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

Fourth Quarter 2009

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

March 2010

Report Prepared By:

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MALCOLM PIRNIE

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1. Introduction

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

2. Site Description

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

3. Operation and Maintenance

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

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

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.

3.1. System Operation and Maintenance

3.1.1. Treatment System Operation

The groundwater treatment system operated with only one minor interruption during the fourth quarter, 2009. As shown in the Monthly Reports and System O&M Logs provided by ECI (Appendix A), the system operated continuously during the fourth quarter with the exception of a six hour interruption in November due to a power outage.

The Monthly Reports indicate that the control panel is not providing operation of the air stripper blower in the "Auto" mode; the blower is currently being operated in "Manual" mode. This situation does not affect the effluent groundwater quality discharged from the treatment system. The system was evaluated by NYSDEC and Malcolm Pirnie in December; however, no apparent problem with the control panel was observed. The NYSDEC and Malcolm Pirnie will discuss the best way to move forward with diagnosing and repairing the control panel.

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 decreased from an average of 215 gallons per

minute (GPM) in October to 191 GPM in December. Figure 3-1 shows that the Well 1-1A flow rate has decreased by approximately 100 GPM since the well repairs were completed in February 2009. As shown in Table 3-1, approximately 26,720,000 gallons of water were treated during the fourth quarter 2009 operating period.

3.2. Influent – Effluent Sampling

Fourth quarter 2009 influent and effluent groundwater samples were collected from the Well 1-1A treatment system in accordance with the Work Plan. 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 system 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.

3.2.1. Influent Sample Results

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 exceeded the corresponding NYSDEC Class GA Standards in each of the samples collected in the fourth quarter, 2009; however, Figure 3-2 shows that the total VOCs concentrations detected in the Well 1-1A influent samples generally increased from the November 2007 through September 2008 sampling events, and have generally decreased since March 2009. Acetone was reported in the October 26, 2009 and December 23, 2009 influent samples at estimated concentrations of 4.2 ug/L and 5.8 ug/L, respectively, and is considered to be a potential laboratory contaminant.

3.2.2. Effluent Sample Results

Table 3-3 shows that no VOCs were detected in October, November, or December 2009 effluent samples.

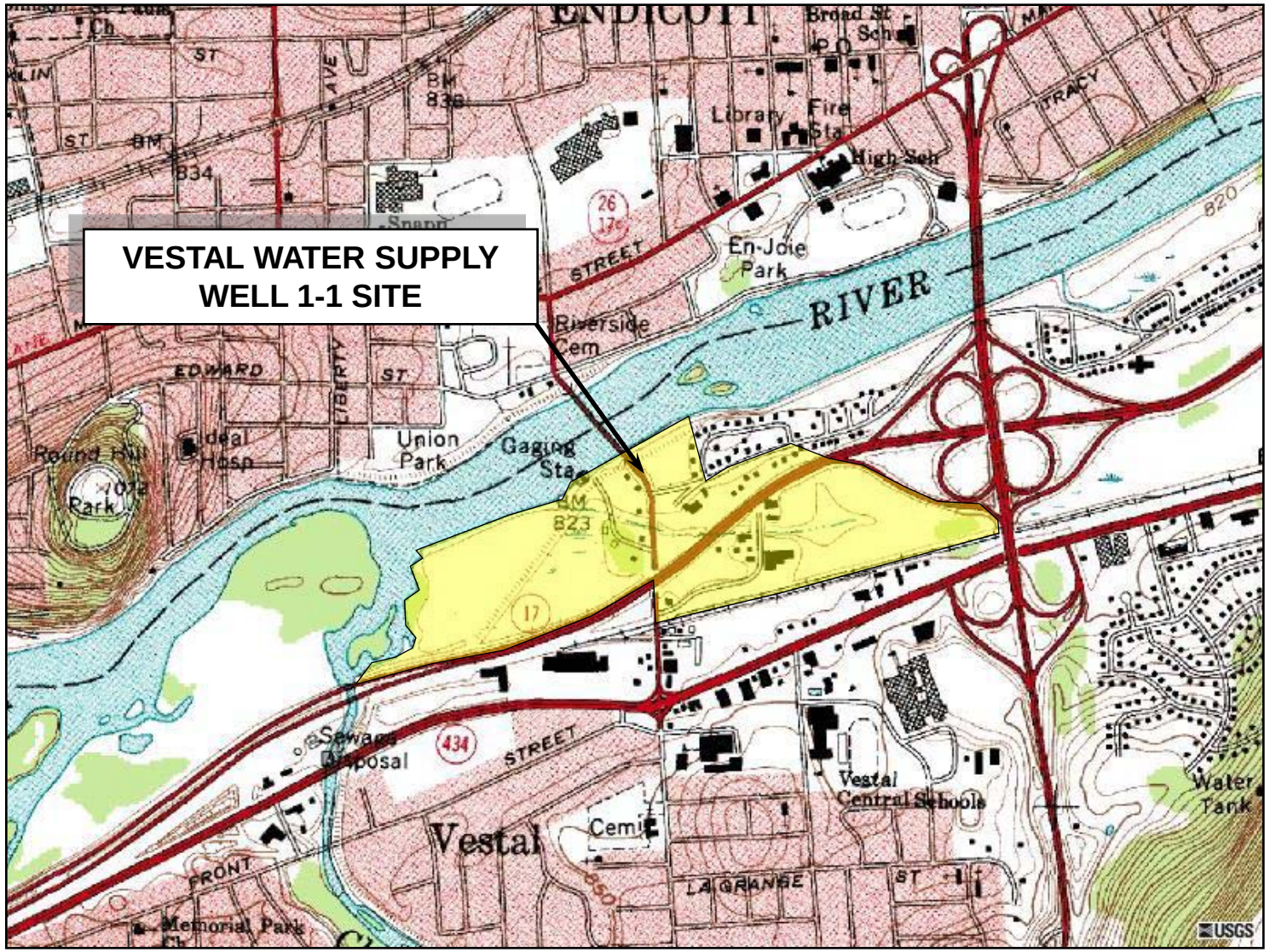
Based on influent sample concentrations and total flow volumes from the Well 1-1A treatment system, approximately 71 pounds of VOCs were removed by the treatment system during the fourth quarter 2009 operating period.

4. Groundwater Monitoring

Groundwater monitoring wells were sampled in accordance with the Work Plan during the second quarter, 2009. The results of the sampling event were submitted with the second quarter 2009 Vestal Water Supply Site Quarterly Report and Annual Groundwater Monitoring Summary (Malcolm Pirnie, 2009). The next annual groundwater monitoring event is scheduled for the first quarter, 2010.

5. Summary

The Vestal Well 1-1A groundwater treatment system operated with only minor interruption during the fourth quarter 2009 operation and maintenance period. The air stripper blower is operating in manual mode, and will continue to be evaluated during the next quarter operational period. The average flow rate through the treatment system during this period was 202 GPM, a decrease of approximately 20 percent compared to the average quarterly flow from the third quarter 2009. Total flow through the treatment system from October 2009 to December 2009 was approximately 27 million gallons. Based on monthly influent and effluent sampling, the treatment system successfully removes VOCs from groundwater extracted from the capture zone. Approximately 71 pounds of VOCs were removed by the treatment system during the fourth quarter 2009 operational period.



