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New York State Department of Environmental Conservation

Site Number 7-04-009A

Vestal Water Supply Site Quarterly Report

Fourth Quarter 2012

June 2013

ARCADIS

Bruce Nelson, CPG
Vice President

Jeremy Wyckoff
Staff Geologist

Vestal Water Supply Site
Quarterly Report

Site Number 7-04-009A

Prepared for:
New York State Department of
Environmental Conservation

Prepared by:
ARCADIS U.S., Inc.
855 Route 146
Suite 210
Clifton Park
New York 12065
Tel 518 250 7300
Fax 518 250 7301

Our Ref.:
00266401.0000

Date:
June 2013

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Table of Contents

Figures

Tables

Appendices

1. Introduction

The New York State Department of Environmental Conservation (NYSDEC) has issued a Work Assignment (# D007618-7) to ARCADIS / Malcolm Pirnie, Inc. (Malcolm Pirnie) for Operation, Maintenance, and Monitoring at the Vestal Water Supply Site in New York State (Site # 7-04-009A). Malcolm Pirnie has prepared this Quarterly Report in accordance with the NYSDEC-approved Work Plan to summarize site activities.

2. Site Description

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

3. Operation and Maintenance

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

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

3.1 Variable Frequency Drive

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 provides energy savings by allowing the well pump motor to be operated at a reduced speed. Compared to the full load rating of the pump motor and at the estimated energy cost of $0.083 per kilo-watt (KW), the VFD, at the current setting of 51 hertz, has the potential to provide an estimated annual energy cost savings up to $9,000.

3.2 Flow Meter

As discussed in the Third and Fourth Quarter 2010 Quarterly Report (Malcolm Pirnie, 2010) the digital flow meter readings for Well 1-1A may be understated and the ECI Monthly Reports and System O&M Logs presented estimated adjusted values. The estimated adjusted flow values for July through December 2010 were calculated by adding an additional 150 gallons per minute (GPM) to the flow displayed on the digital flow meter. The adjustment value was based on the difference between the flow calculated using the manufacturer's pump performance curve, system operating pressure, and pumping level compared to the reading on the digital flow meter. Following discussions with ECI in April 2011, and to be consistent with historical reporting formats, the Monthly Reports and System O&M logs will no longer present the adjusted flow values. Therefore, the flow measurements presented in the Monthly

Report and System O&M Logs (Appendix A) are direct readings from the digital flow meter.

3.3 Discharge Orifice

A temporary circular weir orifice (orifice) was installed in the discharge outlet for the Well 1-1A treatment plant on July 18, 2012 as a temporary means to provide a better estimate of flow through the treatment plant. Flow data measured from the orifice will be used to support the pending NYSDEC Remedial System Optimization (RSO) evaluation.

3.3.1 Orifice Configuration

The orifice was constructed using a 6 inch inside-diameter (ID) orifice inserted into a 10 inch ID PVC outlet pipe. Details of the installation were provided in the Third Quarter Report and Annual Groundwater Monitoring Summary (Malcolm Pirnie, 2013). Flow through the orifice is calculated using the following equation from Driscoll, 1986:

$$\boldsymbol{Q = CA\sqrt{2gh}}$$

Where:

Q = Flow (gallons per minute),

C = Correction factor based on diameter of the orifice and orifice discharge pipe,

A = Area of orifice in square inches,

g = acceleration due to gravity (feet per second squared), and

h = height of water (inches) in the piezometer tube

3.3.2 Flow Readings

Based on field measurements of flow using the orifice, the average discharge rate from the Well 1-1A treatment on October 31, November 20, and December 25, 2012 were approximately 330 GPM, 305 GPM and 310 GPM, respectively. These measurements coincide to digital flow meter readings of 140 GPM, 130 GPM, and 126 GPM, respectively. Therefore, as indicated in Section 3.2, the total flow through the Well 1-1A treatment plant is being under-reported.

3.4 System Operation

As indicated in the ECI Monthly Reports and O&M Logs, the groundwater treatment system was shut down on October 29, 2012 due to a storm (Tropical Storm Sandy). The system was restarted on October 31, 2012 with no storm-related damage reported.

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 140 GPM in October 2012 to an average of 125 GPM in December 2012. As shown on Table 3-1, approximately 17,115,000 gallons of water were treated during the fourth quarter 2012 operating period.

3.5 Influent – Effluent Sampling

Fourth quarter 2012 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 TestAmerica Laboratories following chain-of-custody protocols for analysis of volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260B. The laboratory analytical reporting forms are provided in Appendix B. The laboratory analytical data for the treatment plan samples are summarized in Tables 3-2 (influent VOCs) and Table 3-3 (effluent VOCs); Figure 3-2 presents the Well 1-1A treatment plant total influent VOC concentrations over time.

At the request of the USEPA and the NYSDEC, the December 2012 influent and effluent groundwater samples were also analyzed for Spill Technology and Remediation Series (STARS) VOCs by USEPA Method 8260B and 1,4-dioxane by USEPA Method 8270C. A summary of these results are presented in Table 3-4.

As shown in Table 3-2, influent sample concentrations of 1,1,1-trichloroethane (1,1,1-TCA), 1,1-dichloroethane (1,1-DCA), 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (cis-1,2 DCE), trichloroethene (TCE), and vinyl chloride (VC) are consistent with previous sampling results and exceed the corresponding NYSDEC Class GA Standards in each of the samples collected in the fourth quarter, 2012. Figure 3-2 shows that the total VOCs concentrations detected in the Well 1-1A influent samples are within the range of previous sampling results.

As shown in Table 3-4, methyl-tert butyl ether (MTBE) was detected in the December 2012 influent sample from Well 1-1A at a concentration of 3.2 ug/L. Table 3-4 shows that this concentration is less than the corresponding NYSDEC Class GA Standard of 10 ug/L.

Table 3-4 shows that 1,4-dioxane was not detected in the influent or effluent groundwater samples from the Well 1-1A treatment plant above the indicated laboratory quantitation limits.

Table 3-3 and Table 3-4 show that MTBE was the only VOC detected in the fourth quarter 2012 effluent sample. As shown in Table 3-4, the estimated (based on the "J" qualifier) concentration of MTBE in December 2012 was 0.68 ug/L, which is less than the NYSDEC Class GA Standard of 10 ug/L.

Based on influent sample concentrations and total flow volumes from the Well 1-1A treatment system, approximately 48 pounds of VOCs were removed by the treatment system during the fourth quarter 2012 operating period.

4. Groundwater Monitoring

Groundwater monitoring wells were sampled in accordance with the Work Plan during the third quarter, 2012. The results of the sampling event were submitted to the NYSDEC with the third quarter 2012 Vestal Water Supply Site Quarterly Report and Annual Groundwater Monitoring Summary (March 2013). An isoconcentration map showing the total VOCs concentrations in the July 2012 groundwater samples is provided in Appendix C. The next annual groundwater monitoring event is scheduled for the fourth quarter of 2013.

5. Recommendations

Recommendations for revised instrumentation and controls; replacement of the discharge line from the clear well to the outfall; evaluation of well pump corrosion; and routine well development have been presented to the NYSDEC in the Quarterly Report and Annual Groundwater Monitoring Summary (Malcolm Pirnie, 2013).

6. Summary

The Vestal Well 1-1A groundwater treatment system was shut down for two days in October due to Tropical Storm Sandy. The system operated without interruption during the remainder of the fourth quarter 2012 operation and maintenance period. Total flow through the treatment system from October to December 2012 was approximately 17.1 million gallons. Based on monthly influent and effluent sampling, the treatment system successfully removes VOCs from groundwater extracted from the capture zone. Approximately 48 pounds of VOCs were removed by the treatment system during the fourth quarter 2012 operational period. Groundwater sampling was conducted during the third quarter 2012. The next sampling event is scheduled for the fourth quarter 2013. Recommendations for revised instrumentation and controls; replacement of the discharge line; evaluation of well pump corrosion; and routine well development have been presented to the NYSDEC.

7. References

Driscoll, Fletcher. G, 1986, Groundwater and Wells: A Comprehensive Study of Groundwater and the Technologies used to Locate, Extract, Treat, and Protect this Resource. Johnson Screens, St. Paul, Minnesota.

Malcolm Pirnie, 2010, Quarterly Report, Third and Fourth Quarter 2010, Vestal Water Supply Site, Site Number 7-04-009A.

Malcolm Pirnie, 2013, Quarterly Report and Annual Groundwater Monitoring Summary, Third Quarter 2012, Vestal Water Supply Site, Site Number 7-04-009A.

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

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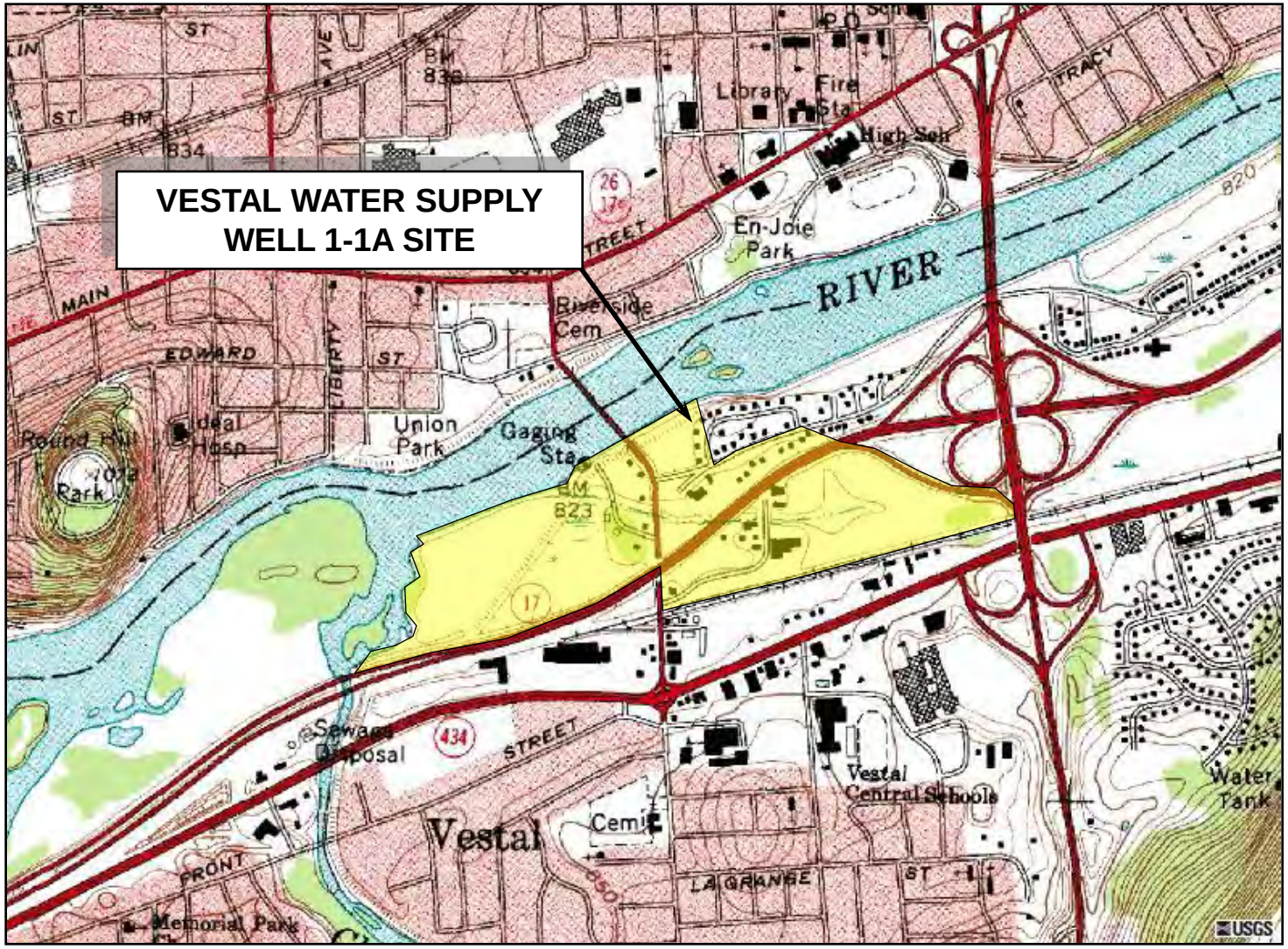
Figure 2-1
SITE LOCATION
Vestal Water Supply Site
Vestal, New York
Site Number 7-04-009A

0 2,000 ft



Source: USGS 7.5-minute Series Topographic Quadrangle, Endicott (1988).

g:\project\0266352\file\reports\Figure 2-1.ppt

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

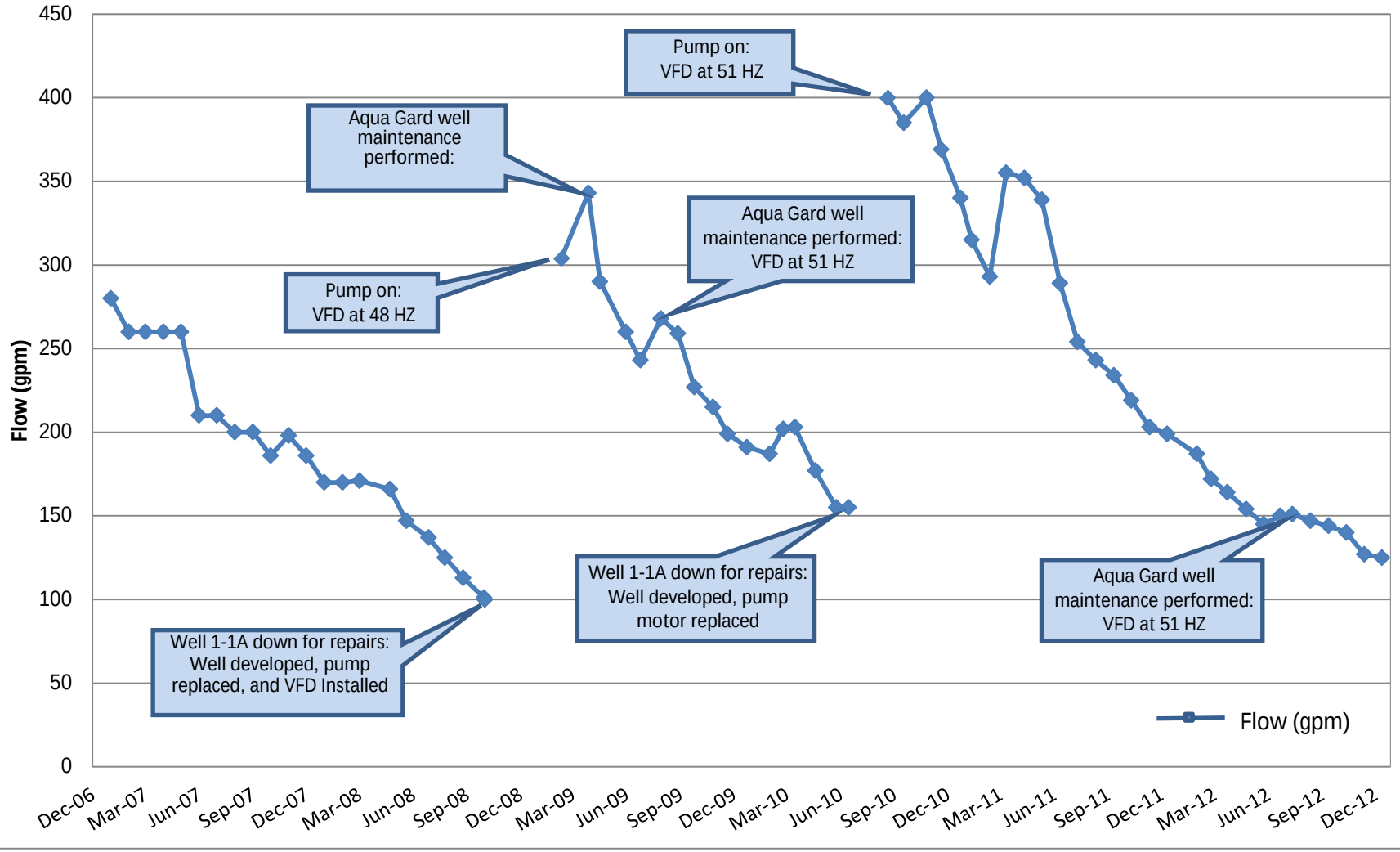

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Figure 3-2
Well 1-1A Treatment Plant Total VOCs Concentrations
Vestal Water Supply Site
NYSDEC Site Number 7-04-009A

