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: ~~VE~~ 4009 - 14 DATE: 3/17/2010

PROJECT NAME: VESTAL

PROJECT NUMBER: 0266352

SAMPLERS: JSR

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 12.37

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	0820	0835	0845	0855	0905	0915	0925	0935	0945	0955	1000	1005	1010
Gallons			1.5			3			4				
Well Volume	12.37	12.92	14.68	14.34	13.84	13.22	12.74	12.47	12.25	12.12	12.05	12.00	11.97
pH	8.29	9.02	9.82	9.87	9.71	9.49	9.35	9.23	9.15	9.12	9.17	9.14	9.12
Conductivity (mohm/cm)	.433	.459	.482	.509	.593	.682	.695	.698	.702	.720	.722	.724	.726
Turbidity	195.0	105.0	181	237	155	126	105	92.8	83.8	78.2	60.8	64.3	62.8
Dissolved Oxygen	5.97	5.61	2.48	0	0	0	0	0	0	0	0	0	0
Temperature (°C)	9.19	9.28	10.93	10.80	10.35	9.68	9.54	9.77	9.90	9.97	10.14	10.12	10.23
Salinity	0	0	0	0	0	0	0	0	0	0	0	0	0
TDS	0.28	0.30	0.31	0.33	0.38	0.44	0.44	0.45	0.45	0.46	0.46	0.46	0.46
REDOX (mV)	-81	-163	-282	-292	-295	-281	-279	-280	-279	-278	-282	-282	-282

Notes: 08:20 START PURGE

8845 ADJUSTED PUMP SPEED LOWER; TROUBLE MAINTAINING FLOW

10:10 SAMPLED - VOCs

MALCOLM PIRNIE

WELL DEVELOPMENT/ PURGING LOG

WELL NUMBER: 4009-15 DATE: 3/17/10

PROJECT NAME: Vestal

PROJECT NUMBER: 0266352

SAMPLERS: GB

A: Total Casing and Screen Length: _____

B: Casing Internal Diameter: _____

C: Water Level Below Top of Casing: 17.14

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	0820	0830	0840	0850	0900	0910	0920	0925	0930	0935		
Gallons			1			2			3			
Well Volume	17.15	17.16	17.16	17.15	17.15	17.14	17.14	17.14	17.15	17.15		
pH	9.20	9.02	8.74	8.50	7.97	7.56	7.36	7.32	7.28	7.24		
Conductivity (mohm/cm)	.564	.567	.593	.615	.679	.746	.791	0.807	0.825	0.817		
Turbidity	11.5	10.7	11.3	10.0	5.5	1.2	1.5	1.6	1.8	1.6		
Dissolved Oxygen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Temperature (°C)	7.17	8.62	8.83	9.21	9.38	9.40	9.51	9.53	9.59	9.69		
Salinity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
TDS	0.35	0.36	0.38	0.39	0.44	0.48	0.51	0.52	0.53	0.54		
REDOX (mV)	-54	-167	-235	-253	-190	-156	-139	-131	-123	117		

Notes: Purging Started @ 0810
Sampled @ 0935

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

Appendix G

Carus – Aqua Mag Information

MALCOLM PIRNIE

AQUA MAG®
Toxicity Information

Environmental: Degradability/ Aquatic Toxicity

Aqua Mag® constituents have undergone aquatic toxicity testing and have been tested shown to be barely toxic to non-toxic according to current toxicity classification categories given below.

Table 1. Toxicity Classification

Constituent Concentration	Toxicity Classification
<1 ppm	Highly or strongly toxic
1-10 ppm	Toxic
10-100 ppm	Moderately toxic
100-1000 ppm	Slightly toxic
>1000 ppm	Barely toxic to non-toxic

Table 2. Aqua Mag Toxicity

48 hour LC 50%	Daphne magna	3580 ppm*
48 hour LC 50%	Lymnaea sp	2954 ppm*
48 hour LC 50%	Fish	1650 ppm (n.n orfe) 10,000 ppm @pH 7**
25 hour/50 hr LC 50%	Daphne magna	1154 ppm/1089 ppm**
0-5 hour EC 50%	Pseudomonas putida	1000-1500 ppm**

EPA hazardous substance	No	40CFR116-117
Waste Disposal Methods	Must comply with all federal, state and local disposal/discharge laws	
RCRA Status of Unused Material	Non-hazardous	40CFR261

*Dowden, B.F., Bennett, H.J., "Toxicity of Selected Chemicals to Certain Animals," Journal WPCF, Sept 1965, pp 1308-1316.

**Schoeber, I.P., Huber, L., "Ecologically Relevant Data of Nonsurfactant Components of Detergents and Cleaners," Tenside Surfactants Detergents, 25, 99-107, (1988).

Responsible Care®
Good Chemistry at Work

Form #PH 1372

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AQUA MAG® Blended Phosphate



DATA SHEET

AQUA MAG® blended phosphate is the premier corrosion inhibitor and sequesterant for use in potable and industrial water systems. The product is a liquid concentrate of exceptional purity, clarity, and stability utilizing a broad spectrum of phosphates for better sequestering and corrosion control.