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

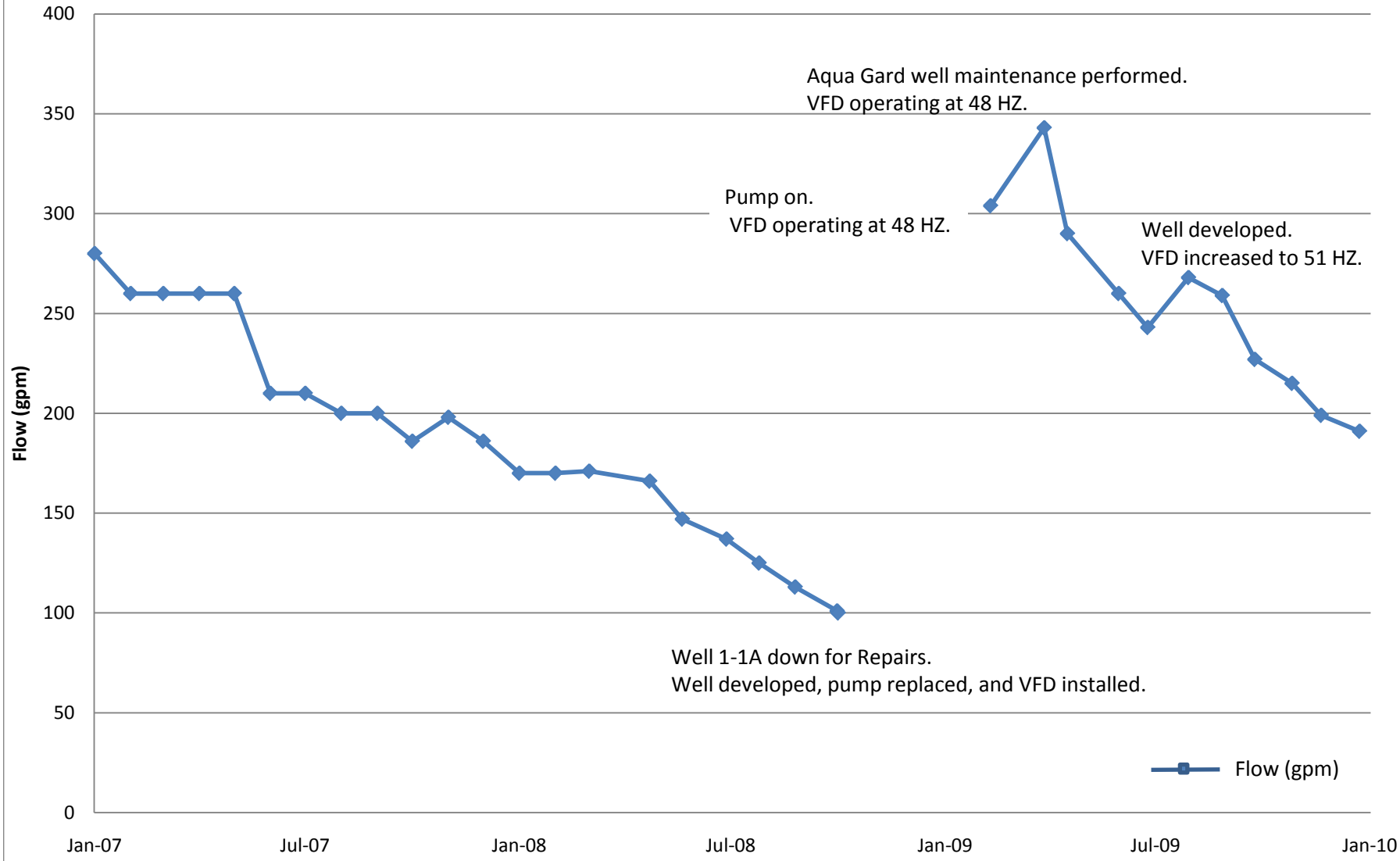


Figure 3-2
Well 1-1A Treatment Plant Total VOCs Concentrations
Vestal Water Supply Site
NYSDEC Site Number 7-04-009A

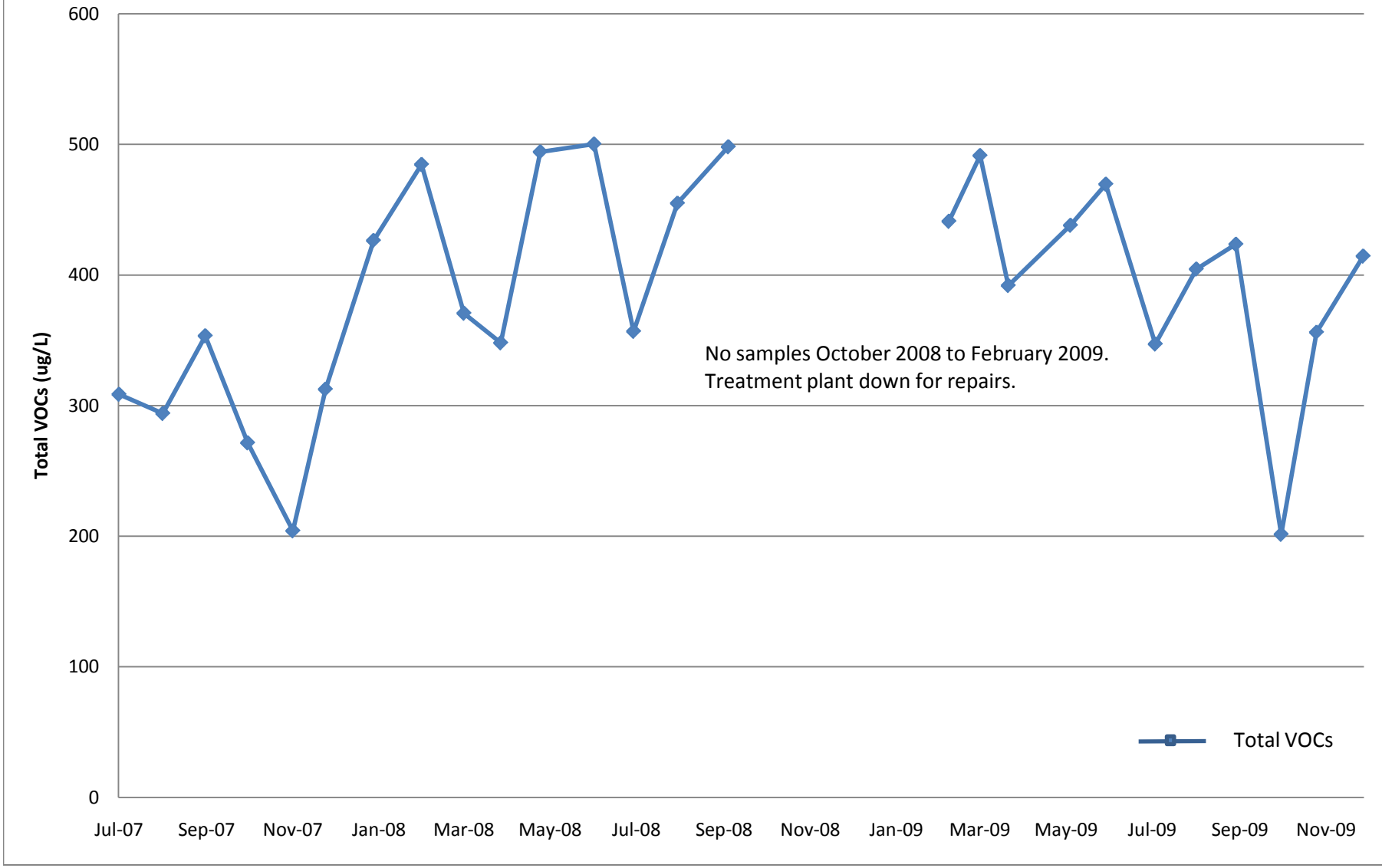


TABLE 3-1
WELL 1-1A FLOW SUMMARY
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE NO. 7-04-009A

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	
Total Flow (2007)				**117,567,360**	
Total Flow (2008)				**57,824,640**	
Total Flow (2009)				**114,779,520**	

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
VOCs			
1,1,1-Trichloroethane	5	**200**	**240**
1,1,2,2-Tetrachloroethane	5	20 U	20 U
1,1,2-Trichloroethane	1	20 U	20 U
1,1-Dichloroethane	5	**24**	**27**
1,1-Dichloroethene	5	**16 J**	**20**
1,2-Dichloroethane	0.6	20 U	20 U
1,2-Dichloropropane	5	20 U	20 U
2-Hexanone		40 U	40 U *
Acetone		40 U	5.8 J
Benzene	1	20 U	20 U
Bromodichloromethane	50	20 U	20 U
Bromoform		20 U	20 U
Bromomethane	5	20 U	20 U
Carbon disulfide		20 U	20 U
Carbon tetrachloride	5	20 U	20 U
Chlorobenzene	5	20 U	20 U
Chloroethane	5	20 U	20 U
Chloroform	7	20 U	20 U
Chloromethane		20 U	20 U
cis-1,2-Dichloroethene	5	**54**	**55**
cis-1,3-Dichloropropene	0.4	20 U	20 U
Dibromochloromethane	50	20 U	20 U
Ethylbenzene	5	20 U	20 U
Methyl Ethyl Ketone	50	40 U	40 U
Methyl Isobutyl Ketone		40 U	40 U
Methylene Chloride	5	20 U	20 U
Styrene	5	20 U	20 U
Tetrachloroethene	5	20 U	20 U
Toluene	5	20 U	20 U
trans-1,2-Dichloroethene	5	20 U	20 U
trans-1,3-Dichloropropene	0.4	20 U	20 U
Trichloroethene	5	**53**	**58**
Vinyl chloride	2	**9.1 J**	**8.6 J**
Xylenes, Total	5	20 U	20 U
Total VOCs		356	414

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
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.