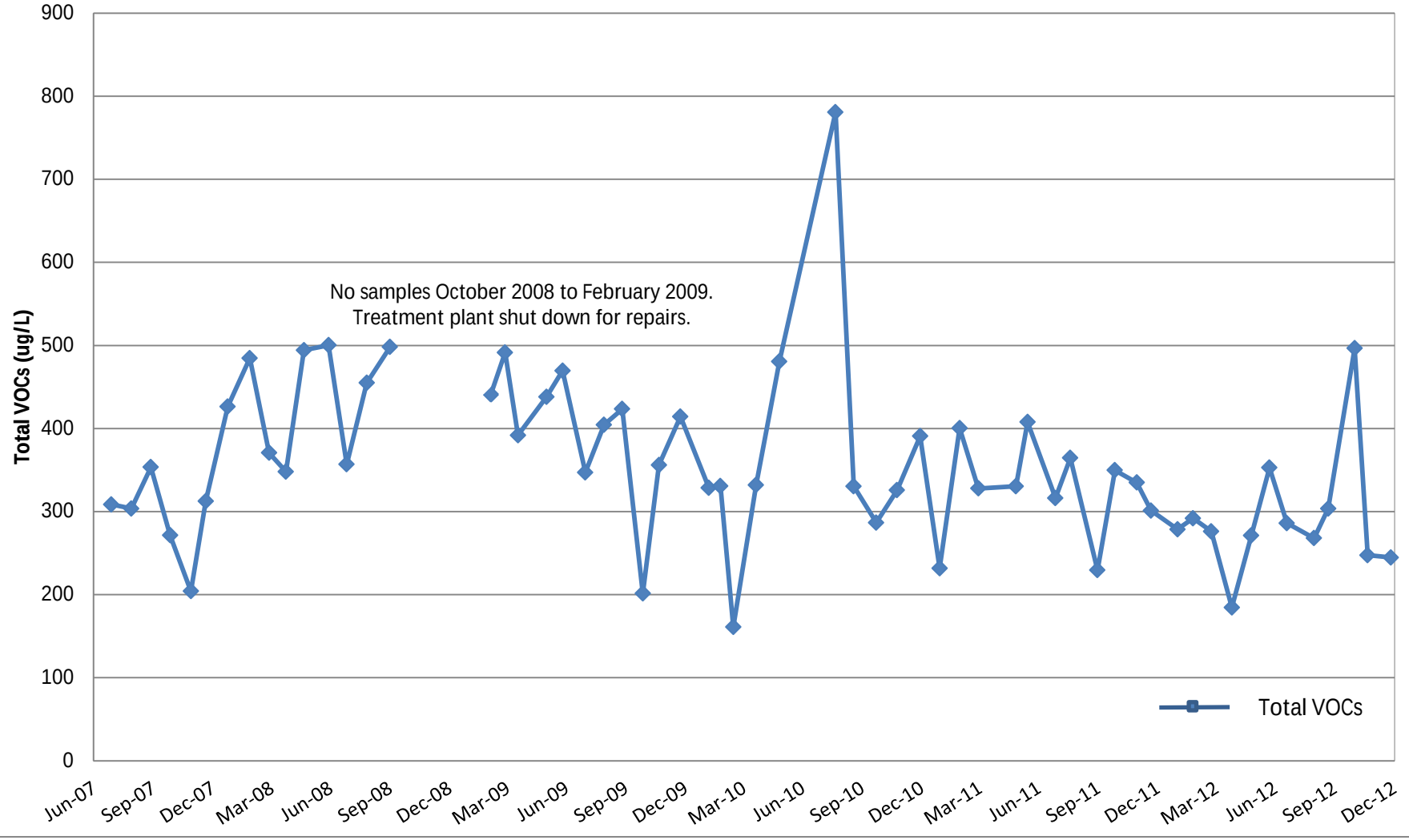

TABLE 3-1
WELL 1-1A FLOW SUMMARY
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE NO. 7-04-009A

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)			**65,750,400**	
Total Flow (2009)			**93,790,080**	

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 3-1
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-10	25 (3)	187	6,732,000	
February-10	28	202	8,144,640	23,938,560
March-10	31	203	9,061,920	
April-10	30	177	7,646,400	
May-10	31	155	6,919,200	16,128,000
June-10	7 (4)	155	1,562,400	
July-10	0 (4)	0	0	
August-10	12 (4)	400	6,912,000	23,544,000
September-10	30	385	16,632,000	
October-10	31	400	17,856,000	
November-10	28 (5)	369	14,878,080	47,911,680
December-10	31	340	15,177,600	
January-11	31	315	14,061,600	
February-11	27 (5)	293	11,391,840	40,278,240
March-11	29 (3)	355	14,824,800	
April-11	26 (3)	352	13,178,880	
May-11	29 (3)	339	14,156,640	39,820,320
June-11	30	289	12,484,800	
July-11	29 (5)	254	10,607,040	
August-11	29 (3)	243	10,147,680	29,178,720
September-11	25 (3)	234	8,424,000	
October-11	31	219	9,776,160	
November-11	30	203	8,769,600	27,429,120
December-11	31	199	8,883,360	
January-12	31	187	8,347,680	
February-12	29	172	7,182,720	22,851,360
March-12	31	164	7,320,960	
April-12	30	154	6,652,800	
May-12	31	145	6,472,800	19,173,600
June-12	28 (4)	150	6,048,000	
July-12	29 (5)	151	6,305,760	
August-12	25 (4)	147	5,292,000	17,818,560
September-12	30	144	6,220,800	
October-12	30 (storm)	140	6,048,000	
November-12	30	127	5,486,400	17,114,400
December-12	31	125	5,580,000	
Total Flow (2010)			**111,522,240**	
Total Flow (2011)			**136,706,400**	
Total Flow (2012)			**76,957,920**	

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 12/21/2011 WATER ug/L	WELL 1A-INF 1/31/2012 WATER ug/L	WELL 1A-INF 2/24/2012 WATER ug/L	WELL 1A-INF 3/23/2012 WATER ug/L	WELL 1A-INF 4/24/2012 WATER ug/L	WELL 1A-INF 5/24/2012 WATER ug/L	WELL 1A-INF 6/21/2012 WATER ug/L	WELL 1A-INF 7/18/2012 WATER ug/L	WELL 1A-INF 8/29/2012 WATER ug/L	WELL 1A-INF 9/20/2012 WATER ug/L	WELL 1A-INF 10/31/2012 WATER ug/L	WELL 1A-INF 11/20/2012 WATER ug/L	WELL 1A-INF 12/26/2012 WATER ug/L
VOCs														
1,1,1-Trichloroethane	5	**150**	**160**	**150**	**140**	**98**	**130**	**190**	**160**	**150**	**170**	**250**	**130**	**130**
1,1,2,2-Tetrachloroethane	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	2 U
1,1,2-Trichloroethane	1	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	2 U
1,1-Dichloroethane	5	**22**	**19**	**19**	**21**	**14**	**20**	**25**	**19**	**16**	**19**	**28**	**15**	**18**
1,1-Dichloroethene	5	**18**	**22**	**27**	**17**	**8.7**	**20**	**16**	**11**	**14**	**15**	**34**	**25**	**12**
1,2-Dichloroethane	0.6	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	2 U
1,2-Dichloropropane	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	2 U
2-Butanone (MEK)	50	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	10 U	20 U	20 U	10 U	20 U
2-Hexanone		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	5 U	10 U
4-Methyl-2-pentanone (MIBK)		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5 U	10 U	10 U	5 U	10 U
Acetone		20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	10 U	20 U	20 U	10 U	20 U
Benzene	1	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	2 U
Bromodichloromethane	50	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	2 U
Bromoform		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	2 U
Bromomethane	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	2 U
Carbon disulfide		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	0.43 J	2 U
Carbon tetrachloride	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	2 U
Chlorobenzene	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	2 U
Chloroethane	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.48 J	2 U	2 U	0.44 J	2 U
Chloroform	7	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	2 U
Chloromethane		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	2 U
cis-1,2-Dichloroethene	5	**51**	**35**	**44**	**45**	**29**	**45**	**56**	**44**	**39**	**47**	**85**	**32**	**37**
cis-1,3-Dichloropropene	0.4	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	2 U
Dibromochloromethane	50	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	2 U
Ethylbenzene	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	2 U
Methylene Chloride	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	2 U
Styrene	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	2 U
Tetrachloroethene	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	2 U
Toluene	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	2 U
trans-1,2-Dichloroethene	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	2 U
trans-1,3-Dichloropropene	0.4	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	2 U	1 U	2 U
Trichloroethene	5	**53**	**37**	**46**	**46**	**30**	**48**	**58**	**46**	**44**	**47**	**94**	**40**	**42**
Vinyl chloride	2	**7.1**	**5.7**	**5.9**	**7.1**	**4.8**	**8.1**	**7.8**	**6.1**	**4.5**	**5.6**	**5.5**	**5.5**	**5.7**
Xylenes, Total	5	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	2 U	4 U	4 U	2 U	4 U
Total VOCs		301	279	292	276	185	271	353	286	268	304	497	248	245

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.
D - Laboratory Dilution.
* - 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 12/21/2011 WATER ug/L	WELL 1A-EFF 1/31/2012 WATER ug/L	WELL 1A-EFF 2/24/2012 WATER ug/L	WELL 1A-EFF 3/23/2012 WATER ug/L	WELL 1A-EFF 4/26/2012 WATER ug/L	WELL 1A-EFF 5/24/2012 WATER ug/L	WELL 1A-EFF 6/21/2012 WATER ug/L	WELL 1A-EFF 7/18/2012 WATER ug/L	WELL 1A-EFF 8/29/2012 WATER ug/L	WELL 1A-EFF 9/20/2012 WATER ug/L	WELL 1A-EFF 10/31/2012 WATER ug/L	WELL 1A-EFF 11/20/2012 WATER ug/L	WELL 1A-EFF 12//2012 WATER ug/L
1,1,1-Trichloroethane	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	0.6	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone (MEK)	50	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone (MIBK)		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzene	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon disulfide		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon tetrachloride	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	7	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	0.4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methylene Chloride	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	0.4	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl chloride	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes, Total	5	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U

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

TABLE 3-4
SUMMARY OF GROUNDWATER TREATMENT SYSTEM RESULTS (STARS VOCs and 1,4-DIOXANE)
VESTAL WATER SUPPLY
VESTAL, NEW YORK
NYSDEC SITE #7-04-009A

Sample ID Sampling Date Matrix Units	NYSDEC GA Standard/ Guidance Value ug/L	WELL 1A-INF 12/26/2012 WATER ug/L	WELL 1A-EFF 12/26/2012 WATER ug/L
VOCs			
1,2,4-Trimethylbenzene	5	2 U	1 U
1,2-Dibromoethane	5	2 U	1 U
1,3,5-Trimethylbenzene	5	2 U	1 U
4-Isopropyltoluene	5	2 U	1 U
Isopropylbenzene	5	2 U	1 U
m,p-Xylene	5	4 U	2 U
Methyl tert-butyl ether	10	3.2	0.68 J
Naphthalene	10	2 U	1 U
n-Butylbenzene	5	2 U	1 U
N-Propylbenzene	5	2 U	1 U
o-Xylene	5	2 U	1 U
sec-Butylbenzene	5	2 U	1 U
tert-Butylbenzene	5	2 U	1 U
SVOCs			
1,4-Dioxane		5 U	4.9 U

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Appendix **A**

Monthly Reports and System Operation and Maintenance Logs

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 2012

SECTION I – SUMMARY OF ACTIVITIES

System operated well entire month. System was turned off on October 29 because of storm but was started back up after storm without any problem. Flow meter readings ranged between 142 GPM at beginning of month and 137.2 GPM at end of month.

SECTION II – MONTHLY OPERATIONS & MAINTENANCE

- Checked and adjusted belts
- Lubricated equipment, as needed
- Changed filters
- Routine inspection of site
- Cleaned up grounds
- Mowed Lawn

SECTION III – REPAIR WORK COMPLETED

- None

SECTION IV – REPAIR WORK NEEDED

- None

SECTION V – RECOMMENDATIONS

- None

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 2012

SECTION I – SUMMARY OF ACTIVITIES

System operated continuously entire month without incident. Flow meter readings ranged between 127.3 GPM at beginning of month and 126.7 GPM at end of month.

SECTION II – MONTHLY OPERATIONS & MAINTENANCE

- Checked and adjusted belts
- Lubricated equipment, as needed
- Changed filters
- Routine inspection of site
- Cleaned up grounds
- Mowed Lawn

SECTION III – REPAIR WORK COMPLETED

- None

SECTION IV – REPAIR WORK NEEDED

- None

SECTION V – RECOMMENDATIONS

- None

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 2012

SECTION I – SUMMARY OF ACTIVITIES

System operated continuously entire month without incident. Flow meter readings stayed at approximately 125 GPM the entire month. Due to cold weather system checked daily and several times a day on extremely cold days.

SECTION II – MONTHLY OPERATIONS & MAINTENANCE

- Checked and adjusted belts
- Lubricated equipment, as needed
- Changed filters
- Routine inspection of property
- Shoveled snow.