BENEFITS OF AQUA MAG

• Inhibits corrosion of steel distribution system water lines, iron and galvanized piping, and lead and copper plumbing

• Decreases iron tuberculation to extend the life of the distribution system

• Inhibits lead and copper leaching, resulting in lower lead and copper levels in the delivered potable water

• Minimizes the occurrence of microbial-influenced corrosion providing longer life system

• Controls iron and manganese minimizing rusty and dirty water in the system

• Reduces discoloration, staining, and mineral build-up resulting in fewer customer complaints

• Diminshes calcium scale deposits typically seen in hot water lines and heaters

• Saves money by reducing corrosion and scale; lowering chlorine demand and decreasing hydrant flushing, leaks and failures

PROPERTIES AND CERTIFICATIONS

Description: Clear homogenous liquid
Viscosity: < 2 cps at 70° F
Freezing Point: < 38° F
Specific Gravity: 1.34-1.40
pH (1% w:w): 6.0 ± 0.5

NSF/ANSI Standard 60, Kosher Appproved
Conforms to 21 CFR, Section 182 and 184 (USDA)

NSF

Certified U Kosher Pareve

HANDLING AND STORAGE

AQUA MAG® blended phosphate should be handled with care. Wear proper protective equipment including goggles, face shield, apron, respirator and proper gloves when handling this product.

Protect containers from physical damage. Store in a cool, dry area in closed containers. In case of accidental release: contain spill by collecting the liquid in a pit or holding behind a dam (sand or soil). Absorb with inert media and dispose of properly. Disposal of all materials shall be in full and strict compliance with federal, state, and local regulations Consult the MSDS for additional safety and handling information.

SHIPPING

AQUA MAG® blended phosphate is generally considered to be safe and is not classified as hazardous according the US Department of Transportation, Canada TDG, UN, IMDG, or IATA regulations.

COMPATIBILITY INFORMATION

AQUA MAG® blended phosphate can be stored in high-medium density polyethylene, cross-linked polyethylene, fiberglass reinforced plastic, 316 stainless steel, glass lined /epoxy lined steel tanks. Piping materials may include schedule 80 PVC/CPVC piping, clear PVC, and white polyethylene tubing. Pump materials may include ceramic, Teflon, viton, hypalon and PVC liquid end pump materials.

Metering equipment can include diaphragm and peristaltic type metering pumps and other pumps meeting compatibility requirements.

It is not compatible with black iron, mild steel, galvanized metals, aluminum, zinc, copper, lead. brass, bronze, tin, and other base metals.

CARUS

Carus Corporation
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Carus Europe
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Certified Company

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DATA SHEET

SHIPPING CONTAINERS

5-gallon (57-lb) Jerrican
(UN Specification: UN3H1/Y1.8/100) Made of high density polyethylene (HDPE). Weighs 3.0 lb (1.36 kg). **The net weight is 57 lb (25.85 kg).**

15-gallon (171-lb) Drum
(UN Specification: UN1H1/Y1.8/100) Made of high density polyethylene (HDPE). Weighs 6.5 lb (3.0 kg). **The net weight is 171 lb (77.6 kg).**

30-gallon (342-lb) Drum
(UN Specification: UN1H1/Y1.8/100) Made of high density polyethylene (HDPE). Weighs 14 lb (6.35 kg). **The net weight is 342 lb (155 kg).**

55-gallon (627-lb) Drum
(UN Specification: UN1H1/Y1.8/100) Made of high density polyethylene (HDPE). Weighs 21 lb (9.5 kg). **The net weight is 627 lb (284 kg).**

SHIPPING CONTAINERS CONT.

275-gallon IBC (Intermediate Bulk Container)
(UN Specification: UN31HA1/Y1.9/100) Weighs 129 lb (58.5 kg). The net weight is 3,135 lb (1,422 kg). The IBC has a 2 in. butterfly valve with NPT threads in bottom sump.

Bulk quantities up to 4,150 gallons are available.

Other containers may be available, contact Carus Corporation at 800-435-6856 for details.

CARUS VALUE ADDED

LABORATORY SUPPORT

Carus Corporation has technical assistance available to answer questions, evaluate treatment alternatives, and perform laboratory testing. Our laboratory capabilities include: Consulting, Treatability Studies, Feasibility Studies, and Analytical Services.

FIELD SERVICES

As an integral part of our technical support, Carus provides extensive on-site treatment assistance. We offer full application services, including technical expertise, supervision, testing, and feed equipment design and installation in order to accomplish a successful evaluation and/or application.

CARUS CORPORATION

During its more than 90-year history Carus' ongoing emphasis on research and development, technical support, and customer service has enabled the company to become the world leader in permanganate, manganese, oxidation, and base-metal catalyst technologies.

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