New York State Department of Environmental Conservation
Vestal Water Supply Site Quarterly Report

Appendix A

Monthly Reports and System Operation and Maintenance Logs

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
October 2009

SECTION I – SUMMARY OF ACTIVITIES

System operated without interruption entire month. Very wet month - System flow increased from 209 GPD at beginning of month to 227 GPD at end of 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 litter
- Cut grass and trimmed trees
- Checked belts and changed air filters on blower

SECTION III – REPAIR WORK COMPLETED

- None

SECTION IV – REPAIR WORK NEEDED

- Control panel auto mode not functioning
- NYSEG needs to seed excavated area.
- Fill ruts previously left by well contractor

SECTION V – RECOMMENDATIONS

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

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
November 2009

SECTION I – SUMMARY OF ACTIVITIES

Except for a 6 hour power outage, the system operated continually the entire month. System flow ranged from 198 GPM to 201 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 grounds
- Replaced belts and changed air filters on blower

SECTION III – REPAIR WORK COMPLETED

- None

SECTION IV – REPAIR WORK NEEDED

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

SECTION V – RECOMMENDATIONS

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

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
December 2009

SECTION I – SUMMARY OF ACTIVITIES

System operated continually the entire month. System flow ranged from 192 GPM to 190 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 grounds
- Checked belts, changed air filters and greased blower
- Shoveled snow

SECTION III – REPAIR WORK COMPLETED

- None

SECTION IV – REPAIR WORK NEEDED

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

SECTION V – RECOMMENDATIONS

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

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)	215				209							211							213							227					
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

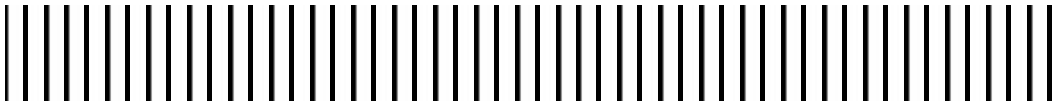
ENVIRONMENTAL COMPLIANCE, INC.									VESTAL WELL 1-1 MONTHLY O & M LOG														November 2009								
DAY	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**
TIME																															
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	
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	
FLOW METER (GPM)		198							200							201							198							198	
CHLORINE ROOM																															
GENERAL CONDITION		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	
TOWER PACKING INSP.		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	
BLOWER AIR FILTERS		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	
ALARM / CONTROL PANEL		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	
OTHER*																															
GROUNDS		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	
INGROUND TANK LEVEL		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																										
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)					192							191							191							190					
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

New York State Department of Environmental Conservation
Vestal Water Supply Site Quarterly Report

Appendix B

Analytical Reporting Forms



0266352 / ALB

MALCOLM PIRNIE

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 220-10548-1

SDG Number: 220-10548

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
11/10/2009 10:23 AM

Designee for
Johanna Dubauskas
Project Manager I
johanna.dubauskas@testamericainc.com
11/10/2009

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

Table of Contents

Table of Contents

Case Narrative for Job: 220-10548-1

Client: Malcolm Pirnie, Inc.
Date: November 10, 2009

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

Lawrence Decker
Laboratory Director

November 10, 2009
Date

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: 220-10548-1
Sdg Number: 220-10548

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-10548-1	Well 1-1A INF	Water	10/26/2009 0725	10/27/2009 1015
220-10548-2	Well 1-1A EFF	Water	10/26/2009 0730	10/27/2009 1015
220-10548-3TB	TRIP BLANK	Water	10/26/2009 0000	10/27/2009 1015

EXECUTIVE SUMMARY - Detections

Client: Malcolm Pirnie, Inc.

Job Number: 220-10548-1
Sdg Number: 220-10548

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
220-10548-1	**WELL 1-1A INF**					
Acetone		4.2	J	20	ug/L	8260B
1,1-Dichloroethane		14		10	ug/L	8260B
1,1-Dichloroethene		8.7	J	10	ug/L	8260B
1,1,1-Trichloroethane		110		10	ug/L	8260B
Trichloroethene		29		10	ug/L	8260B
Vinyl chloride		4.5	J	10	ug/L	8260B
cis-1,2-Dichloroethene		31		10	ug/L	8260B

METHOD SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 220-10548-1
Sdg Number: 220-10548

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: 220-10548-1
Sdg Number: 220-10548

Method	Analyst	Analyst ID
SW846 8260B	Kostrzewska, Barbara	BK

Client: Malcolm Pirnie, Inc.

Job Number: 220-10548-1
Sdg Number: 220-10548

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

Lab Sample ID: 220-10548-1
Client Matrix: Water

Date Sampled: 10/26/2009 0725
Date Received: 10/27/2009 1015

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 2.0
Date Analyzed: 11/06/2009 1105
Date Prepared: 11/06/2009 1105

Analysis Batch: 220-33072

Instrument ID: MSV
Lab File ID: V7806.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	4.2	J	2.1	20
Benzene	10	U	1.5	10
Bromodichloromethane	10	U	0.96	10
Bromoform	10	U	0.92	10
Bromomethane	10	U	4.2	10
Methyl Ethyl Ketone	20	U	2.2	20
Carbon disulfide	10	U	1.8	10
Carbon tetrachloride	10	U	2.1	10
Chlorobenzene	10	U	1.4	10
Chloroethane	10	U	2.1	10
Chloroform	10	U	1.3	10
Chloromethane	10	U	2.2	10
Dibromochloromethane	10	U	1.1	10
1,1-Dichloroethane	14		2.1	10
1,2-Dichloroethane	10	U	1.4	10
1,1-Dichloroethene	8.7	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	110		1.4	10
1,1,2-Trichloroethane	10	U	1.3	10
Trichloroethene	29		1.2	10
Vinyl chloride	4.5	J	2.0	10
Xylenes, Total	10	U	4.5	10
cis-1,2-Dichloroethene	31		2.0	10
trans-1,2-Dichloroethene	10	U	1.5	10

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	87		65 - 136
4-Bromofluorobenzene	91		51 - 142
Dibromofluoromethane	85		68 - 132
Toluene-d8 (Surr)	87		63 - 127

Client: Malcolm Pirnie, Inc.

Job Number: 220-10548-1
Sdg Number: 220-10548

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

Lab Sample ID: 220-10548-2
Client Matrix: Water

Date Sampled: 10/26/2009 0730
Date Received: 10/27/2009 1015

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 11/06/2009 1225
Date Prepared: 11/06/2009 1225

Analysis Batch: 220-33072

Instrument ID: MSV
Lab File ID: V7809.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)	86		65 - 136
4-Bromofluorobenzene	93		51 - 142
Dibromofluoromethane	86		68 - 132
Toluene-d8 (Surr)	88		63 - 127

Client: Malcolm Pirnie, Inc.

Job Number: 220-10548-1
Sdg Number: 220-10548

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 220-10548-3TB
Client Matrix: Water

Date Sampled: 10/26/2009 0000
Date Received: 10/27/2009 1015

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 11/05/2009 1257
Date Prepared: 11/05/2009 1257

Analysis Batch: 220-33043

Instrument ID: MSV
Lab File ID: V7768.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)	77		65 - 136
4-Bromofluorobenzene	96		51 - 142
Dibromofluoromethane	81		68 - 132
Toluene-d8 (Surr)	90		63 - 127

Client: Malcolm Pirnie, Inc.

Job Number: 220-10548-1
Sdg Number: 220-10548

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
220-10548-1	Well 1-1A INF	85	87	87	91
220-10548-2	Well 1-1A EFF	86	86	88	93
220-10548-3	TRIP BLANK	81	77	90	96
MB 220-33043/3		83	82	88	96
MB 220-33072/3		85	87	89	92
LCS 220-33043/2		84	80	89	95
LCS 220-33072/2		86	86	89	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: 220-10548-1
Sdg Number: 220-10548

Method Blank - Batch: 220-33043

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-33043/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/05/2009 1111
Date Prepared: 11/05/2009 1111

Analysis Batch: 220-33043
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V7764.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)	82	65 - 136
4-Bromofluorobenzene	96	51 - 142
Dibromofluoromethane	83	68 - 132
Toluene-d8 (Surr)	88	63 - 127

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

Client: Malcolm Pirnie, Inc.

Job Number: 220-10548-1
Sdg Number: 220-10548

Lab Control Sample - Batch: 220-33043

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-33043/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/05/2009 1018
Date Prepared: 11/05/2009 1018

Analysis Batch: 220-33043
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V7762.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	10.0	11.0	110	41 - 150	
Benzene	10.0	10.6	106	66 - 131	
Bromodichloromethane	10.0	10.1	101	78 - 120	
Bromoform	10.0	10.3	103	66 - 120	
Bromomethane	10.0	5.18	52	47 - 150	
Methyl Ethyl Ketone	10.0	12.3	123	42 - 150	
Carbon disulfide	10.0	10.2	102	55 - 150	
Carbon tetrachloride	10.0	10.6	106	69 - 135	
Chlorobenzene	10.0	10.5	105	68 - 120	
Chloroethane	10.0	11.1	111	49 - 150	
Chloroform	10.0	10.3	103	77 - 126	
Chloromethane	10.0	11.2	112	33 - 150	
Dibromochloromethane	10.0	10.4	104	75 - 120	
1,1-Dichloroethane	10.0	10.3	103	75 - 130	
1,2-Dichloroethane	10.0	10.0	100	73 - 127	
1,1-Dichloroethene	10.0	11.7	117	65 - 142	
1,2-Dichloropropane	10.0	10.5	105	69 - 129	
cis-1,3-Dichloropropene	10.0	10.1	101	63 - 120	
trans-1,3-Dichloropropene	10.0	10.5	105	73 - 120	
Ethylbenzene	10.0	10.6	106	62 - 120	
2-Hexanone	10.0	10.8	108	46 - 150	
Methylene Chloride	10.0	8.73	87	56 - 138	
methyl isobutyl ketone	10.0	9.97	100	70 - 122	J
Styrene	10.0	10.4	104	47 - 120	
1,1,2,2-Tetrachloroethane	10.0	10.8	108	75 - 124	
Tetrachloroethene	10.0	10.3	103	50 - 120	
Toluene	10.0	10.8	108	66 - 120	
1,1,1-Trichloroethane	10.0	10.5	105	73 - 135	
1,1,2-Trichloroethane	10.0	10.6	106	76 - 125	
Trichloroethene	10.0	10.5	105	60 - 122	
Vinyl chloride	10.0	10.9	109	61 - 150	
Xylenes, Total	30.0	32.6	109	58 - 120	
cis-1,2-Dichloroethene	10.0	9.83	98	65 - 120	
trans-1,2-Dichloroethene	10.0	10.3	103	58 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	80	65 - 136
4-Bromofluorobenzene	95	51 - 142
Dibromofluoromethane	84	68 - 132
Toluene-d8 (Surr)	89	63 - 127

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

Client: Malcolm Pirnie, Inc.