SECTION III – REPAIR WORK COMPLETED

- None

SECTION IV – REPAIR WORK NEEDED

- None

SECTION V – RECOMMENDATIONS

- None

ENVIRONMENTAL COMPLIANCE, INC.						VESTAL WELL 1-1 MONTHLY O & M LOG																		October 2012									
DAY	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**
TIME																															
WELL HOUSE	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
PRE LUBE LINE																															
PUMP MOTOR OIL																															
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)*		142								142								140								137					
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																															
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

***Unadjusted Meter Reading**

ENVIRONMENTAL COMPLIANCE, INC. **VESTAL WELL 1-1 MONTHLY O & M LOG** **November 2012**

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
TIME																															
WELL HOUSE	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	
PRE LUBE LINE																															
PUMP MOTOR OIL																															
CHEMICAL BUILDING																															
SUMP PUMP	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	
DISCHARGE VALVES	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	
FLOW METER (GPM)*						127.3							127.0							126.7							126.7				
CHLORINE ROOM																															
GENERAL CONDITION	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	
TOWER PACKING INSP.	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	
MAIN PUMPHOUSE																															
BLOWER AND MOTOR	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	
BLOWER AIR FILTERS	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	
ALARM / CONTROL PANEL																															
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	
OTHER*																															
GROUNDS	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	
INGROUND TANK LEVEL	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	

***Unadjusted Meter Reading**

ENVIRONMENTAL COMPLIANCE, INC.										VESTAL WELL 1-1 MONTHLY O & M LOG										December 2012										
DAY	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**
TIME																															
WELL HOUSE	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X
PRE LUBE LINE																															
PUMP MOTOR OIL																															
CHEMICAL BUILDING																															
SUMP PUMP	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X
DISCHARGE VALVES	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X
FLOW METER (GPM)*				125.3									125.1							125.0							125.0				
CHLORINE ROOM																															
GENERAL CONDITION	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X
TOWER PACKING INSP.	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X
MAIN PUMPHOUSE																															
BLOWER AND MOTOR	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X
BLOWER AIR FILTERS	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X
ALARM / CONTROL PANEL																															
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
OTHER*																															
GROUNDS	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X
INGROUND TANK LEVEL	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X		X

***Unadjusted Meter Reading**

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Appendix **B**

Analytical Reporting Forms

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

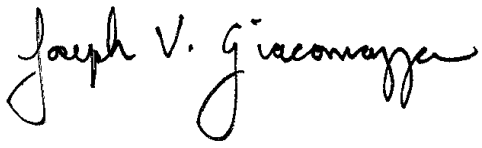
ANALYTICAL REPORT

Job Number: 480-27692-1

Job Description: NYSDEC-Standby VESTAL

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

Attention: Mr. Jeremy Wyckoff



Approved for release.
Joe Giacomazza
Project Administrator
11/8/2012 4:17 PM

Designee for
Sally Hoffman
Project Manager II
sally.hoffman@testamericainc.com
11/08/2012

The test results in this report meet all NELAP requirements for analytes for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this test report should be directed to the TestAmerica Project Manager who has signed this report. TestAmerica Buffalo NELAC Certifications: CADPH 01169CA, FLDOH E87672, ILEPA 200003, KSDOH E-10187, LADEQ 30708, MDH 036-999-337, NHELAP 2973, NJDEP NY455, NHDOH 10026, ORELAP NY200003, PADEP 68-00281, TXCEQ T-104704412-10-1

Table of Contents

Table of Contents

Job Narrative
480-27692-1

Receipt
The samples were received on 11/3/2012 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8º C.

GC/MS VOA
Method 8260B: The following sample was diluted to bring the concentration of target analytes within the calibration range: WELL 1-1A INF (480-27692-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-27692-1

SDG No.:

Instrument ID: HP5973S Analysis Batch Number: 89314

Lab Sample ID: CCVIS 480-89314/33 Client Sample ID:

Date Analyzed: 11/06/12 20:58 Lab File ID: S19855.D GC Column: ZB-624 (60) ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.21	Baseline	larsonr	11/06/12 21:27

SAMPLE SUMMARY

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-27692-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
480-27692-1	WELL 1-1A INF	Water	10/31/2012 1300	11/03/2012 0900
480-27692-2	WELL 1-1A EFF	Water	10/31/2012 1305	11/03/2012 0900
480-27692-3	TRIP BLANK	Water	10/31/2012 0000	11/03/2012 0900

EXECUTIVE SUMMARY - Detections

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-27692-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
480-27692-1	**WELL 1-1A INF**					
1,1,1-Trichloroethane		250		5.0	ug/L	8260B
1,1-Dichloroethane		28		2.0	ug/L	8260B
1,1-Dichloroethene		34		2.0	ug/L	8260B
cis-1,2-Dichloroethene		85		2.0	ug/L	8260B
Trichloroethene		94		2.0	ug/L	8260B
Vinyl chloride		5.5		2.0	ug/L	8260B

METHOD SUMMARY

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-27692-1

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

Lab References:

TAL BUF = TestAmerica Buffalo

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. Invoice to Arcadis

Job Number: 480-27692-1

Method	Analyst	Analyst ID
SW846 8260B	Ferguson, Tyler R	TRF
SW846 8260B	Larson, Renee	RL

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-27692-1

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

Lab Sample ID: 480-27692-1
Client Matrix: Water

Date Sampled: 10/31/2012 1300
Date Received: 11/03/2012 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-89142	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S19845.D
Dilution:	2.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/06/2012 1654			Final Weight/Volume:	5 mL
Prep Date:	11/06/2012 1654				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	280	E	1.6	2.0
1,1,2,2-Tetrachloroethane	2.0	U	0.42	2.0
1,1,2-Trichloroethane	2.0	U	0.46	2.0
1,1-Dichloroethane	28		0.76	2.0
1,1-Dichloroethene	34		0.58	2.0
1,2-Dibromoethane	2.0	U	1.5	2.0
1,2-Dichloroethane	2.0	U	0.42	2.0
1,2-Dichloropropane	2.0	U	1.4	2.0
2-Hexanone	10	U	2.5	10
2-Butanone (MEK)	20	U	2.6	20
4-Methyl-2-pentanone (MIBK)	10	U	4.2	10
Acetone	20	U	6.0	20
Benzene	2.0	U	0.82	2.0
Bromodichloromethane	2.0	U	0.78	2.0
Bromoform	2.0	U	0.52	2.0
Bromomethane	2.0	U	1.4	2.0
Carbon disulfide	2.0	U	0.38	2.0
Carbon tetrachloride	2.0	U	0.54	2.0
Chlorobenzene	2.0	U	1.5	2.0
Dibromochloromethane	2.0	U	0.64	2.0
Chloroethane	2.0	U	0.64	2.0
Chloroform	2.0	U	0.68	2.0
Chloromethane	2.0	U	0.70	2.0
cis-1,2-Dichloroethene	85		1.6	2.0
cis-1,3-Dichloropropene	2.0	U	0.72	2.0
Ethylbenzene	2.0	U	1.5	2.0
Methylene Chloride	2.0	U	0.88	2.0
Styrene	2.0	U	1.5	2.0
Tetrachloroethene	2.0	U	0.72	2.0
Toluene	2.0	U	1.0	2.0
trans-1,2-Dichloroethene	2.0	U	1.8	2.0
trans-1,3-Dichloropropene	2.0	U	0.74	2.0
Trichloroethene	94		0.92	2.0
Vinyl chloride	5.5		1.8	2.0
Xylenes, Total	4.0	U	1.3	4.0
m,p-Xylene	4.0	U	1.3	4.0
o-Xylene	2.0	U	1.5	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94		66 - 137
Toluene-d8 (Surr)	100		71 - 126
4-Bromofluorobenzene (Surr)	96		73 - 120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-27692-1

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

Lab Sample ID: 480-27692-1
Client Matrix: Water

Date Sampled: 10/31/2012 1300
Date Received: 11/03/2012 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-89314	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S19874.D
Dilution:	5.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/07/2012 0351	Run Type:	DL	Final Weight/Volume:	5 mL
Prep Date:	11/07/2012 0351				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	250		4.1	5.0
1,1,2,2-Tetrachloroethane	5.0	U	1.1	5.0
1,1,2-Trichloroethane	5.0	U	1.2	5.0
1,1-Dichloroethane	28		1.9	5.0
1,1-Dichloroethene	36		1.5	5.0
1,2-Dibromoethane	5.0	U	3.7	5.0
1,2-Dichloroethane	5.0	U	1.1	5.0
1,2-Dichloropropane	5.0	U	3.6	5.0
2-Hexanone	25	U	6.2	25
2-Butanone (MEK)	50	U	6.6	50
4-Methyl-2-pentanone (MIBK)	25	U	11	25
Acetone	50	U	15	50
Benzene	5.0	U	2.1	5.0
Bromodichloromethane	5.0	U	2.0	5.0
Bromoform	5.0	U	1.3	5.0
Bromomethane	5.0	U	3.5	5.0
Carbon disulfide	5.0	U	0.95	5.0
Carbon tetrachloride	5.0	U	1.4	5.0
Chlorobenzene	5.0	U *	3.8	5.0
Dibromochloromethane	5.0	U	1.6	5.0
Chloroethane	5.0	U	1.6	5.0
Chloroform	5.0	U	1.7	5.0
Chloromethane	5.0	U	1.8	5.0
cis-1,2-Dichloroethene	83		4.1	5.0
cis-1,3-Dichloropropene	5.0	U	1.8	5.0
Ethylbenzene	5.0	U	3.7	5.0
Methylene Chloride	5.0	U	2.2	5.0
Styrene	5.0	U	3.7	5.0
Tetrachloroethene	5.0	U *	1.8	5.0
Toluene	5.0	U	2.6	5.0
trans-1,2-Dichloroethene	5.0	U *	4.5	5.0
trans-1,3-Dichloropropene	5.0	U	1.9	5.0
Trichloroethene	94		2.3	5.0
Vinyl chloride	5.6		4.5	5.0
Xylenes, Total	10	U	3.3	10
m,p-Xylene	10	U	3.3	10
o-Xylene	5.0	U	3.8	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	91		66 - 137
Toluene-d8 (Surr)	100		71 - 126
4-Bromofluorobenzene (Surr)	99		73 - 120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-27692-1

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

Lab Sample ID: 480-27692-2
Client Matrix: Water

Date Sampled: 10/31/2012 1305
Date Received: 11/03/2012 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-89142	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S19846.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/06/2012 1715			Final Weight/Volume:	5 mL
Prep Date:	11/06/2012 1715				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.82	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.21	1.0
1,1,2-Trichloroethane	1.0	U	0.23	1.0
1,1-Dichloroethane	1.0	U	0.38	1.0
1,1-Dichloroethene	1.0	U	0.29	1.0
1,2-Dibromoethane	1.0	U	0.73	1.0
1,2-Dichloroethane	1.0	U	0.21	1.0
1,2-Dichloropropane	1.0	U	0.72	1.0
2-Hexanone	5.0	U	1.2	5.0
2-Butanone (MEK)	10	U	1.3	10
4-Methyl-2-pentanone (MIBK)	5.0	U	2.1	5.0
Acetone	10	U	3.0	10
Benzene	1.0	U	0.41	1.0
Bromodichloromethane	1.0	U	0.39	1.0
Bromoform	1.0	U	0.26	1.0
Bromomethane	1.0	U	0.69	1.0
Carbon disulfide	1.0	U	0.19	1.0
Carbon tetrachloride	1.0	U	0.27	1.0
Chlorobenzene	1.0	U	0.75	1.0
Dibromochloromethane	1.0	U	0.32	1.0
Chloroethane	1.0	U	0.32	1.0
Chloroform	1.0	U	0.34	1.0
Chloromethane	1.0	U	0.35	1.0
cis-1,2-Dichloroethene	1.0	U	0.81	1.0
cis-1,3-Dichloropropene	1.0	U	0.36	1.0
Ethylbenzene	1.0	U	0.74	1.0
Methylene Chloride	1.0	U	0.44	1.0
Styrene	1.0	U	0.73	1.0
Tetrachloroethene	1.0	U	0.36	1.0
Toluene	1.0	U	0.51	1.0
trans-1,2-Dichloroethene	1.0	U	0.90	1.0
trans-1,3-Dichloropropene	1.0	U	0.37	1.0
Trichloroethene	1.0	U	0.46	1.0
Vinyl chloride	1.0	U	0.90	1.0
Xylenes, Total	2.0	U	0.66	2.0
m,p-Xylene	2.0	U	0.66	2.0
o-Xylene	1.0	U	0.76	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95		66 - 137
Toluene-d8 (Surr)	98		71 - 126
4-Bromofluorobenzene (Surr)	95		73 - 120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-27692-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 480-27692-3
Client Matrix: Water

Date Sampled: 10/31/2012 0000
Date Received: 11/03/2012 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-89142	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S19847.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	11/06/2012 1737			Final Weight/Volume:	5 mL
Prep Date:	11/06/2012 1737				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.82	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.21	1.0
1,1,2-Trichloroethane	1.0	U	0.23	1.0
1,1-Dichloroethane	1.0	U	0.38	1.0
1,1-Dichloroethene	1.0	U	0.29	1.0
1,2-Dibromoethane	1.0	U	0.73	1.0
1,2-Dichloroethane	1.0	U	0.21	1.0
1,2-Dichloropropane	1.0	U	0.72	1.0
2-Hexanone	5.0	U	1.2	5.0
2-Butanone (MEK)	10	U	1.3	10
4-Methyl-2-pentanone (MIBK)	5.0	U	2.1	5.0
Acetone	10	U	3.0	10
Benzene	1.0	U	0.41	1.0
Bromodichloromethane	1.0	U	0.39	1.0
Bromoform	1.0	U	0.26	1.0
Bromomethane	1.0	U	0.69	1.0
Carbon disulfide	1.0	U	0.19	1.0
Carbon tetrachloride	1.0	U	0.27	1.0
Chlorobenzene	1.0	U	0.75	1.0
Dibromochloromethane	1.0	U	0.32	1.0
Chloroethane	1.0	U	0.32	1.0
Chloroform	1.0	U	0.34	1.0
Chloromethane	1.0	U	0.35	1.0
cis-1,2-Dichloroethene	1.0	U	0.81	1.0
cis-1,3-Dichloropropene	1.0	U	0.36	1.0
Ethylbenzene	1.0	U	0.74	1.0
Methylene Chloride	1.0	U	0.44	1.0
Styrene	1.0	U	0.73	1.0
Tetrachloroethene	1.0	U	0.36	1.0
Toluene	1.0	U	0.51	1.0
trans-1,2-Dichloroethene	1.0	U	0.90	1.0
trans-1,3-Dichloropropene	1.0	U	0.37	1.0
Trichloroethene	1.0	U	0.46	1.0
Vinyl chloride	1.0	U	0.90	1.0
Xylenes, Total	2.0	U	0.66	2.0
m,p-Xylene	2.0	U	0.66	2.0
o-Xylene	1.0	U	0.76	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	93		66 - 137
Toluene-d8 (Surr)	98		71 - 126
4-Bromofluorobenzene (Surr)	96		73 - 120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-27692-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	TOL %Rec	BFB %Rec
480-27692-1	WELL 1-1A INF	94	100	96
480-27692-1 DL	WELL 1-1A INF DL	91	100	99
480-27692-2	WELL 1-1A EFF	95	98	95
480-27692-3	TRIP BLANK	93	98	96
MB 480-89142/5		93	98	96
MB 480-89314/5		92	98	95
LCS 480-89142/4		93	98	97
LCS 480-89314/4		93	99	98

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	66-137
TOL = Toluene-d8 (Surr)	71-126
BFB = 4-Bromofluorobenzene (Surr)	73-120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-27692-1

Method Blank - Batch: 480-89142

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 480-89142/5	Analysis Batch:	480-89142	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S19830.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/06/2012 0857	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	11/06/2012 0857				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.82	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.21	1.0
1,1,2-Trichloroethane	1.0	U	0.23	1.0
1,1-Dichloroethane	1.0	U	0.38	1.0
1,1-Dichloroethene	1.0	U	0.29	1.0
1,2-Dibromoethane	1.0	U	0.73	1.0
1,2-Dichloroethane	1.0	U	0.21	1.0
1,2-Dichloropropane	1.0	U	0.72	1.0
2-Hexanone	5.0	U	1.2	5.0
2-Butanone (MEK)	10	U	1.3	10
4-Methyl-2-pentanone (MIBK)	5.0	U	2.1	5.0
Acetone	10	U	3.0	10
Benzene	1.0	U	0.41	1.0
Bromodichloromethane	1.0	U	0.39	1.0
Bromoform	1.0	U	0.26	1.0
Bromomethane	1.0	U	0.69	1.0
Carbon disulfide	1.0	U	0.19	1.0
Carbon tetrachloride	1.0	U	0.27	1.0
Chlorobenzene	1.0	U	0.75	1.0
Dibromochloromethane	1.0	U	0.32	1.0
Chloroethane	1.0	U	0.32	1.0
Chloroform	1.0	U	0.34	1.0
Chloromethane	1.0	U	0.35	1.0
cis-1,2-Dichloroethene	1.0	U	0.81	1.0
cis-1,3-Dichloropropene	1.0	U	0.36	1.0
Ethylbenzene	1.0	U	0.74	1.0
Methylene Chloride	1.0	U	0.44	1.0
Styrene	1.0	U	0.73	1.0
Tetrachloroethene	1.0	U	0.36	1.0
Toluene	1.0	U	0.51	1.0
trans-1,2-Dichloroethene	1.0	U	0.90	1.0
trans-1,3-Dichloropropene	1.0	U	0.37	1.0
Trichloroethene	1.0	U	0.46	1.0
Vinyl chloride	1.0	U	0.90	1.0
Xylenes, Total	2.0	U	0.66	2.0
m,p-Xylene	2.0	U	0.66	2.0
o-Xylene	1.0	U	0.76	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	93	66 - 137
Toluene-d8 (Surr)	98	71 - 126
4-Bromofluorobenzene (Surr)	96	73 - 120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-27692-1

Lab Control Sample - Batch: 480-89142

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 480-89142/4	Analysis Batch:	480-89142	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S19829.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/06/2012 0836	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	11/06/2012 0836				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethane	25.0	23.7	95	71 - 129	
1,1-Dichloroethene	25.0	21.2	85	58 - 121	
1,2-Dichloroethane	25.0	25.3	101	75 - 127	
Benzene	25.0	25.3	101	71 - 124	
Chlorobenzene	25.0	26.9	108	72 - 120	
cis-1,2-Dichloroethene	25.0	25.3	101	74 - 124	
Ethylbenzene	25.0	26.7	107	77 - 123	
Tetrachloroethene	25.0	28.3	113	74 - 122	
Toluene	25.0	26.0	104	80 - 122	
trans-1,2-Dichloroethene	25.0	27.5	110	73 - 127	
Trichloroethene	25.0	26.4	106	74 - 123	
m,p-Xylene	50.0	52.7	105	76 - 122	
o-Xylene	25.0	26.0	104	76 - 122	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	93	66 - 137
Toluene-d8 (Surr)	98	71 - 126
4-Bromofluorobenzene (Surr)	97	73 - 120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-27692-1

Method Blank - Batch: 480-89314

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 480-89314/5	Analysis Batch:	480-89314	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S19858.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/06/2012 2202	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	11/06/2012 2202				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.82	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.21	1.0
1,1,2-Trichloroethane	1.0	U	0.23	1.0
1,1-Dichloroethane	1.0	U	0.38	1.0
1,1-Dichloroethene	1.0	U	0.29	1.0
1,2-Dibromoethane	1.0	U	0.73	1.0
1,2-Dichloroethane	1.0	U	0.21	1.0
1,2-Dichloropropane	1.0	U	0.72	1.0
2-Hexanone	5.0	U	1.2	5.0
2-Butanone (MEK)	10	U	1.3	10
4-Methyl-2-pentanone (MIBK)	5.0	U	2.1	5.0
Acetone	10	U	3.0	10
Benzene	1.0	U	0.41	1.0
Bromodichloromethane	1.0	U	0.39	1.0
Bromoform	1.0	U	0.26	1.0
Bromomethane	1.0	U	0.69	1.0
Carbon disulfide	1.0	U	0.19	1.0
Carbon tetrachloride	1.0	U	0.27	1.0
Chlorobenzene	1.0	U	0.75	1.0
Dibromochloromethane	1.0	U	0.32	1.0
Chloroethane	1.0	U	0.32	1.0
Chloroform	1.0	U	0.34	1.0
Chloromethane	1.0	U	0.35	1.0
cis-1,2-Dichloroethene	1.0	U	0.81	1.0
cis-1,3-Dichloropropene	1.0	U	0.36	1.0
Ethylbenzene	1.0	U	0.74	1.0
Methylene Chloride	1.0	U	0.44	1.0
Styrene	1.0	U	0.73	1.0
Tetrachloroethene	1.0	U	0.36	1.0
Toluene	1.0	U	0.51	1.0
trans-1,2-Dichloroethene	1.0	U	0.90	1.0
trans-1,3-Dichloropropene	1.0	U	0.37	1.0
Trichloroethene	1.0	U	0.46	1.0
Vinyl chloride	1.0	U	0.90	1.0
Xylenes, Total	2.0	U	0.66	2.0
m,p-Xylene	2.0	U	0.66	2.0
o-Xylene	1.0	U	0.76	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	92	66 - 137
Toluene-d8 (Surr)	98	71 - 126
4-Bromofluorobenzene (Surr)	95	73 - 120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-27692-1

Lab Control Sample - Batch: 480-89314

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 480-89314/4	Analysis Batch:	480-89314	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S19857.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	11/06/2012 2141	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	11/06/2012 2141				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethane	25.0	21.5	86	71 - 129	
1,1-Dichloroethene	25.0	19.3	77	58 - 121	
1,2-Dichloroethane	25.0	24.2	97	75 - 127	
Benzene	25.0	23.4	94	71 - 124	
Chlorobenzene	25.0	25.6	102	72 - 120	
cis-1,2-Dichloroethene	25.0	24.2	97	74 - 124	
Ethylbenzene	25.0	25.0	100	77 - 123	
Tetrachloroethene	25.0	26.7	107	74 - 122	
Toluene	25.0	24.3	97	80 - 122	
trans-1,2-Dichloroethene	25.0	25.8	103	73 - 127	
Trichloroethene	25.0	24.4	98	74 - 123	
m,p-Xylene	50.0	50.2	100	76 - 122	
o-Xylene	25.0	24.8	99	76 - 122	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	93	66 - 137
Toluene-d8 (Surr)	99	71 - 126
4-Bromofluorobenzene (Surr)	98	73 - 120

DATA REPORTING QUALIFIERS

Client: Malcolm Pirnie, Inc. Invoice to Arcadis Job Number: 480-27692-1

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	E	Compound concentration exceeds the upper level of the calibration range of the instrument for that specific analysis.
	*	LCS or LCSD exceeds the control limits

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-27692-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:480-89142					
LCS 480-89142/4	Lab Control Sample	T	Water	8260B	
MB 480-89142/5	Method Blank	T	Water	8260B	
480-27692-1	WELL 1-1A INF	T	Water	8260B	
480-27692-2	WELL 1-1A EFF	T	Water	8260B	
480-27692-3	TRIP BLANK	T	Water	8260B	
Analysis Batch:480-89314					
LCS 480-89314/4	Lab Control Sample	T	Water	8260B	
MB 480-89314/5	Method Blank	T	Water	8260B	
480-27692-1DL	WELL 1-1A INF	T	Water	8260B	

Report Basis

T = Total

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-27692-1

Laboratory Chronicle

Lab ID: 480-27692-1 **Client ID:** WELL 1-1A INF

Sample Date/Time: 10/31/2012 13:00 Received Date/Time: 11/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	480-27692-A-1		480-89142		11/06/2012 16:54	2	TAL BUF	RL
A:8260B	480-27692-A-1		480-89142		11/06/2012 16:54	2	TAL BUF	RL
P:5030B	480-27692-B-1	DL	480-89314		11/07/2012 03:51	5	TAL BUF	TRF
A:8260B	480-27692-B-1	DL	480-89314		11/07/2012 03:51	5	TAL BUF	TRF

Lab ID: 480-27692-2 **Client ID:** WELL 1-1A EFF

Sample Date/Time: 10/31/2012 13:05 Received Date/Time: 11/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	480-27692-A-2		480-89142		11/06/2012 17:15	1	TAL BUF	RL
A:8260B	480-27692-A-2		480-89142		11/06/2012 17:15	1	TAL BUF	RL

Lab ID: 480-27692-3 **Client ID:** TRIP BLANK

Sample Date/Time: 10/31/2012 00:00 Received Date/Time: 11/03/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	480-27692-A-3		480-89142		11/06/2012 17:37	1	TAL BUF	RL
A:8260B	480-27692-A-3		480-89142		11/06/2012 17:37	1	TAL BUF	RL

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 480-89142/5		480-89142		11/06/2012 08:57	1	TAL BUF	RL
A:8260B	MB 480-89142/5		480-89142		11/06/2012 08:57	1	TAL BUF	RL
P:5030B	MB 480-89314/5		480-89314		11/06/2012 22:02	1	TAL BUF	TRF
A:8260B	MB 480-89314/5		480-89314		11/06/2012 22:02	1	TAL BUF	TRF

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 480-89142/4		480-89142		11/06/2012 08:36	1	TAL BUF	RL
A:8260B	LCS 480-89142/4		480-89142		11/06/2012 08:36	1	TAL BUF	RL
P:5030B	LCS 480-89314/4		480-89314		11/06/2012 21:41	1	TAL BUF	TRF
A:8260B	LCS 480-89314/4		480-89314		11/06/2012 21:41	1	TAL BUF	TRF

Lab References:
TAL BUF = TestAmerica Buffalo

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-27692-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
17_COMP_WRK_00020	12/22/12	08/31/12	Methanol, Lot DG596	20 mL	17COMP_STK_00041	500 uL	1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							Benzene	50 ug/mL
							Chlorobenzene	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							Ethylbenzene	50 ug/mL
							m,p-Xylene	100 ug/mL
							o-Xylene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	150 ug/mL
.17COMP_STK_00041	03/31/14	Ultra Scientific, Lot CJ-0518			(Purchased Reagent)		1,1-Dichloroethane	2000 ug/mL
							1,1-Dichloroethene	2000 ug/mL
							1,2-Dichloroethane	2000 ug/mL
							Benzene	2000 ug/mL
							Chlorobenzene	2000 ug/mL
							cis-1,2-Dichloroethene	2000 ug/mL
							Ethylbenzene	2000 ug/mL
							m,p-Xylene	4000 ug/mL
							o-Xylene	2000 ug/mL
							Tetrachloroethene	2000 ug/mL
							Toluene	2000 ug/mL
							trans-1,2-Dichloroethene	2000 ug/mL
							Trichloroethene	2000 ug/mL
							Xylenes, Total	6000 ug/mL
60COMP_WRK_00035	12/05/12	10/05/12	Methanol, Lot DG596	20 mL	60 COMP_STK_00041	1 mL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichlorobenzene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2,4-Trimethylbenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3,5-Trimethylbenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							2,2-Dichloropropane	100 ug/mL
							2-Chlorotoluene	100 ug/mL