Job Number: 220-10548-1
Sdg Number: 220-10548

Method Blank - Batch: 220-33072

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-33072/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/06/2009 1039
Date Prepared: 11/06/2009 1039

Analysis Batch: 220-33072
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V7805.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)	87	65 - 136
4-Bromofluorobenzene	92	51 - 142
Dibromofluoromethane	85	68 - 132
Toluene-d8 (Surr)	89	63 - 127

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

Client: Malcolm Pirnie, Inc.

Job Number: 220-10548-1
Sdg Number: 220-10548

Lab Control Sample - Batch: 220-33072

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-33072/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/06/2009 0946
Date Prepared: 11/06/2009 0946

Analysis Batch: 220-33072
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V7803.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	10.0	8.78	88	41 - 150	J
Benzene	10.0	10.2	102	66 - 131	
Bromodichloromethane	10.0	9.70	97	78 - 120	
Bromoform	10.0	9.55	95	66 - 120	
Bromomethane	10.0	5.52	55	47 - 150	
Methyl Ethyl Ketone	10.0	9.68	97	42 - 150	J
Carbon disulfide	10.0	9.18	92	55 - 150	
Carbon tetrachloride	10.0	10.4	104	69 - 135	
Chlorobenzene	10.0	9.76	98	68 - 120	
Chloroethane	10.0	10.9	109	49 - 150	
Chloroform	10.0	10.0	100	77 - 126	
Chloromethane	10.0	10.9	109	33 - 150	
Dibromochloromethane	10.0	9.22	92	75 - 120	
1,1-Dichloroethane	10.0	9.74	97	75 - 130	
1,2-Dichloroethane	10.0	9.88	99	73 - 127	
1,1-Dichloroethene	10.0	11.5	115	65 - 142	
1,2-Dichloropropane	10.0	9.47	95	69 - 129	
cis-1,3-Dichloropropene	10.0	9.28	93	63 - 120	
trans-1,3-Dichloropropene	10.0	9.70	97	73 - 120	
Ethylbenzene	10.0	9.86	99	62 - 120	
2-Hexanone	10.0	8.02	80	46 - 150	J
Methylene Chloride	10.0	9.20	92	56 - 138	
methyl isobutyl ketone	10.0	8.76	88	70 - 122	J
Styrene	10.0	9.82	98	47 - 120	
1,1,2,2-Tetrachloroethane	10.0	9.69	97	75 - 124	
Tetrachloroethene	10.0	9.83	98	50 - 120	
Toluene	10.0	10.1	101	66 - 120	
1,1,1-Trichloroethane	10.0	10.4	104	73 - 135	
1,1,2-Trichloroethane	10.0	9.90	99	76 - 125	
Trichloroethene	10.0	9.99	100	60 - 122	
Vinyl chloride	10.0	11.0	110	61 - 150	
Xylenes, Total	30.0	30.4	101	58 - 120	
cis-1,2-Dichloroethene	10.0	9.28	93	65 - 120	
trans-1,2-Dichloroethene	10.0	9.54	95	58 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	86	65 - 136
4-Bromofluorobenzene	89	51 - 142
Dibromofluoromethane	86	68 - 132
Toluene-d8 (Surr)	89	63 - 127

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

DATA REPORTING QUALIFIERS

Client: Malcolm Pirnie, Inc.

Job Number: 220-10548-1
Sdg Number: 220-10548

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	J	Indicates an estimated value.

Client: Malcolm Pirnie, Inc.

Job Number: 220-10548-1
Sdg Number: 220-10548

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:220-33043					
LCS 220-33043/2	Lab Control Sample	T	Water	8260B	
MB 220-33043/3	Method Blank	T	Water	8260B	
220-10548-3TB	TRIP BLANK	T	Water	8260B	
Analysis Batch:220-33072					
LCS 220-33072/2	Lab Control Sample	T	Water	8260B	
MB 220-33072/3	Method Blank	T	Water	8260B	
220-10548-1	Well 1-1A INF	T	Water	8260B	
220-10548-2	Well 1-1A EFF	T	Water	8260B	

Report Basis
T = Total

Client: Malcolm Pirnie, Inc.

Job Number: 220-10548-1
SDG: 220-10548

Laboratory Chronicle

Lab ID: 220-10548-1 **Client ID: Well 1-1A INF**

Sample Date/Time: 10/26/2009 07:25 Received Date/Time: 10/27/2009 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-10548-A-1		220-33072		11/06/2009 11:05	2	TAL CT	BK
A:8260B	220-10548-A-1		220-33072		11/06/2009 11:05	2	TAL CT	BK

Lab ID: 220-10548-2 **Client ID: Well 1-1A EFF**

Sample Date/Time: 10/26/2009 07:30 Received Date/Time: 10/27/2009 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-10548-A-2		220-33072		11/06/2009 12:25	1	TAL CT	BK
A:8260B	220-10548-A-2		220-33072		11/06/2009 12:25	1	TAL CT	BK

Lab ID: 220-10548-3 **Client ID: TRIP BLANK**

Sample Date/Time: 10/26/2009 00:00 Received Date/Time: 10/27/2009 10:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-10548-A-3		220-33043		11/05/2009 12:57	1	TAL CT	BK
A:8260B	220-10548-A-3		220-33043		11/05/2009 12:57	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 220-33043/3		220-33043		11/05/2009 11:11	1	TAL CT	BK
A:8260B	MB 220-33043/3		220-33043		11/05/2009 11:11	1	TAL CT	BK
P:5030B	MB 220-33072/3		220-33072		11/06/2009 10:39	1	TAL CT	BK
A:8260B	MB 220-33072/3		220-33072		11/06/2009 10:39	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 220-33043/2		220-33043		11/05/2009 10:18	1	TAL CT	BK
A:8260B	LCS 220-33043/2		220-33043		11/05/2009 10:18	1	TAL CT	BK
P:5030B	LCS 220-33072/2		220-33072		11/06/2009 09:46	1	TAL CT	BK
A:8260B	LCS 220-33072/2		220-33072		11/06/2009 09:46	1	TAL CT	BK

Lab References:
TAL CT = TestAmerica Connecticut

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 220-10774-1

SDG Number: 220-10774

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
12/7/2009 2:33 PM

Designee for
Johanna Dubauskas
Project Manager I
johanna.dubauskas@testamericainc.com
12/07/2009

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.

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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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Case Narrative for Job: 220-10774

Client: Malcolm Pirnie, Inc.
Date: December 7, 2009

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

Lawrence Decker
Laboratory Director

December 7, 2009
Date

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.

SAMPLE SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 220-10774-1
Sdg Number: 220-10774

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-10774-1	Well 1-1A INF	Water	11/20/2009 0800	11/21/2009 1030
220-10774-2	Well 1-1A EFF	Water	11/20/2009 0805	11/21/2009 1030
220-10774-3TB	Trip Blank	Water	11/20/2009 0000	11/21/2009 1030

EXECUTIVE SUMMARY - Detections

Client: Malcolm Pirnie, Inc.

Job Number: 220-10774-1
Sdg Number: 220-10774

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
220-10774-1	**WELL 1-1A INF**					
1,1-Dichloroethane		24		20	ug/L	8260B
1,1-Dichloroethene		16	J	20	ug/L	8260B
1,1,1-Trichloroethane		200		20	ug/L	8260B
Trichloroethene		53		20	ug/L	8260B
Vinyl chloride		9.1	J	20	ug/L	8260B
cis-1,2-Dichloroethene		54		20	ug/L	8260B
220-10774-3TB	**TRIP BLANK**					
Methylene Chloride		2.4	J B	5.0	ug/L	8260B

METHOD SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 220-10774-1
Sdg Number: 220-10774

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: 220-10774-1
Sdg Number: 220-10774

Method	Analyst	Analyst ID
SW846 8260B	Kostrzewska, Barbara	BK

Client: Malcolm Pirnie, Inc.