Lab Name: TestAmerica Buffalo Job No.: 480-27692-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chlorotoluene	100 ug/mL
							4-Isopropyltoluene	100 ug/mL
							Benzene	100 ug/mL
							Bromobenzene	100 ug/mL
							Bromodichloromethane	100 ug/mL
							Bromoform	100 ug/mL
							Bromomethane	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chloroethane	100 ug/mL
							Chloroform	100 ug/mL
							Chloromethane	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Dibromochloromethane	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorodifluoromethane	100 ug/mL
							Ethylbenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Isopropylbenzene	100 ug/mL
							m,p-Xylene	200 ug/mL
							Methylene Chloride	100 ug/mL
							n-Butylbenzene	100 ug/mL
							N-Propylbenzene	100 ug/mL
							Naphthalene	100 ug/mL
							o-Xylene	100 ug/mL
							sec-Butylbenzene	100 ug/mL
							Styrene	100 ug/mL
							tert-Butylbenzene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							Trichloroethene	100 ug/mL
							Trichlorofluoromethane	100 ug/mL
							Vinyl chloride	100 ug/mL
							Xylenes, Total	300 ug/mL
.60 COMP_STK_00041	09/30/15		Ultra Scientific, Lot CJ-3132		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2000 ug/mL
							1,1,1-Trichloroethane	2000 ug/mL
							1,1,2,2-Tetrachloroethane	2000 ug/mL
							1,1,2-Trichloroethane	2000 ug/mL
							1,1-Dichloroethane	2000 ug/mL
							1,1-Dichloroethene	2000 ug/mL
							1,1-Dichloropropene	2000 ug/mL
							1,2,3-Trichlorobenzene	2000 ug/mL
							1,2,3-Trichloropropane	2000 ug/mL
							1,2,4-Trichlorobenzene	2000 ug/mL
							1,2,4-Trimethylbenzene	2000 ug/mL
							1,2-Dibromo-3-Chloropropane	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-27692-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dibromoethane	2000 ug/mL
							1,2-Dichlorobenzene	2000 ug/mL
							1,2-Dichloroethane	2000 ug/mL
							1,2-Dichloropropane	2000 ug/mL
							1,3,5-Trimethylbenzene	2000 ug/mL
							1,3-Dichlorobenzene	2000 ug/mL
							1,3-Dichloropropane	2000 ug/mL
							1,4-Dichlorobenzene	2000 ug/mL
							2,2-Dichloropropane	2000 ug/mL
							2-Chlorotoluene	2000 ug/mL
							4-Chlorotoluene	2000 ug/mL
							4-Isopropyltoluene	2000 ug/mL
							Benzene	2000 ug/mL
							Bromobenzene	2000 ug/mL
							Bromodichloromethane	2000 ug/mL
							Bromoform	2000 ug/mL
							Bromomethane	2000 ug/mL
							Carbon tetrachloride	2000 ug/mL
							Chlorobenzene	2000 ug/mL
							Chlorobromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloroform	2000 ug/mL
							Chloromethane	2000 ug/mL
							cis-1,2-Dichloroethene	2000 ug/mL
							cis-1,3-Dichloropropene	2000 ug/mL
							Dibromochloromethane	2000 ug/mL
							Dibromomethane	2000 ug/mL
							Dichlorodifluoromethane	2000 ug/mL
							Ethylbenzene	2000 ug/mL
							Hexachlorobutadiene	2000 ug/mL
							Isopropylbenzene	2000 ug/mL
							m,p-Xylene	4000 ug/mL
							Methylene Chloride	2000 ug/mL
							n-Butylbenzene	2000 ug/mL
							N-Propylbenzene	2000 ug/mL
							Naphthalene	2000 ug/mL
							o-Xylene	2000 ug/mL
							sec-Butylbenzene	2000 ug/mL
							Styrene	2000 ug/mL
							tert-Butylbenzene	2000 ug/mL
							Tetrachloroethene	2000 ug/mL
							Toluene	2000 ug/mL
							trans-1,2-Dichloroethene	2000 ug/mL
							trans-1,3-Dichloropropene	2000 ug/mL
							Trichloroethene	2000 ug/mL
							Trichlorofluoromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
							Xylenes, Total	6000 ug/mL
8260+_SS_WRK_00033	12/05/12	10/05/12	Methanol, Lot DG596	20 mL	2-CLEVE_SS_00067	1 mL	2-Chloroethyl vinyl ether	500 mg/L
					2-CLEVE_SS_00068	1 mL	2-Chloroethyl vinyl ether	500 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-27692-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					8260+#1 SS_ST_00075	1 mL	1,1,2-Trichloro-1,2,2-trifluoroethane	100 mg/L
							Acetonitrile	4000 mg/L
							Carbon disulfide	100 mg/L
							Cyclohexane	100 mg/L
							Ethyl methacrylate	100 mg/L
							Methyl acetate	100 mg/L
							Methyl tert-butyl ether	100 mg/L
							Methylcyclohexane	100 mg/L
							Tetrahydrofuran	500 mg/L
							trans-1,4-Dichloro-2-butene	500 mg/L
					8260+#1 SS_ST_00076	1 mL	1,1,2-Trichloro-1,2,2-trifluoroethane	100 mg/L
							Acetonitrile	4000 mg/L
							Carbon disulfide	100 mg/L
							Cyclohexane	100 mg/L
							Ethyl methacrylate	100 mg/L
							Methyl acetate	100 mg/L
							Methyl tert-butyl ether	100 mg/L
							Methylcyclohexane	100 mg/L
							Tetrahydrofuran	500 mg/L
							trans-1,4-Dichloro-2-butene	500 mg/L
					8260+#2 SS_ST_00071	1 mL	2-Butanone (MEK)	500 mg/L
							2-Hexanone	500 mg/L
							4-Methyl-2-pentanone (MIBK)	500 mg/L
							Acetone	500 mg/L
							Iodomethane	100 mg/L
							Vinyl acetate	500 mg/L
					8260+#2 SS_ST_00072	1 mL	2-Butanone (MEK)	500 mg/L
							2-Hexanone	500 mg/L
							4-Methyl-2-pentanone (MIBK)	500 mg/L
							Acetone	500 mg/L
							Iodomethane	100 mg/L
							Vinyl acetate	500 mg/L
					8260+#3SS_STK_00065	1 mL	Acrolein	2000 mg/L
							Acrylonitrile	500 mg/L
					8260+#3SS_STK_00066	1 mL	Acrolein	2000 mg/L
							Acrylonitrile	500 mg/L
.2-CLEVE SS_00067	06/30/14	Ultra Scientific, Lot CG-0850A			(Purchased Reagent)		2-Chloroethyl vinyl ether	5000 ug/mL
.2-CLEVE SS_00068	06/30/14	Ultra Scientific, Lot CG-0850A			(Purchased Reagent)		2-Chloroethyl vinyl ether	5000 ug/mL
.8260+#1 SS_ST_00075	04/30/13	Supelco, Lot LB91821			(Purchased Reagent)		1,1,2-Trichloro-1,2,2-trifluoroethane	1000 ug/mL
							Acetonitrile	40000 ug/mL
							Carbon disulfide	1000 ug/mL
							Cyclohexane	1000 ug/mL
							Ethyl methacrylate	1000 ug/mL
							Methyl acetate	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
							Methylcyclohexane	1000 ug/mL
							Tetrahydrofuran	5000 ug/mL
							trans-1,4-Dichloro-2-butene	5000 ug/mL

Lab Name: TestAmerica Buffalo Job No.: 480-27692-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.8260+#1 SS_ST_00076	04/30/13		Supelco, Lot LB91821		(Purchased Reagent)		1,1,2-Trichloro-1,2,2-trifluoroethane	1000 ug/mL
							Acetonitrile	40000 ug/mL
							Carbon disulfide	1000 ug/mL
							Cyclohexane	1000 ug/mL
							Ethyl methacrylate	1000 ug/mL
							Methyl acetate	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
							Methylcyclohexane	1000 ug/mL
							Tetrahydrofuran	5000 ug/mL
							trans-1,4-Dichloro-2-butene	5000 ug/mL
.8260+#2 SS_ST_00071	08/31/13		Supelco, Lot LB95006		(Purchased Reagent)		2-Butanone (MEK)	5000 ug/mL
							2-Hexanone	5000 ug/mL
							4-Methyl-2-pentanone (MIBK)	5000 ug/mL
							Acetone	5000 ug/mL
							Iodomethane	1000 ug/mL
							Vinyl acetate	5000 ug/mL
.8260+#2 SS_ST_00072	08/31/13		Supelco, Lot LB95006		(Purchased Reagent)		2-Butanone (MEK)	5000 ug/mL
							2-Hexanone	5000 ug/mL
							4-Methyl-2-pentanone (MIBK)	5000 ug/mL
							Acetone	5000 ug/mL
							Iodomethane	1000 ug/mL
							Vinyl acetate	5000 ug/mL
.8260+#3SS_STK_00065	07/31/13		Supelco, Lot LB94085		(Purchased Reagent)		Acrolein	20000 ug/mL
							Acrylonitrile	5000 ug/mL
.8260+#3SS_STK_00066	07/31/13		Supelco, Lot LB94085		(Purchased Reagent)		Acrolein	20000 ug/mL
							Acrylonitrile	5000 ug/mL
S_8260_IS_00043	12/10/12	10/10/12	P&T Methanol, Lot DG256	10 mL	MV_IS_STK_00215	500 uL	1,4-Dichlorobenzene-d4	125 ug/mL
							1,4-Difluorobenzene	125 ug/mL
							Chlorobenzene-d5	125 ug/mL
.MV_IS_STK_00215	02/28/17		Restek, Lot A087617		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							1,4-Difluorobenzene	2500 ug/mL
							Chlorobenzene-d5	2500 ug/mL
S_8260_Surr_00040	12/12/12	10/12/12	P&T Methanol, Lot DG596	10 mL	MV_SURR_STK_00279	460 uL	1,2-Dichloroethane-d4 (Surr)	115 ug/mL
							4-Bromofluorobenzene (Surr)	115 ug/mL
							Toluene-d8 (Surr)	115 ug/mL
.MV_SURR_STK_00279	10/31/14		Ultra Scientific, Lot CH-2969		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL

Certification Summary

Client: Malcolm Pirnie, Inc. Invoice to Arcadis
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-27692-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Buffalo	Arkansas DEQ	State Program	6	88-0686
TestAmerica Buffalo	California	NELAC	9	1169CA
TestAmerica Buffalo	Connecticut	State Program	1	PH-0568
TestAmerica Buffalo	Florida	NELAC	4	E87672
TestAmerica Buffalo	Georgia	State Program	4	956
TestAmerica Buffalo	Georgia	State Program	4	956
TestAmerica Buffalo	Georgia	State Program	4	N/A
TestAmerica Buffalo	Illinois	NELAC	5	200003
TestAmerica Buffalo	Iowa	State Program	7	374
TestAmerica Buffalo	Kansas	NELAC	7	E-10187
TestAmerica Buffalo	Kentucky	State Program	4	90029
TestAmerica Buffalo	Kentucky (UST)	State Program	4	30
TestAmerica Buffalo	Louisiana	NELAC	6	02031
TestAmerica Buffalo	Maine	State Program	1	NY00044
TestAmerica Buffalo	Maryland	State Program	3	294
TestAmerica Buffalo	Massachusetts	State Program	1	M-NY044
TestAmerica Buffalo	Michigan	State Program	5	9937
TestAmerica Buffalo	Minnesota	NELAC	5	036-999-337
TestAmerica Buffalo	New Hampshire	NELAC	1	2337
TestAmerica Buffalo	New Hampshire	NELAC	1	2973
TestAmerica Buffalo	New Jersey	NELAC	2	NY455
TestAmerica Buffalo	New York	NELAC	2	10026
TestAmerica Buffalo	North Dakota	State Program	8	R-176
TestAmerica Buffalo	Oklahoma	State Program	6	9421
TestAmerica Buffalo	Oregon	NELAC	10	NY200003
TestAmerica Buffalo	Pennsylvania	NELAC	3	68-00281
TestAmerica Buffalo	Rhode Island	State Program	1	LAO00328
TestAmerica Buffalo	Tennessee	State Program	4	TN02970
TestAmerica Buffalo	Texas	NELAC	6	T104704412-11-2
TestAmerica Buffalo	USDA	Federal		P330-11-00386
TestAmerica Buffalo	Virginia	NELAC	3	460185
TestAmerica Buffalo	Washington	State Program	10	C784
TestAmerica Buffalo	West Virginia DEP	State Program	3	252
TestAmerica Buffalo	Wisconsin	State Program	5	998310390

Accreditation may not be offered or required for all methods and analytes reported in this package Please contact your project manager for the laboratory's current list of certified methods and analytes.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

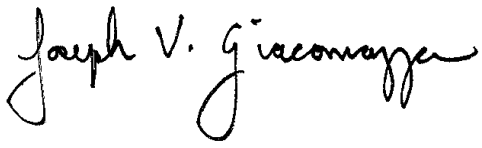
ANALYTICAL REPORT

Job Number: 480-28908-1

Job Description: NYSDEC-Standby VESTAL

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

Attention: Mr. Jeremy Wyckoff



Approved for release.
Joe Giacomazza
Project Administrator
12/5/2012 3:18 PM

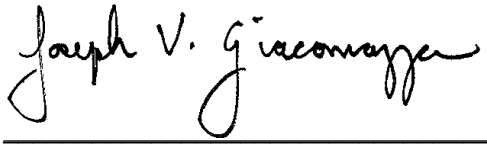
Designee for
Sally Hoffman
Project Manager II
sally.hoffman@testamericainc.com
12/05/2012

The test results in this report meet all NELAP requirements for analytes for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this test report should be directed to the TestAmerica Project Manager who has signed this report. TestAmerica Buffalo NELAC Certifications: CADPH 01169CA, FLDOH E87672, ILEPA 200003, KSDOH E-10187, LADEQ 30708, MDH 036-999-337, NHELAP 2973, NJDEP NY455, NHDOH 10026, ORELAP NY200003, PADEP 68-00281, TXCEQ T-104704412-10-1

Job Number: 480-28908-1

Job Description: NYSDEC-Standby VESTAL

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.



Approved for release.
Joe Giacomazza
Project Administrator
12/5/2012 3:18 PM

Designee for
Sally Hoffman

Table of Contents

Table of Contents

Job Narrative
480-28908-1

Receipt
The samples were received on 11/21/2012 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.1° C.

GC/MS VOA
Method 8260B: The following sample was diluted to bring the concentration of target analytes within the calibration range: WELL 1-1A INF (480-28908-1). Elevated reporting limits (RLs) are provided.

Method 8260B: The following compound was outside control limits in the continuing calibration verification (CCV) associated with batch 93908: Acrolein. This compound is not classified as Calibration Check Compound (CCCs) in the reference method, and the laboratory defaults to in-house and/or project-specific criteria for evaluation. Due to the large number of analytes contained in the CCV, the laboratory's SOP allows for six analytes to be outside limits; therefore, the data has been reported.

Method 8260B: The following compound was outside control limits in the continuing calibration verification (CCV) associated with batch 93751: Acrolein. This compound is not classified as Calibration Check Compounds (CCCs) in the reference method, and the laboratory defaults to in-house and/or project-specific criteria for evaluation. Due to the large number of analytes contained in the CCV, the laboratory's SOP allows for six analytes to be outside limits; therefore, the data has been reported.

No other analytical or quality issues were noted.

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-28908-1

SDG No.:

Instrument ID: HP5973G Analysis Batch Number: 93751

Lab Sample ID: CCVIS 480-93751/2 Client Sample ID:

Date Analyzed: 12/02/12 14:33 Lab File ID: G17640.D GC Column: ZB-624 (60) ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
trans-1,2-Dichloroethene	3.61	Poor chromatography	diasn	12/02/12 15:24
1,1-Dichloroethane	4.02	Peak Tail	diasn	12/02/12 15:24

Lab Sample ID: LCS 480-93751/4 Client Sample ID:

Date Analyzed: 12/02/12 14:55 Lab File ID: G17641.D GC Column: ZB-624 (60) ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
trans-1,2-Dichloroethene	3.62	Peak Tail	diasn	12/02/12 15:50
1,1-Dichloroethane	4.02	Peak Tail	diasn	12/02/12 15:50

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-28908-1

SDG No.:

Instrument ID: HP5973S Analysis Batch Number: 93877

Lab Sample ID: IC 480-93877/3 Client Sample ID:

Date Analyzed: 12/03/12 15:21 Lab File ID: S20970.D GC Column: ZB-624 (60) ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.22	Split Peak	larsonr	12/03/12 18:47
Chloromethane	1.40	Split Peak	larsonr	12/03/12 18:47
Vinyl chloride	1.50	Split Peak	larsonr	12/03/12 18:47

Lab Sample ID: IC 480-93877/4 Client Sample ID:

Date Analyzed: 12/03/12 15:43 Lab File ID: S20971.D GC Column: ZB-624 (60) ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1,1-Trichloroethane	4.29	Split Peak	larsonr	12/03/12 18:51
Cyclohexane	4.29	Split Peak	larsonr	12/03/12 18:51

Lab Sample ID: IC 480-93877/5 Client Sample ID:

Date Analyzed: 12/03/12 16:04 Lab File ID: S20972.D GC Column: ZB-624 (60) ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	1.98	Split Peak	larsonr	12/03/12 18:54

Lab Sample ID: ICIS 480-93877/6 Client Sample ID:

Date Analyzed: 12/03/12 16:26 Lab File ID: S20973.D GC Column: ZB-624 (60) ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1,1-Trichloroethane	4.29	Split Peak	larsonr	12/03/12 18:56

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-28908-1

SDG No.:

Instrument ID: HP5973S Analysis Batch Number: 93908

Lab Sample ID: 480-28908-1 DL Client Sample ID: WELL 1-1A INF DL

Date Analyzed: 12/04/12 03:11 Lab File ID: S20996.D GC Column: ZB-624 (60) ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Vinyl chloride	1.46	Split Peak	fergusont	12/04/12 07:09

SAMPLE SUMMARY

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-28908-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
480-28908-1	WELL 1-1A INF	Water	11/20/2012 1450	11/21/2012 0900
480-28908-2	WELL 1-1A EFF	Water	11/20/2012 1455	11/21/2012 0900
480-28908-3	TRIP BLANK	Water	11/20/2012 0000	11/21/2012 0900

EXECUTIVE SUMMARY - Detections

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-28908-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
480-28908-1	**WELL 1-1A INF**					
1,1,1-Trichloroethane		130		2.0	ug/L	8260B
1,1-Dichloroethane		15		1.0	ug/L	8260B
1,1-Dichloroethene		25		1.0	ug/L	8260B
Carbon disulfide		0.43	J	1.0	ug/L	8260B
Chloroethane		0.44	J	1.0	ug/L	8260B
cis-1,2-Dichloroethene		32		1.0	ug/L	8260B
Trichloroethene		40		1.0	ug/L	8260B
Vinyl chloride		5.5		1.0	ug/L	8260B

METHOD SUMMARY

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-28908-1

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

Lab References:

TAL BUF = TestAmerica Buffalo

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. Invoice to Arcadis

Job Number: 480-28908-1

Method	Analyst	Analyst ID
SW846 8260B	Ferguson, Tyler R	TRF

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-28908-1

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

Lab Sample ID: 480-28908-1
Client Matrix: Water

Date Sampled: 11/20/2012 1450
Date Received: 11/21/2012 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-93751	Instrument ID:	HP5973G
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	G17643.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/02/2012 1622			Final Weight/Volume:	5 mL
Prep Date:	12/02/2012 1622				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	140	E	0.82	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.21	1.0
1,1,2-Trichloroethane	1.0	U	0.23	1.0
1,1-Dichloroethane	15		0.38	1.0
1,1-Dichloroethene	25		0.29	1.0
1,2-Dibromoethane	1.0	U	0.73	1.0
1,2-Dichloroethane	1.0	U	0.21	1.0
1,2-Dichloropropane	1.0	U	0.72	1.0
2-Hexanone	5.0	U	1.2	5.0
2-Butanone (MEK)	10	U	1.3	10
4-Methyl-2-pentanone (MIBK)	5.0	U	2.1	5.0
Acetone	10	U	3.0	10
Benzene	1.0	U	0.41	1.0
Bromodichloromethane	1.0	U	0.39	1.0
Bromoform	1.0	U	0.26	1.0
Bromomethane	1.0	U	0.69	1.0
Carbon disulfide	0.43	J	0.19	1.0
Carbon tetrachloride	1.0	U	0.27	1.0
Chlorobenzene	1.0	U	0.75	1.0
Dibromochloromethane	1.0	U	0.32	1.0
Chloroethane	0.44	J	0.32	1.0
Chloroform	1.0	U	0.34	1.0
Chloromethane	1.0	U	0.35	1.0
cis-1,2-Dichloroethene	32		0.81	1.0
cis-1,3-Dichloropropene	1.0	U	0.36	1.0
Ethylbenzene	1.0	U	0.74	1.0
Methylene Chloride	1.0	U	0.44	1.0
Styrene	1.0	U	0.73	1.0
Tetrachloroethene	1.0	U	0.36	1.0
Toluene	1.0	U	0.51	1.0
trans-1,2-Dichloroethene	1.0	U	0.90	1.0
trans-1,3-Dichloropropene	1.0	U	0.37	1.0
Trichloroethene	40		0.46	1.0
Vinyl chloride	5.5		0.90	1.0
Xylenes, Total	2.0	U	0.66	2.0
m,p-Xylene	2.0	U	0.66	2.0
o-Xylene	1.0	U	0.76	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96		66 - 137
Toluene-d8 (Surr)	107		71 - 126
4-Bromofluorobenzene (Surr)	102		73 - 120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-28908-1

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

Lab Sample ID: 480-28908-1
Client Matrix: Water

Date Sampled: 11/20/2012 1450
Date Received: 11/21/2012 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-93908	Instrument ID:	HP5973S
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	S20996.D
Dilution:	2.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/04/2012 0311	Run Type:	DL	Final Weight/Volume:	5 mL
Prep Date:	12/04/2012 0311				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	130		1.6	2.0
1,1,2,2-Tetrachloroethane	2.0	U	0.42	2.0
1,1,2-Trichloroethane	2.0	U	0.46	2.0
1,1-Dichloroethane	17		0.76	2.0
1,1-Dichloroethene	11		0.58	2.0
1,2-Dibromoethane	2.0	U	1.5	2.0
1,2-Dichloroethane	2.0	U	0.42	2.0
1,2-Dichloropropane	2.0	U	1.4	2.0
2-Hexanone	10	U	2.5	10
2-Butanone (MEK)	20	U	2.6	20
4-Methyl-2-pentanone (MIBK)	10	U	4.2	10
Acetone	20	U	6.0	20
Benzene	2.0	U	0.82	2.0
Bromodichloromethane	2.0	U	0.78	2.0
Bromoform	2.0	U	0.52	2.0
Bromomethane	2.0	U	1.4	2.0
Carbon disulfide	2.0	U	0.38	2.0
Carbon tetrachloride	2.0	U	0.54	2.0
Chlorobenzene	2.0	U	1.5	2.0
Dibromochloromethane	2.0	U	0.64	2.0
Chloroethane	2.0	U	0.64	2.0
Chloroform	2.0	U	0.68	2.0
Chloromethane	2.0	U	0.70	2.0
cis-1,2-Dichloroethene	40		1.6	2.0
cis-1,3-Dichloropropene	2.0	U	0.72	2.0
Ethylbenzene	2.0	U	1.5	2.0
Methylene Chloride	2.0	U	0.88	2.0
Styrene	2.0	U	1.5	2.0
Tetrachloroethene	2.0	U	0.72	2.0
Toluene	2.0	U	1.0	2.0
trans-1,2-Dichloroethene	2.0	U	1.8	2.0
trans-1,3-Dichloropropene	2.0	U	0.74	2.0
Trichloroethene	42		0.92	2.0
Vinyl chloride	5.4		1.8	2.0
Xylenes, Total	4.0	U	1.3	4.0
m,p-Xylene	4.0	U	1.3	4.0
o-Xylene	2.0	U	1.5	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		66 - 137
Toluene-d8 (Surr)	99		71 - 126
4-Bromofluorobenzene (Surr)	92		73 - 120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-28908-1

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

Lab Sample ID: 480-28908-2
Client Matrix: Water

Date Sampled: 11/20/2012 1455
Date Received: 11/21/2012 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-93751	Instrument ID:	HP5973G
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	G17644.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/02/2012 1644			Final Weight/Volume:	5 mL
Prep Date:	12/02/2012 1644				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.82	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.21	1.0
1,1,2-Trichloroethane	1.0	U	0.23	1.0
1,1-Dichloroethane	1.0	U	0.38	1.0
1,1-Dichloroethene	1.0	U	0.29	1.0
1,2-Dibromoethane	1.0	U	0.73	1.0
1,2-Dichloroethane	1.0	U	0.21	1.0
1,2-Dichloropropane	1.0	U	0.72	1.0
2-Hexanone	5.0	U	1.2	5.0
2-Butanone (MEK)	10	U	1.3	10
4-Methyl-2-pentanone (MIBK)	5.0	U	2.1	5.0
Acetone	10	U	3.0	10
Benzene	1.0	U	0.41	1.0
Bromodichloromethane	1.0	U	0.39	1.0
Bromoform	1.0	U	0.26	1.0
Bromomethane	1.0	U	0.69	1.0
Carbon disulfide	1.0	U	0.19	1.0
Carbon tetrachloride	1.0	U	0.27	1.0
Chlorobenzene	1.0	U	0.75	1.0
Dibromochloromethane	1.0	U	0.32	1.0
Chloroethane	1.0	U	0.32	1.0
Chloroform	1.0	U	0.34	1.0
Chloromethane	1.0	U	0.35	1.0
cis-1,2-Dichloroethene	1.0	U	0.81	1.0
cis-1,3-Dichloropropene	1.0	U	0.36	1.0
Ethylbenzene	1.0	U	0.74	1.0
Methylene Chloride	1.0	U	0.44	1.0
Styrene	1.0	U	0.73	1.0
Tetrachloroethene	1.0	U	0.36	1.0
Toluene	1.0	U	0.51	1.0
trans-1,2-Dichloroethene	1.0	U	0.90	1.0
trans-1,3-Dichloropropene	1.0	U	0.37	1.0
Trichloroethene	1.0	U	0.46	1.0
Vinyl chloride	1.0	U	0.90	1.0
Xylenes, Total	2.0	U	0.66	2.0
m,p-Xylene	2.0	U	0.66	2.0
o-Xylene	1.0	U	0.76	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	95		66 - 137
Toluene-d8 (Surr)	104		71 - 126
4-Bromofluorobenzene (Surr)	100		73 - 120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-28908-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 480-28908-3
Client Matrix: Water

Date Sampled: 11/20/2012 0000
Date Received: 11/21/2012 0900

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-93751	Instrument ID:	HP5973G
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	G17645.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	12/02/2012 1707			Final Weight/Volume:	5 mL
Prep Date:	12/02/2012 1707				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.82	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.21	1.0
1,1,2-Trichloroethane	1.0	U	0.23	1.0
1,1-Dichloroethane	1.0	U	0.38	1.0
1,1-Dichloroethene	1.0	U	0.29	1.0
1,2-Dibromoethane	1.0	U	0.73	1.0
1,2-Dichloroethane	1.0	U	0.21	1.0
1,2-Dichloropropane	1.0	U	0.72	1.0
2-Hexanone	5.0	U	1.2	5.0
2-Butanone (MEK)	10	U	1.3	10
4-Methyl-2-pentanone (MIBK)	5.0	U	2.1	5.0
Acetone	10	U	3.0	10
Benzene	1.0	U	0.41	1.0
Bromodichloromethane	1.0	U	0.39	1.0
Bromoform	1.0	U	0.26	1.0
Bromomethane	1.0	U	0.69	1.0
Carbon disulfide	1.0	U	0.19	1.0
Carbon tetrachloride	1.0	U	0.27	1.0
Chlorobenzene	1.0	U	0.75	1.0
Dibromochloromethane	1.0	U	0.32	1.0
Chloroethane	1.0	U	0.32	1.0
Chloroform	1.0	U	0.34	1.0
Chloromethane	1.0	U	0.35	1.0
cis-1,2-Dichloroethene	1.0	U	0.81	1.0
cis-1,3-Dichloropropene	1.0	U	0.36	1.0
Ethylbenzene	1.0	U	0.74	1.0
Methylene Chloride	1.0	U	0.44	1.0
Styrene	1.0	U	0.73	1.0
Tetrachloroethene	1.0	U	0.36	1.0
Toluene	1.0	U	0.51	1.0
trans-1,2-Dichloroethene	1.0	U	0.90	1.0
trans-1,3-Dichloropropene	1.0	U	0.37	1.0
Trichloroethene	1.0	U	0.46	1.0
Vinyl chloride	1.0	U	0.90	1.0
Xylenes, Total	2.0	U	0.66	2.0
m,p-Xylene	2.0	U	0.66	2.0
o-Xylene	1.0	U	0.76	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101		66 - 137
Toluene-d8 (Surr)	106		71 - 126
4-Bromofluorobenzene (Surr)	99		73 - 120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-28908-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	TOL %Rec	BFB %Rec
480-28908-1	WELL 1-1A INF	96	107	102
480-28908-1 DL	WELL 1-1A INF DL	98	99	92
480-28908-2	WELL 1-1A EFF	95	104	100
480-28908-3	TRIP BLANK	101	106	99
MB 480-93751/5		98	112	107
MB 480-93908/5		98	100	94
LCS 480-93751/4		93	104	103
LCS 480-93908/4		98	98	95

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	66-137
TOL = Toluene-d8 (Surr)	71-126
BFB = 4-Bromofluorobenzene (Surr)	73-120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-28908-1

Method Blank - Batch: 480-93751

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 480-93751/5	Analysis Batch:	480-93751	Instrument ID:	HP5973G
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	G17639.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/02/2012 1410	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/02/2012 1410				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.82	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.21	1.0
1,1,2-Trichloroethane	1.0	U	0.23	1.0
1,1-Dichloroethane	1.0	U	0.38	1.0
1,1-Dichloroethene	1.0	U	0.29	1.0
1,2-Dibromoethane	1.0	U	0.73	1.0
1,2-Dichloroethane	1.0	U	0.21	1.0
1,2-Dichloropropane	1.0	U	0.72	1.0
2-Hexanone	5.0	U	1.2	5.0
2-Butanone (MEK)	10	U	1.3	10
4-Methyl-2-pentanone (MIBK)	5.0	U	2.1	5.0
Acetone	10	U	3.0	10
Benzene	1.0	U	0.41	1.0
Bromodichloromethane	1.0	U	0.39	1.0
Bromoform	1.0	U	0.26	1.0
Bromomethane	1.0	U	0.69	1.0
Carbon disulfide	1.0	U	0.19	1.0
Carbon tetrachloride	1.0	U	0.27	1.0
Chlorobenzene	1.0	U	0.75	1.0
Dibromochloromethane	1.0	U	0.32	1.0
Chloroethane	1.0	U	0.32	1.0
Chloroform	1.0	U	0.34	1.0
Chloromethane	1.0	U	0.35	1.0
cis-1,2-Dichloroethene	1.0	U	0.81	1.0
cis-1,3-Dichloropropene	1.0	U	0.36	1.0
Ethylbenzene	1.0	U	0.74	1.0
Methylene Chloride	1.0	U	0.44	1.0
Styrene	1.0	U	0.73	1.0
Tetrachloroethene	1.0	U	0.36	1.0
Toluene	1.0	U	0.51	1.0
trans-1,2-Dichloroethene	1.0	U	0.90	1.0
trans-1,3-Dichloropropene	1.0	U	0.37	1.0
Trichloroethene	1.0	U	0.46	1.0
Vinyl chloride	1.0	U	0.90	1.0
Xylenes, Total	2.0	U	0.66	2.0
m,p-Xylene	2.0	U	0.66	2.0
o-Xylene	1.0	U	0.76	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98	66 - 137
Toluene-d8 (Surr)	112	71 - 126
4-Bromofluorobenzene (Surr)	107	73 - 120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-28908-1