Job Number: 220-10774-1
Sdg Number: 220-10774

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

Lab Sample ID: 220-10774-1
Client Matrix: Water

Date Sampled: 11/20/2009 0800
Date Received: 11/21/2009 1030

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 4.0
Date Analyzed: 12/02/2009 2027
Date Prepared: 12/02/2009 2027

Analysis Batch: 220-33936

Instrument ID: MSV
Lab File ID: V8330.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	40	U	4.1	40
Benzene	20	U	3.0	20
Bromodichloromethane	20	U	1.9	20
Bromoform	20	U	1.8	20
Bromomethane	20	U	8.5	20
Methyl Ethyl Ketone	40	U	4.4	40
Carbon disulfide	20	U	3.6	20
Carbon tetrachloride	20	U	4.3	20
Chlorobenzene	20	U	2.9	20
Chloroethane	20	U	4.2	20
Chloroform	20	U	2.7	20
Chloromethane	20	U	4.4	20
Dibromochloromethane	20	U	2.2	20
1,1-Dichloroethane	24		4.1	20
1,2-Dichloroethane	20	U	2.9	20
1,1-Dichloroethene	16	J	3.3	20
1,2-Dichloropropane	20	U	2.8	20
cis-1,3-Dichloropropene	20	U	1.1	20
trans-1,3-Dichloropropene	20	U	2.3	20
Ethylbenzene	20	U	3.5	20
2-Hexanone	40	U	4.4	40
Methylene Chloride	20	U	3.1	20
methyl isobutyl ketone	40	U	1.5	40
Styrene	20	U	2.6	20
1,1,2,2-Tetrachloroethane	20	U	3.2	20
Tetrachloroethene	20	U	3.2	20
Toluene	20	U	2.9	20
1,1,1-Trichloroethane	200		2.8	20
1,1,2-Trichloroethane	20	U	2.6	20
Trichloroethene	53		2.5	20
Vinyl chloride	9.1	J	4.0	20
Xylenes, Total	20	U	9.1	20
cis-1,2-Dichloroethene	54		4.0	20
trans-1,2-Dichloroethene	20	U	3.0	20

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94		65 - 136
4-Bromofluorobenzene	88		51 - 142
Dibromofluoromethane	95		68 - 132
Toluene-d8 (Surr)	83		63 - 127

Client: Malcolm Pirnie, Inc.

Job Number: 220-10774-1
Sdg Number: 220-10774

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

Lab Sample ID: 220-10774-2
Client Matrix: Water

Date Sampled: 11/20/2009 0805
Date Received: 11/21/2009 1030

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 11/24/2009 2021
Date Prepared: 11/24/2009 2021

Analysis Batch: 220-33707

Instrument ID: MSL
Lab File ID: L9564.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)	115		65 - 136
4-Bromofluorobenzene	90		51 - 142
Dibromofluoromethane	112		68 - 132
Toluene-d8 (Surr)	105		63 - 127

Client: Malcolm Pirnie, Inc.

Job Number: 220-10774-1
Sdg Number: 220-10774

Client Sample ID: **Trip Blank**

Lab Sample ID: 220-10774-3TB
Client Matrix: Water

Date Sampled: 11/20/2009 0000
Date Received: 11/21/2009 1030

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 11/24/2009 1958
Date Prepared: 11/24/2009 1958

Analysis Batch: 220-33707

Instrument ID: MSL
Lab File ID: L9563.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	2.4	J B	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	92		51 - 142
Dibromofluoromethane	112		68 - 132
Toluene-d8 (Surr)	100		63 - 127

Client: Malcolm Pirnie, Inc.

Job Number: 220-10774-1
Sdg Number: 220-10774

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
220-10774-1	Well 1-1A INF	95	94	83	88
220-10774-2	Well 1-1A EFF	112	115	105	90
220-10774-3	Trip Blank	112	112	100	92
MB 220-33707/3		112	112	97	90
MB 220-33936/3		92	91	84	88
LCS 220-33707/2		102	102	92	89
LCS 220-33936/2		93	91	84	88

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: 220-10774-1
Sdg Number: 220-10774

Method Blank - Batch: 220-33707

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-33707/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/24/2009 1128
Date Prepared: 11/24/2009 1128

Analysis Batch: 220-33707
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 5890/5971 GC/MS
Lab File ID: L9542.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	3.41	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)	112	65 - 136
4-Bromofluorobenzene	90	51 - 142
Dibromofluoromethane	112	68 - 132
Toluene-d8 (Surr)	97	63 - 127

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

Client: Malcolm Pirnie, Inc.

Job Number: 220-10774-1
Sdg Number: 220-10774

Lab Control Sample - Batch: 220-33707

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-33707/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 11/24/2009 0953
Date Prepared: 11/24/2009 0953

Analysis Batch: 220-33707
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 5890/5971 GC/MS
Lab File ID: L9538.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	20.0	17.2	86	41 - 150	
Benzene	20.0	21.4	107	66 - 131	
Bromodichloromethane	20.0	20.2	101	78 - 120	
Bromoform	20.0	19.4	97	66 - 120	
Bromomethane	20.0	23.4	117	47 - 150	
Methyl Ethyl Ketone	20.0	18.8	94	42 - 150	
Carbon disulfide	20.0	21.5	107	55 - 150	
Carbon tetrachloride	20.0	22.3	111	69 - 135	
Chlorobenzene	20.0	19.2	96	68 - 120	
Chloroethane	20.0	25.1	125	49 - 150	
Chloroform	20.0	21.5	107	77 - 126	
Chloromethane	20.0	27.7	138	33 - 150	
Dibromochloromethane	20.0	18.8	94	75 - 120	
1,1-Dichloroethane	20.0	21.3	106	75 - 130	
1,2-Dichloroethane	20.0	21.0	105	73 - 127	
1,1-Dichloroethene	20.0	25.0	125	65 - 142	
1,2-Dichloropropane	20.0	21.4	107	69 - 129	
cis-1,3-Dichloropropene	20.0	20.0	100	63 - 120	
trans-1,3-Dichloropropene	20.0	20.3	102	73 - 120	
Ethylbenzene	20.0	19.1	95	62 - 120	
2-Hexanone	20.0	16.7	83	46 - 150	
Methylene Chloride	20.0	21.9	110	56 - 138	
methyl isobutyl ketone	20.0	19.9	100	70 - 122	
Styrene	20.0	17.4	87	47 - 120	
1,1,2,2-Tetrachloroethane	20.0	20.4	102	75 - 124	
Tetrachloroethene	20.0	18.3	91	50 - 120	
Toluene	20.0	18.8	94	66 - 120	
1,1,1-Trichloroethane	20.0	22.2	111	73 - 135	
1,1,2-Trichloroethane	20.0	21.9	109	76 - 125	
Trichloroethene	20.0	21.3	106	60 - 122	
Vinyl chloride	20.0	25.2	126	61 - 150	
Xylenes, Total	60.0	55.9	93	58 - 120	
cis-1,2-Dichloroethene	20.0	21.1	105	65 - 120	
trans-1,2-Dichloroethene	20.0	21.3	107	58 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102	65 - 136
4-Bromofluorobenzene	89	51 - 142
Dibromofluoromethane	102	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: 220-10774-1
Sdg Number: 220-10774

Method Blank - Batch: 220-33936

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-33936/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/02/2009 1233
Date Prepared: 12/02/2009 1233

Analysis Batch: 220-33936
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V8312.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)	91	65 - 136
4-Bromofluorobenzene	88	51 - 142
Dibromofluoromethane	92	68 - 132
Toluene-d8 (Surr)	84	63 - 127

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

Client: Malcolm Pirnie, Inc.

Job Number: 220-10774-1
Sdg Number: 220-10774

Lab Control Sample - Batch: 220-33936

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-33936/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/02/2009 1114
Date Prepared: 12/02/2009 1114

Analysis Batch: 220-33936
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: V8309.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	10.0	6.98	70	41 - 150	J
Benzene	10.0	10.9	109	66 - 131	
Bromodichloromethane	10.0	11.0	110	78 - 120	
Bromoform	10.0	10.6	106	66 - 120	
Bromomethane	10.0	10.1	101	47 - 150	
Methyl Ethyl Ketone	10.0	9.09	91	42 - 150	J
Carbon disulfide	10.0	11.8	118	55 - 150	
Carbon tetrachloride	10.0	11.8	118	69 - 135	
Chlorobenzene	10.0	10.0	100	68 - 120	
Chloroethane	10.0	13.2	132	49 - 150	
Chloroform	10.0	11.3	113	77 - 126	
Chloromethane	10.0	13.6	136	33 - 150	
Dibromochloromethane	10.0	10.3	103	75 - 120	
1,1-Dichloroethane	10.0	11.2	112	75 - 130	
1,2-Dichloroethane	10.0	11.0	110	73 - 127	
1,1-Dichloroethene	10.0	12.4	124	65 - 142	
1,2-Dichloropropane	10.0	10.7	107	69 - 129	
cis-1,3-Dichloropropene	10.0	10.8	108	63 - 120	
trans-1,3-Dichloropropene	10.0	11.1	111	73 - 120	
Ethylbenzene	10.0	10.5	105	62 - 120	
2-Hexanone	10.0	8.15	82	46 - 150	J
Methylene Chloride	10.0	10.7	107	56 - 138	
methyl isobutyl ketone	10.0	9.43	94	70 - 122	J
Styrene	10.0	9.52	95	47 - 120	
1,1,2,2-Tetrachloroethane	10.0	9.46	95	75 - 124	
Tetrachloroethene	10.0	9.88	99	50 - 120	
Toluene	10.0	10.1	101	66 - 120	
1,1,1-Trichloroethane	10.0	11.7	117	73 - 135	
1,1,2-Trichloroethane	10.0	10.7	107	76 - 125	
Trichloroethene	10.0	11.0	110	60 - 122	
Vinyl chloride	10.0	14.1	141	61 - 150	
Xylenes, Total	30.0	31.3	104	58 - 120	
cis-1,2-Dichloroethene	10.0	10.4	104	65 - 120	
trans-1,2-Dichloroethene	10.0	11.1	111	58 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	91	65 - 136
4-Bromofluorobenzene	88	51 - 142
Dibromofluoromethane	93	68 - 132
Toluene-d8 (Surr)	84	63 - 127

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

DATA REPORTING QUALIFIERS

Client: Malcolm Pirnie, Inc.

Job Number: 220-10774-1
Sdg Number: 220-10774

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

Client: Malcolm Pirnie, Inc.

Job Number: 220-10774-1
Sdg Number: 220-10774

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:220-33707					
LCS 220-33707/2	Lab Control Sample	T	Water	8260B	
MB 220-33707/3	Method Blank	T	Water	8260B	
220-10774-2	Well 1-1A EFF	T	Water	8260B	
220-10774-3TB	Trip Blank	T	Water	8260B	
Analysis Batch:220-33936					
LCS 220-33936/2	Lab Control Sample	T	Water	8260B	
MB 220-33936/3	Method Blank	T	Water	8260B	
220-10774-1	Well 1-1A INF	T	Water	8260B	

Report Basis
T = Total

Client: Malcolm Pirnie, Inc.

Job Number: 220-10774-1
SDG: 220-10774

Laboratory Chronicle

Lab ID: 220-10774-1 **Client ID: Well 1-1A INF**

Sample Date/Time: 11/20/2009 08:00 Received Date/Time: 11/21/2009 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-10774-A-1		220-33936		12/02/2009 20:27	4	TAL CT	BK
A:8260B	220-10774-A-1		220-33936		12/02/2009 20:27	4	TAL CT	BK

Lab ID: 220-10774-2 **Client ID: Well 1-1A EFF**

Sample Date/Time: 11/20/2009 08:05 Received Date/Time: 11/21/2009 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-10774-A-2		220-33707		11/24/2009 20:21	1	TAL CT	BK
A:8260B	220-10774-A-2		220-33707		11/24/2009 20:21	1	TAL CT	BK

Lab ID: 220-10774-3 **Client ID: Trip Blank**

Sample Date/Time: 11/20/2009 00:00 Received Date/Time: 11/21/2009 10:30

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-10774-A-3		220-33707		11/24/2009 19:58	1	TAL CT	BK
A:8260B	220-10774-A-3		220-33707		11/24/2009 19:58	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 220-33707/3		220-33707		11/24/2009 11:28	1	TAL CT	BK
A:8260B	MB 220-33707/3		220-33707		11/24/2009 11:28	1	TAL CT	BK
P:5030B	MB 220-33936/3		220-33936		12/02/2009 12:33	1	TAL CT	BK
A:8260B	MB 220-33936/3		220-33936		12/02/2009 12:33	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 220-33707/2		220-33707		11/24/2009 09:53	1	TAL CT	BK
A:8260B	LCS 220-33707/2		220-33707		11/24/2009 09:53	1	TAL CT	BK
P:5030B	LCS 220-33936/2		220-33936		12/02/2009 11:14	1	TAL CT	BK
A:8260B	LCS 220-33936/2		220-33936		12/02/2009 11:14	1	TAL CT	BK

Lab References:
TAL CT = TestAmerica Connecticut

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 220-11184-1

SDG Number: 220-11184

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
1/11/2010 12:10 PM

Designee for
Johanna Dubauskas
Project Manager I
johanna.dubauskas@testamericainc.com
01/11/2010

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.

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TestAmerica Laboratories, Inc.
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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
All samples were received in good condition within temperature requirements.

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

Case Narrative for Job: 220-11184

Client: MPI
Date: January 11, 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.

Lawrence Decker
Laboratory Director

January 11, 2010
Date

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

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

Pesticides

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

PCBs for compound/retention time

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

DRO/CTETPH

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

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: 220-11184-1
Sdg Number: 220-11184

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
220-11184-1	Well 1-1A INF	Water	12/23/2009 0925	12/24/2009 1100
220-11184-2	Well 1-1A EFF	Water	12/23/2009 0930	12/24/2009 1100
220-11184-3TB	Trip Blank	Water	12/23/2009 0000	12/24/2009 1100

EXECUTIVE SUMMARY - Detections

Client: Malcolm Pirnie, Inc.

Job Number: 220-11184-1
Sdg Number: 220-11184

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
220-11184-1	**WELL 1-1A INF**					
Acetone		5.8	J	40	ug/L	8260B
1,1-Dichloroethane		27		20	ug/L	8260B
1,1-Dichloroethene		20		20	ug/L	8260B
1,1,1-Trichloroethane		240		20	ug/L	8260B
Trichloroethene		58		20	ug/L	8260B
Vinyl chloride		8.6	J	20	ug/L	8260B
cis-1,2-Dichloroethene		55		20	ug/L	8260B
220-11184-3TB	**TRIP BLANK**					
Methylene Chloride		3.5	J B	5.0	ug/L	8260B

METHOD SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 220-11184-1
Sdg Number: 220-11184

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: 220-11184-1
Sdg Number: 220-11184

Method	Analyst	Analyst ID
SW846 8260B	Kostrzewska, Barbara	BK

Client: Malcolm Pirnie, Inc.

Job Number: 220-11184-1
Sdg Number: 220-11184

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

Lab Sample ID: 220-11184-1
Client Matrix: Water

Date Sampled: 12/23/2009 0925
Date Received: 12/24/2009 1100

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 4.0
Date Analyzed: 12/29/2009 1146
Date Prepared: 12/29/2009 1146

Analysis Batch: 220-34808

Instrument ID: MSW
Lab File ID: W0027.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	5.8	J	4.1	40
Benzene	20	U	3.0	20
Bromodichloromethane	20	U	1.9	20
Bromoform	20	U	1.8	20
Bromomethane	20	U	8.5	20
Methyl Ethyl Ketone	40	U	4.4	40
Carbon disulfide	20	U	3.6	20
Carbon tetrachloride	20	U	4.3	20
Chlorobenzene	20	U	2.9	20
Chloroethane	20	U	4.2	20
Chloroform	20	U	2.7	20
Chloromethane	20	U	4.4	20
Dibromochloromethane	20	U	2.2	20
1,1-Dichloroethane	27		4.1	20
1,2-Dichloroethane	20	U	2.9	20
1,1-Dichloroethene	20		3.3	20
1,2-Dichloropropane	20	U	2.8	20
cis-1,3-Dichloropropene	20	U	1.1	20
trans-1,3-Dichloropropene	20	U	2.3	20
Ethylbenzene	20	U	3.5	20
2-Hexanone	40	U *	4.4	40
Methylene Chloride	20	U	3.1	20
methyl isobutyl ketone	40	U	1.5	40
Styrene	20	U	2.6	20
1,1,2,2-Tetrachloroethane	20	U	3.2	20
Tetrachloroethene	20	U	3.2	20
Toluene	20	U	2.9	20
1,1,1-Trichloroethane	240		2.8	20
1,1,2-Trichloroethane	20	U	2.6	20
Trichloroethene	58		2.5	20
Vinyl chloride	8.6	J	4.0	20
Xylenes, Total	20	U	9.1	20
cis-1,2-Dichloroethene	55		4.0	20
trans-1,2-Dichloroethene	20	U	3.0	20

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97		65 - 136
4-Bromofluorobenzene	80		51 - 142
Dibromofluoromethane	120		68 - 132
Toluene-d8 (Surr)	89		63 - 127

Client: Malcolm Pirnie, Inc.

Job Number: 220-11184-1
Sdg Number: 220-11184

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

Lab Sample ID: 220-11184-2
Client Matrix: Water

Date Sampled: 12/23/2009 0930
Date Received: 12/24/2009 1100

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 12/28/2009 2138
Date Prepared: 12/28/2009 2138

Analysis Batch: 220-34682

Instrument ID: MSW
Lab File ID: W0008.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)	97		65 - 136
4-Bromofluorobenzene	77		51 - 142
Dibromofluoromethane	120		68 - 132
Toluene-d8 (Surr)	87		63 - 127

Client: Malcolm Pirnie, Inc.

Job Number: 220-11184-1
Sdg Number: 220-11184

Client Sample ID: **Trip Blank**

Lab Sample ID: 220-11184-3TB
Client Matrix: Water

Date Sampled: 12/23/2009 0000
Date Received: 12/24/2009 1100

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 12/28/2009 2203
Date Prepared: 12/28/2009 2203

Analysis Batch: 220-34682

Instrument ID: MSW
Lab File ID: W0009.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	3.5	J B	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)	97		65 - 136
4-Bromofluorobenzene	77		51 - 142
Dibromofluoromethane	121		68 - 132
Toluene-d8 (Surr)	86		63 - 127

Client: Malcolm Pirnie, Inc.

Job Number: 220-11184-1
Sdg Number: 220-11184

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
220-11184-1	Well 1-1A INF	120	97	89	80
220-11184-2	Well 1-1A EFF	120	97	87	77
220-11184-3	Trip Blank	121	97	86	77
MB 220-34682/3		123	99	89	81
MB 220-34808/3		121	98	91	77
LCS 220-34682/2		127	102	97	81
LCS 220-34808/2		115	93	90	80
220-11180-F-6 MS		107	86	91	82
220-11180-H-6 MSD		106	82	93	83

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: 220-11184-1
Sdg Number: 220-11184

Method Blank - Batch: 220-34682

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-34682/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/28/2009 1259
Date Prepared: 12/28/2009 1259

Analysis Batch: 220-34682
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: W9987.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	1.16	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)	99	65 - 136
4-Bromofluorobenzene	81	51 - 142
Dibromofluoromethane	123	68 - 132
Toluene-d8 (Surr)	89	63 - 127

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

Client: Malcolm Pirnie, Inc.

Job Number: 220-11184-1
Sdg Number: 220-11184

Lab Control Sample - Batch: 220-34682

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-34682/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/28/2009 1210
Date Prepared: 12/28/2009 1210

Analysis Batch: 220-34682
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: W9985.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	10.0	6.83	68	41 - 150	J
Benzene	10.0	9.22	92	66 - 131	
Bromodichloromethane	10.0	9.05	90	78 - 120	
Bromoform	10.0	10.6	106	66 - 120	
Bromomethane	10.0	8.91	89	47 - 150	
Methyl Ethyl Ketone	10.0	6.30	63	42 - 150	J
Carbon disulfide	10.0	11.1	111	55 - 150	
Carbon tetrachloride	10.0	11.4	114	69 - 135	
Chlorobenzene	10.0	8.23	82	68 - 120	
Chloroethane	10.0	10.5	105	49 - 150	
Chloroform	10.0	10.6	106	77 - 126	
Chloromethane	10.0	10.6	106	33 - 150	
Dibromochloromethane	10.0	9.32	93	75 - 120	
1,1-Dichloroethane	10.0	9.23	92	75 - 130	
1,2-Dichloroethane	10.0	9.32	93	73 - 127	
1,1-Dichloroethene	10.0	11.8	118	65 - 142	
1,2-Dichloropropane	10.0	8.09	81	69 - 129	
cis-1,3-Dichloropropene	10.0	7.29	73	63 - 120	
trans-1,3-Dichloropropene	10.0	8.86	89	73 - 120	
Ethylbenzene	10.0	8.07	81	62 - 120	
2-Hexanone	10.0	3.69	37	46 - 150	J *
Methylene Chloride	10.0	11.8	118	56 - 138	
methyl isobutyl ketone	10.0	6.84	68	70 - 122	J *
Styrene	10.0	7.12	71	47 - 120	
1,1,2,2-Tetrachloroethane	10.0	8.03	80	75 - 124	
Tetrachloroethene	10.0	8.94	89	50 - 120	
Toluene	10.0	8.62	86	66 - 120	
1,1,1-Trichloroethane	10.0	11.2	112	73 - 135	
1,1,2-Trichloroethane	10.0	9.47	95	76 - 125	
Trichloroethene	10.0	9.73	97	60 - 122	
Vinyl chloride	10.0	11.0	110	61 - 150	
Xylenes, Total	30.0	22.7	76	58 - 120	
cis-1,2-Dichloroethene	10.0	8.26	83	65 - 120	
trans-1,2-Dichloroethene	10.0	9.61	96	58 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102	65 - 136
4-Bromofluorobenzene	81	51 - 142
Dibromofluoromethane	127	68 - 132
Toluene-d8 (Surr)	97	63 - 127

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

Client: Malcolm Pirnie, Inc.

Job Number: 220-11184-1
Sdg Number: 220-11184

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 220-34682

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	220-11180-F-6 MS	Analysis Batch: 220-34682	Instrument ID: HP 6890/5973 GC/MS
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: W9999.D
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	12/28/2009 1755		Final Weight/Volume: 5 mL
Date Prepared:	12/28/2009 1755		

MSD Lab Sample ID:	220-11180-H-6 MSD	Analysis Batch: 220-34682	Instrument ID: HP 6890/5973 GC/MS
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: W0000.D
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	12/28/2009 1819		Final Weight/Volume: 5 mL
Date Prepared:	12/28/2009 1819		

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acetone	86	83	41 - 150	3	20		
Benzene	114	104	66 - 131	6	20		
Bromodichloromethane	106	99	78 - 120	7	20		
Bromoform	119	108	66 - 120	10	20		
Bromomethane	73	79	47 - 150	8	20		
Methyl Ethyl Ketone	104	103	42 - 150	0	20		
Carbon disulfide	120	114	55 - 150	5	20		
Carbon tetrachloride	127	116	69 - 135	9	20		
Chlorobenzene	104	96	68 - 120	8	20		
Chloroethane	94	105	49 - 150	11	20		
Chloroform	112	100	77 - 126	12	20		
Chloromethane	82	98	33 - 150	18	20		
Dibromochloromethane	109	100	75 - 120	8	20		
1,1-Dichloroethane	113	104	75 - 130	8	20		
1,2-Dichloroethane	103	94	73 - 127	9	20		
1,1-Dichloroethene	118	109	65 - 142	8	20		
1,2-Dichloropropane	104	100	69 - 129	5	20		
cis-1,3-Dichloropropene	95	91	63 - 120	5	20		
trans-1,3-Dichloropropene	106	98	73 - 120	8	20		
Ethylbenzene	115	95	62 - 120	5	20		
2-Hexanone	87	86	46 - 150	1	20		
Methylene Chloride	111	104	56 - 138	7	20		
methyl isobutyl ketone	89	90	70 - 122	1	20		
Styrene	100	92	47 - 120	8	20		
1,1,2,2-Tetrachloroethane	98	93	75 - 124	6	20		
Tetrachloroethene	106	98	50 - 120	8	20		
Toluene	108	101	66 - 120	6	20		
1,1,1-Trichloroethane	127	117	73 - 135	8	20		
1,1,2-Trichloroethane	111	99	76 - 125	12	20		
Trichloroethene	120	109	60 - 122	9	20		

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

Client: Malcolm Pirnie, Inc.

Job Number: 220-11184-1
Sdg Number: 220-11184

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 220-34682

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	220-11180-F-6 MS	Analysis Batch: 220-34682	Instrument ID: HP 6890/5973 GC/MS
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: W9999.D
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	12/28/2009 1755		Final Weight/Volume: 5 mL
Date Prepared:	12/28/2009 1755		

MSD Lab Sample ID:	220-11180-H-6 MSD	Analysis Batch: 220-34682	Instrument ID: HP 6890/5973 GC/MS
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: W0000.D
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	12/28/2009 1819		Final Weight/Volume: 5 mL
Date Prepared:	12/28/2009 1819		

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Vinyl chloride	91	106	61 - 150	15	20		
Xylenes, Total	117	106	58 - 120	6	20		
cis-1,2-Dichloroethene	107	104	65 - 120	3	20		
trans-1,2-Dichloroethene	117	108	58 - 120	8	20		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	86	82	65 - 136
4-Bromofluorobenzene	82	83	51 - 142
Dibromofluoromethane	107	106	68 - 132
Toluene-d8 (Surr)	91	93	63 - 127

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

Client: Malcolm Pirnie, Inc.

Job Number: 220-11184-1
Sdg Number: 220-11184

Matrix Spike/
Matrix Spike Duplicate Data Report - Batch: 220-34682

Method: 8260B
Preparation: 5030B

MS Lab Sample ID: 220-11180-F-6 MS
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/28/2009 1755
Date Prepared: 12/28/2009 1755

Units: ug/L

MSD Lab Sample ID: 220-11180-H-6 MSD
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/28/2009 1819
Date Prepared: 12/28/2009 1819

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Acetone	10	U	20.0	20.0	17.1	16.6
Benzene	12		20.0	20.0	34.9	32.9
Bromodichloromethane	5.0	U	20.0	20.0	21.2	19.8
Bromoform	5.0	U	20.0	20.0	23.8	21.5
Bromomethane	5.0	U	20.0	20.0	14.6	15.7
Methyl Ethyl Ketone	10	U	20.0	20.0	20.7	20.6
Carbon disulfide	5.0	U	20.0	20.0	24.0	22.8
Carbon tetrachloride	5.0	U	20.0	20.0	25.5	23.2
Chlorobenzene	5.0	U	20.0	20.0	20.8	19.2
Chloroethane	5.0	U	20.0	20.0	18.8	21.1
Chloroform	5.0	U	20.0	20.0	22.5	20.0
Chloromethane	5.0	U	20.0	20.0	16.4	19.7
Dibromochloromethane	5.0	U	20.0	20.0	21.8	20.1
1,1-Dichloroethane	5.0	U	20.0	20.0	22.5	20.8
1,2-Dichloroethane	5.0	U	20.0	20.0	20.5	18.7
1,1-Dichloroethene	5.0	U	20.0	20.0	23.6	21.8
1,2-Dichloropropane	5.0	U	20.0	20.0	20.9	19.9
cis-1,3-Dichloropropene	5.0	U	20.0	20.0	19.1	18.2
trans-1,3-Dichloropropene	5.0	U	20.0	20.0	21.2	19.6
Ethylbenzene	64		20.0	20.0	87.2	83.3
2-Hexanone	10	U	20.0	20.0	17.4	17.2
Methylene Chloride	5.0	U	20.0	20.0	22.2	20.8
methyl isobutyl ketone	10	U	20.0	20.0	17.8	18.0
Styrene	0.75	J	20.0	20.0	20.7	19.2
1,1,2,2-Tetrachloroethane	5.0	U	20.0	20.0	19.7	18.5
Tetrachloroethene	5.0	U	20.0	20.0	21.1	19.6
Toluene	2.6	J	20.0	20.0	24.3	22.9
1,1,1-Trichloroethane	5.0	U	20.0	20.0	25.3	23.4
1,1,2-Trichloroethane	5.0	U	20.0	20.0	22.3	19.8
Trichloroethene	5.0	U	20.0	20.0	23.9	21.8
Vinyl chloride	5.0	U	20.0	20.0	18.2	21.3
Xylenes, Total	43		60.0	60.0	113	106
cis-1,2-Dichloroethene	5.0	U	20.0	20.0	21.4	20.9
trans-1,2-Dichloroethene	5.0	U	20.0	20.0	23.4	21.5

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

Client: Malcolm Pirnie, Inc.

Job Number: 220-11184-1
Sdg Number: 220-11184

Method Blank - Batch: 220-34808

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 220-34808/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/29/2009 1121
Date Prepared: 12/29/2009 1121

Analysis Batch: 220-34808
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: W0026.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)	98	65 - 136
4-Bromofluorobenzene	77	51 - 142
Dibromofluoromethane	121	68 - 132
Toluene-d8 (Surr)	91	63 - 127

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

Client: Malcolm Pirnie, Inc.

Job Number: 220-11184-1
Sdg Number: 220-11184

Lab Control Sample - Batch: 220-34808

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 220-34808/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 12/29/2009 1004
Date Prepared: 12/29/2009 1004

Analysis Batch: 220-34808
Prep Batch: N/A
Units: ug/L

Instrument ID: HP 6890/5973 GC/MS
Lab File ID: W0023.D
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	10.0	6.37	64	41 - 150	J
Benzene	10.0	10.4	104	66 - 131	
Bromodichloromethane	10.0	9.60	96	78 - 120	
Bromoform	10.0	10.4	104	66 - 120	
Bromomethane	10.0	11.1	111	47 - 150	
Methyl Ethyl Ketone	10.0	7.33	73	42 - 150	J
Carbon disulfide	10.0	12.7	127	55 - 150	
Carbon tetrachloride	10.0	12.4	124	69 - 135	
Chlorobenzene	10.0	8.79	88	68 - 120	
Chloroethane	10.0	12.1	121	49 - 150	
Chloroform	10.0	11.4	114	77 - 126	
Chloromethane	10.0	12.4	124	33 - 150	
Dibromochloromethane	10.0	9.57	96	75 - 120	
1,1-Dichloroethane	10.0	9.86	99	75 - 130	
1,2-Dichloroethane	10.0	9.42	94	73 - 127	
1,1-Dichloroethene	10.0	13.9	139	65 - 142	
1,2-Dichloropropane	10.0	9.34	93	69 - 129	
cis-1,3-Dichloropropene	10.0	7.86	79	63 - 120	
trans-1,3-Dichloropropene	10.0	9.27	93	73 - 120	
Ethylbenzene	10.0	9.26	93	62 - 120	
2-Hexanone	10.0	4.09	41	46 - 150	J *
Methylene Chloride	10.0	12.0	120	56 - 138	
methyl isobutyl ketone	10.0	6.95	70	70 - 122	J
Styrene	10.0	7.97	80	47 - 120	
1,1,2,2-Tetrachloroethane	10.0	7.82	78	75 - 124	
Tetrachloroethene	10.0	10.2	102	50 - 120	
Toluene	10.0	9.24	92	66 - 120	
1,1,1-Trichloroethane	10.0	12.2	122	73 - 135	
1,1,2-Trichloroethane	10.0	9.80	98	76 - 125	
Trichloroethene	10.0	10.7	107	60 - 122	
Vinyl chloride	10.0	12.7	127	61 - 150	
Xylenes, Total	30.0	25.4	85	58 - 120	
cis-1,2-Dichloroethene	10.0	9.60	96	65 - 120	
trans-1,2-Dichloroethene	10.0	10.6	106	58 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	93	65 - 136
4-Bromofluorobenzene	80	51 - 142
Dibromofluoromethane	115	68 - 132
Toluene-d8 (Surr)	90	63 - 127

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

DATA REPORTING QUALIFIERS

Client: Malcolm Pirnie, Inc.

Job Number: 220-11184-1
Sdg Number: 220-11184

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: 220-11184-1
Sdg Number: 220-11184

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:220-34682					
LCS 220-34682/2	Lab Control Sample	T	Water	8260B	
MB 220-34682/3	Method Blank	T	Water	8260B	
220-11180-F-6 MS	Matrix Spike	T	Water	8260B	
220-11180-H-6 MSD	Matrix Spike Duplicate	T	Water	8260B	
220-11184-2	Well 1-1A EFF	T	Water	8260B	
220-11184-3TB	Trip Blank	T	Water	8260B	
Analysis Batch:220-34808					
LCS 220-34808/2	Lab Control Sample	T	Water	8260B	
MB 220-34808/3	Method Blank	T	Water	8260B	
220-11184-1	Well 1-1A INF	T	Water	8260B	

Report Basis
T = Total

Client: Malcolm Pirnie, Inc.

Job Number: 220-11184-1
SDG: 220-11184

Laboratory Chronicle

Lab ID: 220-11184-1 **Client ID: Well 1-1A INF**

Sample Date/Time: 12/23/2009 09:25 Received Date/Time: 12/24/2009 11:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11184-A-1		220-34808		12/29/2009 11:46	4	TAL CT	BK
A:8260B	220-11184-A-1		220-34808		12/29/2009 11:46	4	TAL CT	BK

Lab ID: 220-11184-2 **Client ID: Well 1-1A EFF**

Sample Date/Time: 12/23/2009 09:30 Received Date/Time: 12/24/2009 11:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11184-B-2		220-34682		12/28/2009 21:38	1	TAL CT	BK
A:8260B	220-11184-B-2		220-34682		12/28/2009 21:38	1	TAL CT	BK

Lab ID: 220-11184-3 **Client ID: Trip Blank**

Sample Date/Time: 12/23/2009 00:00 Received Date/Time: 12/24/2009 11:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11184-B-3		220-34682		12/28/2009 22:03	1	TAL CT	BK
A:8260B	220-11184-B-3		220-34682		12/28/2009 22:03	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 220-34682/3		220-34682		12/28/2009 12:59	1	TAL CT	BK
A:8260B	MB 220-34682/3		220-34682		12/28/2009 12:59	1	TAL CT	BK
P:5030B	MB 220-34808/3		220-34808		12/29/2009 11:21	1	TAL CT	BK
A:8260B	MB 220-34808/3		220-34808		12/29/2009 11:21	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 220-34682/2		220-34682		12/28/2009 12:10	1	TAL CT	BK
A:8260B	LCS 220-34682/2		220-34682		12/28/2009 12:10	1	TAL CT	BK
P:5030B	LCS 220-34808/2		220-34808		12/29/2009 10:04	1	TAL CT	BK
A:8260B	LCS 220-34808/2		220-34808		12/29/2009 10:04	1	TAL CT	BK

Client: Malcolm Pirnie, Inc.

Job Number: 220-11184-1
SDG: 220-11184

Laboratory Chronicle

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

Sample Date/Time: N/A 12/22/2009 00:00 Received Date/Time: N/A 12/23/2009 19:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11180-F-6 MS		220-34682		12/28/2009 17:55	1	TAL CT	BK
A:8260B	220-11180-F-6 MS		220-34682		12/28/2009 17:55	1	TAL CT	BK

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

Sample Date/Time: N/A 12/22/2009 00:00 Received Date/Time: N/A 12/23/2009 19:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	220-11180-H-6 MSD		220-34682		12/28/2009 18:19	1	TAL CT	BK
A:8260B	220-11180-H-6 MSD		220-34682		12/28/2009 18:19	1	TAL CT	BK

Lab References:
TAL CT = TestAmerica Connecticut