Lab Control Sample - Batch: 480-93751

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 480-93751/4	Analysis Batch:	480-93751	Instrument ID:	HP5973G
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	G17641.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/02/2012 1455	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/02/2012 1455				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethane	25.0	23.9	96	71 - 129	
1,1-Dichloroethene	25.0	15.3	61	58 - 121	
1,2-Dichloroethane	25.0	22.5	90	75 - 127	
Benzene	25.0	22.6	90	71 - 124	
Chlorobenzene	25.0	24.6	99	72 - 120	
cis-1,2-Dichloroethene	25.0	23.2	93	74 - 124	
Ethylbenzene	25.0	24.7	99	77 - 123	
Tetrachloroethene	25.0	24.4	98	74 - 122	
Toluene	25.0	24.1	96	80 - 122	
trans-1,2-Dichloroethene	25.0	26.2	105	73 - 127	
Trichloroethene	25.0	23.5	94	74 - 123	
m,p-Xylene	50.0	49.2	98	76 - 122	
o-Xylene	25.0	25.1	100	76 - 122	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	93	66 - 137
Toluene-d8 (Surr)	104	71 - 126
4-Bromofluorobenzene (Surr)	103	73 - 120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-28908-1

Method Blank - Batch: 480-93908

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 480-93908/5	Analysis Batch:	480-93908	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S20984.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/03/2012 2124	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/03/2012 2124				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.82	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.21	1.0
1,1,2-Trichloroethane	1.0	U	0.23	1.0
1,1-Dichloroethane	1.0	U	0.38	1.0
1,1-Dichloroethene	1.0	U	0.29	1.0
1,2-Dibromoethane	1.0	U	0.73	1.0
1,2-Dichloroethane	1.0	U	0.21	1.0
1,2-Dichloropropane	1.0	U	0.72	1.0
2-Hexanone	5.0	U	1.2	5.0
2-Butanone (MEK)	10	U	1.3	10
4-Methyl-2-pentanone (MIBK)	5.0	U	2.1	5.0
Acetone	10	U	3.0	10
Benzene	1.0	U	0.41	1.0
Bromodichloromethane	1.0	U	0.39	1.0
Bromoform	1.0	U	0.26	1.0
Bromomethane	1.0	U	0.69	1.0
Carbon disulfide	1.0	U	0.19	1.0
Carbon tetrachloride	1.0	U	0.27	1.0
Chlorobenzene	1.0	U	0.75	1.0
Dibromochloromethane	1.0	U	0.32	1.0
Chloroethane	1.0	U	0.32	1.0
Chloroform	1.0	U	0.34	1.0
Chloromethane	1.0	U	0.35	1.0
cis-1,2-Dichloroethene	1.0	U	0.81	1.0
cis-1,3-Dichloropropene	1.0	U	0.36	1.0
Ethylbenzene	1.0	U	0.74	1.0
Methylene Chloride	1.0	U	0.44	1.0
Styrene	1.0	U	0.73	1.0
Tetrachloroethene	1.0	U	0.36	1.0
Toluene	1.0	U	0.51	1.0
trans-1,2-Dichloroethene	1.0	U	0.90	1.0
trans-1,3-Dichloropropene	1.0	U	0.37	1.0
Trichloroethene	1.0	U	0.46	1.0
Vinyl chloride	1.0	U	0.90	1.0
Xylenes, Total	2.0	U	0.66	2.0
m,p-Xylene	2.0	U	0.66	2.0
o-Xylene	1.0	U	0.76	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98	66 - 137
Toluene-d8 (Surr)	100	71 - 126
4-Bromofluorobenzene (Surr)	94	73 - 120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-28908-1

Lab Control Sample - Batch: 480-93908

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 480-93908/4	Analysis Batch:	480-93908	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S20983.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	12/03/2012 2102	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	12/03/2012 2102				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethane	25.0	23.7	95	71 - 129	
1,1-Dichloroethene	25.0	23.4	94	58 - 121	
1,2-Dichloroethane	25.0	24.0	96	75 - 127	
Benzene	25.0	23.6	95	71 - 124	
Chlorobenzene	25.0	23.3	93	72 - 120	
cis-1,2-Dichloroethene	25.0	24.1	96	74 - 124	
Ethylbenzene	25.0	23.7	95	77 - 123	
Tetrachloroethene	25.0	23.7	95	74 - 122	
Toluene	25.0	23.5	94	80 - 122	
trans-1,2-Dichloroethene	25.0	24.3	97	73 - 127	
Trichloroethene	25.0	24.2	97	74 - 123	
m,p-Xylene	50.0	47.6	95	76 - 122	
o-Xylene	25.0	23.9	96	76 - 122	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98	66 - 137
Toluene-d8 (Surr)	98	71 - 126
4-Bromofluorobenzene (Surr)	95	73 - 120

DATA REPORTING QUALIFIERS

Client: Malcolm Pirnie, Inc. Invoice to Arcadis Job Number: 480-28908-1

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	E	Compound concentration exceeds the upper level of the calibration range of the instrument for that specific analysis.
	J	Indicates an estimated value.

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-28908-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:480-93751					
LCS 480-93751/4	Lab Control Sample	T	Water	8260B	
MB 480-93751/5	Method Blank	T	Water	8260B	
480-28908-1	WELL 1-1A INF	T	Water	8260B	
480-28908-2	WELL 1-1A EFF	T	Water	8260B	
480-28908-3	TRIP BLANK	T	Water	8260B	
Analysis Batch:480-93908					
LCS 480-93908/4	Lab Control Sample	T	Water	8260B	
MB 480-93908/5	Method Blank	T	Water	8260B	
480-28908-1DL	WELL 1-1A INF	T	Water	8260B	

Report Basis

T = Total

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-28908-1

Laboratory Chronicle

Lab ID: 480-28908-1 **Client ID:** WELL 1-1A INF

Sample Date/Time: 11/20/2012 14:50 Received Date/Time: 11/21/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	480-28908-A-1		480-93751		12/02/2012 16:22	1	TAL BUF	TRF
A:8260B	480-28908-A-1		480-93751		12/02/2012 16:22	1	TAL BUF	TRF
P:5030B	480-28908-B-1	DL	480-93908		12/04/2012 03:11	2	TAL BUF	TRF
A:8260B	480-28908-B-1	DL	480-93908		12/04/2012 03:11	2	TAL BUF	TRF

Lab ID: 480-28908-2 **Client ID:** WELL 1-1A EFF

Sample Date/Time: 11/20/2012 14:55 Received Date/Time: 11/21/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	480-28908-A-2		480-93751		12/02/2012 16:44	1	TAL BUF	TRF
A:8260B	480-28908-A-2		480-93751		12/02/2012 16:44	1	TAL BUF	TRF

Lab ID: 480-28908-3 **Client ID:** TRIP BLANK

Sample Date/Time: 11/20/2012 00:00 Received Date/Time: 11/21/2012 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	480-28908-A-3		480-93751		12/02/2012 17:07	1	TAL BUF	TRF
A:8260B	480-28908-A-3		480-93751		12/02/2012 17:07	1	TAL BUF	TRF

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 480-93751/5		480-93751		12/02/2012 14:10	1	TAL BUF	TRF
A:8260B	MB 480-93751/5		480-93751		12/02/2012 14:10	1	TAL BUF	TRF
P:5030B	MB 480-93908/5		480-93908		12/03/2012 21:24	1	TAL BUF	TRF
A:8260B	MB 480-93908/5		480-93908		12/03/2012 21:24	1	TAL BUF	TRF

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 480-93751/4		480-93751		12/02/2012 14:55	1	TAL BUF	TRF
A:8260B	LCS 480-93751/4		480-93751		12/02/2012 14:55	1	TAL BUF	TRF
P:5030B	LCS 480-93908/4		480-93908		12/03/2012 21:02	1	TAL BUF	TRF
A:8260B	LCS 480-93908/4		480-93908		12/03/2012 21:02	1	TAL BUF	TRF

Lab References:
TAL BUF = TestAmerica Buffalo

Lab Name: TestAmerica Buffalo Job No.: 480-28908-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
17_COMP_WRK_00020	12/22/12	08/31/12	Methanol, Lot DG596	20 mL	17COMP_STK_00041	500 uL	1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							Benzene	50 ug/mL
							Chlorobenzene	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							Ethylbenzene	50 ug/mL
							m,p-Xylene	100 ug/mL
							o-Xylene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	150 ug/mL
.17COMP_STK_00041	03/31/14	Ultra Scientific, Lot CJ-0518			(Purchased Reagent)		1,1-Dichloroethane	2000 ug/mL
							1,1-Dichloroethene	2000 ug/mL
							1,2-Dichloroethane	2000 ug/mL
							Benzene	2000 ug/mL
							Chlorobenzene	2000 ug/mL
							cis-1,2-Dichloroethene	2000 ug/mL
							Ethylbenzene	2000 ug/mL
							m,p-Xylene	4000 ug/mL
							o-Xylene	2000 ug/mL
							Tetrachloroethene	2000 ug/mL
							Toluene	2000 ug/mL
							trans-1,2-Dichloroethene	2000 ug/mL
							Trichloroethene	2000 ug/mL
							Xylenes, Total	6000 ug/mL
60COMP_WRK_00037	01/01/13	11/01/12	Methanol, Lot DG596	20 mL	60 COMP_STK_00030	1 mL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichlorobenzene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2,4-Trimethylbenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3,5-Trimethylbenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL

Lab Name: TestAmerica Buffalo Job No.: 480-28908-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dichlorobenzene	100 ug/mL
							2,2-Dichloropropane	100 ug/mL
							2-Chlorotoluene	100 ug/mL
							4-Chlorotoluene	100 ug/mL
							4-Isopropyltoluene	100 ug/mL
							Benzene	100 ug/mL
							Bromobenzene	100 ug/mL
							Bromodichloromethane	100 ug/mL
							Bromoform	100 ug/mL
							Bromomethane	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chloroethane	100 ug/mL
							Chloroform	100 ug/mL
							Chloromethane	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Dibromochloromethane	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorodifluoromethane	100 ug/mL
							Ethylbenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Isopropylbenzene	100 ug/mL
							m,p-Xylene	200 ug/mL
							Methylene Chloride	100 ug/mL
							n-Butylbenzene	100 ug/mL
							N-Propylbenzene	100 ug/mL
							Naphthalene	100 ug/mL
							o-Xylene	100 ug/mL
							sec-Butylbenzene	100 ug/mL
							Styrene	100 ug/mL
							tert-Butylbenzene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							Trichloroethene	100 ug/mL
							Trichlorofluoromethane	100 ug/mL
							Vinyl chloride	100 ug/mL
							Xylenes, Total	300 ug/mL
.60 COMP_STK_00030	06/30/15		Ultra Scientific, Lot CJ-1656		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2000 ug/mL
							1,1,1-Trichloroethane	2000 ug/mL
							1,1,2,2-Tetrachloroethane	2000 ug/mL
							1,1,2-Trichloroethane	2000 ug/mL
							1,1-Dichloroethane	2000 ug/mL
							1,1-Dichloroethene	2000 ug/mL
							1,1-Dichloropropene	2000 ug/mL

Lab Name: TestAmerica Buffalo Job No.: 480-28908-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3-Trichlorobenzene	2000 ug/mL
							1,2,3-Trichloropropane	2000 ug/mL
							1,2,4-Trichlorobenzene	2000 ug/mL
							1,2,4-Trimethylbenzene	2000 ug/mL
							1,2-Dibromo-3-Chloropropane	2000 ug/mL
							1,2-Dibromoethane	2000 ug/mL
							1,2-Dichlorobenzene	2000 ug/mL
							1,2-Dichloroethane	2000 ug/mL
							1,2-Dichloropropane	2000 ug/mL
							1,3,5-Trimethylbenzene	2000 ug/mL
							1,3-Dichlorobenzene	2000 ug/mL
							1,3-Dichloropropane	2000 ug/mL
							1,4-Dichlorobenzene	2000 ug/mL
							2,2-Dichloropropane	2000 ug/mL
							2-Chlorotoluene	2000 ug/mL
							4-Chlorotoluene	2000 ug/mL
							4-Isopropyltoluene	2000 ug/mL
							Benzene	2000 ug/mL
							Bromobenzene	2000 ug/mL
							Bromodichloromethane	2000 ug/mL
							Bromoform	2000 ug/mL
							Bromomethane	2000 ug/mL
							Carbon tetrachloride	2000 ug/mL
							Chlorobenzene	2000 ug/mL
							Chlorobromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloroform	2000 ug/mL
							Chloromethane	2000 ug/mL
							cis-1,2-Dichloroethene	2000 ug/mL
							cis-1,3-Dichloropropene	2000 ug/mL
							Dibromochloromethane	2000 ug/mL
							Dibromomethane	2000 ug/mL
							Dichlorodifluoromethane	2000 ug/mL
							Ethylbenzene	2000 ug/mL
							Hexachlorobutadiene	2000 ug/mL
							Isopropylbenzene	2000 ug/mL
							m,p-Xylene	4000 ug/mL
							Methylene Chloride	2000 ug/mL
							n-Butylbenzene	2000 ug/mL
							N-Propylbenzene	2000 ug/mL
							Naphthalene	2000 ug/mL
							o-Xylene	2000 ug/mL
							sec-Butylbenzene	2000 ug/mL
							Styrene	2000 ug/mL
							tert-Butylbenzene	2000 ug/mL
							Tetrachloroethene	2000 ug/mL
							Toluene	2000 ug/mL
							trans-1,2-Dichloroethene	2000 ug/mL

Lab Name: TestAmerica Buffalo Job No.: 480-28908-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							trans-1,3-Dichloropropene	2000 ug/mL
							Trichloroethene	2000 ug/mL
							Trichlorofluoromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
							Xylenes, Total	6000 ug/mL
60COMP_WRK_00038	01/17/13	11/17/12	Methanol, Lot DG596	20 mL	60 COMP_STK_00029	1 mL	1,1,1,2-Tetrachloroethane	100 ug/mL
							1,1,1-Trichloroethane	100 ug/mL
							1,1,2,2-Tetrachloroethane	100 ug/mL
							1,1,2-Trichloroethane	100 ug/mL
							1,1-Dichloroethane	100 ug/mL
							1,1-Dichloroethene	100 ug/mL
							1,1-Dichloropropene	100 ug/mL
							1,2,3-Trichlorobenzene	100 ug/mL
							1,2,3-Trichloropropane	100 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2,4-Trimethylbenzene	100 ug/mL
							1,2-Dibromo-3-Chloropropane	100 ug/mL
							1,2-Dibromoethane	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,2-Dichloroethane	100 ug/mL
							1,2-Dichloropropane	100 ug/mL
							1,3,5-Trimethylbenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,3-Dichloropropane	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							2,2-Dichloropropane	100 ug/mL
							2-Chlorotoluene	100 ug/mL
							4-Chlorotoluene	100 ug/mL
							4-Isopropyltoluene	100 ug/mL
							Benzene	100 ug/mL
							Bromobenzene	100 ug/mL
							Bromodichloromethane	100 ug/mL
							Bromoform	100 ug/mL
							Bromomethane	100 ug/mL
							Carbon tetrachloride	100 ug/mL
							Chlorobenzene	100 ug/mL
							Chlorobromomethane	100 ug/mL
							Chloroethane	100 ug/mL
							Chloroform	100 ug/mL
							Chloromethane	100 ug/mL
							cis-1,2-Dichloroethene	100 ug/mL
							cis-1,3-Dichloropropene	100 ug/mL
							Dibromochloromethane	100 ug/mL
							Dibromomethane	100 ug/mL
							Dichlorodifluoromethane	100 ug/mL
							Ethylbenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL

Lab Name: TestAmerica Buffalo Job No.: 480-28908-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isopropylbenzene	100 ug/mL
							m,p-Xylene	200 ug/mL
							Methylene Chloride	100 ug/mL
							n-Butylbenzene	100 ug/mL
							N-Propylbenzene	100 ug/mL
							Naphthalene	100 ug/mL
							o-Xylene	100 ug/mL
							sec-Butylbenzene	100 ug/mL
							Styrene	100 ug/mL
							tert-Butylbenzene	100 ug/mL
							Tetrachloroethene	100 ug/mL
							Toluene	100 ug/mL
							trans-1,2-Dichloroethene	100 ug/mL
							trans-1,3-Dichloropropene	100 ug/mL
							Trichloroethene	100 ug/mL
							Trichlorofluoromethane	100 ug/mL
							Vinyl chloride	100 ug/mL
.60 COMP_STK_00029	06/30/15		Ultra Scientific, Lot CJ-1656		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2000 ug/mL
							1,1,1-Trichloroethane	2000 ug/mL
							1,1,2,2-Tetrachloroethane	2000 ug/mL
							1,1,2-Trichloroethane	2000 ug/mL
							1,1-Dichloroethane	2000 ug/mL
							1,1-Dichloroethene	2000 ug/mL
							1,1-Dichloropropene	2000 ug/mL
							1,2,3-Trichlorobenzene	2000 ug/mL
							1,2,3-Trichloropropane	2000 ug/mL
							1,2,4-Trichlorobenzene	2000 ug/mL
							1,2,4-Trimethylbenzene	2000 ug/mL
							1,2-Dibromo-3-Chloropropane	2000 ug/mL
							1,2-Dibromoethane	2000 ug/mL
							1,2-Dichlorobenzene	2000 ug/mL
							1,2-Dichloroethane	2000 ug/mL
							1,2-Dichloropropane	2000 ug/mL
							1,3,5-Trimethylbenzene	2000 ug/mL
							1,3-Dichlorobenzene	2000 ug/mL
							1,3-Dichloropropane	2000 ug/mL
							1,4-Dichlorobenzene	2000 ug/mL
							2,2-Dichloropropane	2000 ug/mL
							2-Chlorotoluene	2000 ug/mL
							4-Chlorotoluene	2000 ug/mL
							4-Isopropyltoluene	2000 ug/mL
							Benzene	2000 ug/mL
							Bromobenzene	2000 ug/mL
							Bromodichloromethane	2000 ug/mL
							Bromoform	2000 ug/mL
							Bromomethane	2000 ug/mL
							Carbon tetrachloride	2000 ug/mL
							Chlorobenzene	2000 ug/mL

Lab Name: TestAmerica Buffalo Job No.: 480-28908-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chlorobromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloroform	2000 ug/mL
							Chloromethane	2000 ug/mL
							cis-1,2-Dichloroethene	2000 ug/mL
							cis-1,3-Dichloropropene	2000 ug/mL
							Dibromochloromethane	2000 ug/mL
							Dibromomethane	2000 ug/mL
							Dichlorodifluoromethane	2000 ug/mL
							Ethylbenzene	2000 ug/mL
							Hexachlorobutadiene	2000 ug/mL
							Isopropylbenzene	2000 ug/mL
							m,p-Xylene	4000 ug/mL
							Methylene Chloride	2000 ug/mL
							n-Butylbenzene	2000 ug/mL
							N-Propylbenzene	2000 ug/mL
							Naphthalene	2000 ug/mL
							o-Xylene	2000 ug/mL
							sec-Butylbenzene	2000 ug/mL
							Styrene	2000 ug/mL
							tert-Butylbenzene	2000 ug/mL
							Tetrachloroethene	2000 ug/mL
							Toluene	2000 ug/mL
							trans-1,2-Dichloroethene	2000 ug/mL
							trans-1,3-Dichloropropene	2000 ug/mL
							Trichloroethene	2000 ug/mL
							Trichlorofluoromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
8260+_SS_WRK_00035	01/01/13	11/01/12	Methanol, Lot DG596	20 mL	2-CLEVE SS_00079	1 mL	2-Chloroethyl vinyl ether	500 mg/L
					2-CLEVE SS_00080	1 mL	2-Chloroethyl vinyl ether	500 mg/L
					8260+#1 SS_ST_00073	1 mL	1,1,2-Trichloro-1,2,2-trifluoroethane	100 mg/L
							Acetonitrile	4000 mg/L
							Carbon disulfide	100 mg/L
							Cyclohexane	100 mg/L
							Ethyl methacrylate	100 mg/L
							Methyl acetate	100 mg/L
							Methyl tert-butyl ether	100 mg/L
							Methylcyclohexane	100 mg/L
							Tetrahydrofuran	500 mg/L
							trans-1,4-Dichloro-2-butene	500 mg/L
					8260+#1 SS_ST_00074	1 mL	1,1,2-Trichloro-1,2,2-trifluoroethane	100 mg/L
							Acetonitrile	4000 mg/L
							Carbon disulfide	100 mg/L
							Cyclohexane	100 mg/L
							Ethyl methacrylate	100 mg/L
							Methyl acetate	100 mg/L

Lab Name: TestAmerica Buffalo Job No.: 480-28908-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methyl tert-butyl ether	100 mg/L
							Methylcyclohexane	100 mg/L
							Tetrahydrofuran	500 mg/L
							trans-1,4-Dichloro-2-butene	500 mg/L
					8260+#2 SS_ST_00081	1 mL	2-Butanone (MEK)	500 mg/L
							2-Hexanone	500 mg/L
							4-Methyl-2-pentanone (MIBK)	500 mg/L
							Acetone	500 mg/L
							Iodomethane	100 mg/L
							Vinyl acetate	500 mg/L
					8260+#2 SS_ST_00082	1 mL	2-Butanone (MEK)	500 mg/L
							2-Hexanone	500 mg/L
							4-Methyl-2-pentanone (MIBK)	500 mg/L
							Acetone	500 mg/L
							Iodomethane	100 mg/L
							Vinyl acetate	500 mg/L
					8260+#3SS_STK_00067	1 mL	Acrolein	2000 mg/L
							Acrylonitrile	500 mg/L
					8260+#3SS_STK_00068	1 mL	Acrolein	2000 mg/L
							Acrylonitrile	500 mg/L
.2-CLEVE SS_00079	06/30/14		Ultra Scientific, Lot CG-0850A		(Purchased Reagent)		2-Chloroethyl vinyl ether	5000 ug/mL
.2-CLEVE SS_00080	06/30/14		Ultra Scientific, Lot CG-0850A		(Purchased Reagent)		2-Chloroethyl vinyl ether	5000 ug/mL
.8260+#1 SS_ST_00073	04/30/13		Supelco, Lot LB91821		(Purchased Reagent)		1,1,2-Trichloro-1,2,2-trifluoroethane	1000 ug/mL
							Acetonitrile	40000 ug/mL
							Carbon disulfide	1000 ug/mL
							Cyclohexane	1000 ug/mL
							Ethyl methacrylate	1000 ug/mL
							Methyl acetate	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
							Methylcyclohexane	1000 ug/mL
							Tetrahydrofuran	5000 ug/mL
							trans-1,4-Dichloro-2-butene	5000 ug/mL
.8260+#1 SS_ST_00074	04/30/13		Supelco, Lot LB91821		(Purchased Reagent)		1,1,2-Trichloro-1,2,2-trifluoroethane	1000 ug/mL
							Acetonitrile	40000 ug/mL
							Carbon disulfide	1000 ug/mL
							Cyclohexane	1000 ug/mL
							Ethyl methacrylate	1000 ug/mL
							Methyl acetate	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
							Methylcyclohexane	1000 ug/mL
							Tetrahydrofuran	5000 ug/mL
							trans-1,4-Dichloro-2-butene	5000 ug/mL
.8260+#2 SS_ST_00081	08/31/13		Supelco, Lot LB95006		(Purchased Reagent)		2-Butanone (MEK)	5000 ug/mL
							2-Hexanone	5000 ug/mL
							4-Methyl-2-pentanone (MIBK)	5000 ug/mL
							Acetone	5000 ug/mL

Lab Name: TestAmerica Buffalo Job No.: 480-28908-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Iodomethane	1000 ug/mL
							Vinyl acetate	5000 ug/mL
.8260+#2 SS_ST_00082	08/31/13		Supelco, Lot LB95006		(Purchased Reagent)		2-Butanone (MEK)	5000 ug/mL
							2-Hexanone	5000 ug/mL
							4-Methyl-2-pentanone (MIBK)	5000 ug/mL
							Acetone	5000 ug/mL
							Iodomethane	1000 ug/mL
							Vinyl acetate	5000 ug/mL
.8260+#3SS_STK_00067	07/31/13		Supelco, Lot LB94085		(Purchased Reagent)		Acrolein	20000 ug/mL
							Acrylonitrile	5000 ug/mL
.8260+#3SS_STK_00068	07/31/13		Supelco, Lot LB94085		(Purchased Reagent)		Acrolein	20000 ug/mL
							Acrylonitrile	5000 ug/mL
8260+_SS_WRK_00036	01/17/13	11/17/12	Methanol, Lot DG596	20 mL	2-CLEVE SS_00077	1 mL	2-Chloroethyl vinyl ether	500 mg/L
					2-CLEVE SS_00078	1 mL	2-Chloroethyl vinyl ether	500 mg/L
					8260+#1 SS_ST_00072	1 mL	1,1,2-Trichloro-1,2,2-trifluoroethane	100 mg/L
							Acetonitrile	4000 mg/L
							Carbon disulfide	100 mg/L
							Cyclohexane	100 mg/L
							Ethyl methacrylate	100 mg/L
							Methyl acetate	100 mg/L
							Methyl tert-butyl ether	100 mg/L
							Methylcyclohexane	100 mg/L
							Tetrahydrofuran	500 mg/L
							trans-1,4-Dichloro-2-butene	500 mg/L
					8260+#1 SS_ST_00078	1 mL	1,1,2-Trichloro-1,2,2-trifluoroethane	100 mg/L
							Acetonitrile	4000 mg/L
							Carbon disulfide	100 mg/L
							Cyclohexane	100 mg/L
							Ethyl methacrylate	100 mg/L
							Methyl acetate	100 mg/L
							Methyl tert-butyl ether	100 mg/L
							Methylcyclohexane	100 mg/L
							Tetrahydrofuran	500 mg/L
							trans-1,4-Dichloro-2-butene	500 mg/L
					8260+#2 SS_ST_00079	1 mL	2-Butanone (MEK)	500 mg/L
							2-Hexanone	500 mg/L
							4-Methyl-2-pentanone (MIBK)	500 mg/L
							Acetone	500 mg/L
							Iodomethane	100 mg/L
							Vinyl acetate	500 mg/L
					8260+#2 SS_ST_00080	1 mL	2-Butanone (MEK)	500 mg/L
							2-Hexanone	500 mg/L
							4-Methyl-2-pentanone (MIBK)	500 mg/L
							Acetone	500 mg/L
							Iodomethane	100 mg/L
							Vinyl acetate	500 mg/L

Lab Name: TestAmerica Buffalo Job No.: 480-28908-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					8260+#3SS_STK_00077	1 mL	Acrolein	2000 mg/L
							Acrylonitrile	500 mg/L
					8260+#3SS_STK_00080	1 mL	Acrolein	2000 mg/L
							Acrylonitrile	500 mg/L
.2-CLEVE SS_00077	06/30/14	Ultra Scientific, Lot CG-0850A			(Purchased Reagent)		2-Chloroethyl vinyl ether	5000 ug/mL
.2-CLEVE SS_00078	06/30/14	Ultra Scientific, Lot CG-0850A			(Purchased Reagent)		2-Chloroethyl vinyl ether	5000 ug/mL
.8260+#1 SS_ST_00072	04/30/13	Supelco, Lot LB91821			(Purchased Reagent)		1,1,2-Trichloro-1,2,2-trifluoroethane	1000 ug/mL
							Acetonitrile	40000 ug/mL
							Carbon disulfide	1000 ug/mL
							Cyclohexane	1000 ug/mL
							Ethyl methacrylate	1000 ug/mL
							Methyl acetate	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
							Methylcyclohexane	1000 ug/mL
							Tetrahydrofuran	5000 ug/mL
							trans-1,4-Dichloro-2-butene	5000 ug/mL
.8260+#1 SS_ST_00078	04/30/13	Supelco, Lot LB91821			(Purchased Reagent)		1,1,2-Trichloro-1,2,2-trifluoroethane	1000 ug/mL
							Acetonitrile	40000 ug/mL
							Carbon disulfide	1000 ug/mL
							Cyclohexane	1000 ug/mL
							Ethyl methacrylate	1000 ug/mL
							Methyl acetate	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
							Methylcyclohexane	1000 ug/mL
							Tetrahydrofuran	5000 ug/mL
							trans-1,4-Dichloro-2-butene	5000 ug/mL
.8260+#2 SS_ST_00079	08/31/13	Supelco, Lot LB95006			(Purchased Reagent)		2-Butanone (MEK)	5000 ug/mL
							2-Hexanone	5000 ug/mL
							4-Methyl-2-pentanone (MIBK)	5000 ug/mL
							Acetone	5000 ug/mL
							Iodomethane	1000 ug/mL
							Vinyl acetate	5000 ug/mL
.8260+#2 SS_ST_00080	08/31/13	Supelco, Lot LB95006			(Purchased Reagent)		2-Butanone (MEK)	5000 ug/mL
							2-Hexanone	5000 ug/mL
							4-Methyl-2-pentanone (MIBK)	5000 ug/mL
							Acetone	5000 ug/mL
							Iodomethane	1000 ug/mL
							Vinyl acetate	5000 ug/mL
.8260+#3SS_STK_00077	07/31/13	Supelco, Lot LB94232			(Purchased Reagent)		Acrolein	20000 ug/mL
							Acrylonitrile	5000 ug/mL
.8260+#3SS_STK_00080	07/31/13	Supelco, Lot LB94232			(Purchased Reagent)		Acrolein	20000 ug/mL
							Acrylonitrile	5000 ug/mL
G_8260_IS_00027	01/15/13	11/15/12	P&T Methanol, Lot DG596	10 mL	MV_IS_STK_00231	500 uL	1,4-Dichlorobenzene-d4	125 ug/mL
							1,4-Difluorobenzene	125 ug/mL
							Chlorobenzene-d5	125 ug/mL
.MV_IS_STK_00231	04/14/13	Restek, Lot A090187			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-28908-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Difluorobenzene	2500 ug/mL
							Chlorobenzene-d5	2500 ug/mL
G_8260_Surr_00034	01/12/13	11/12/12	P&T Methanol, Lot DG860	10 mL	MV_SURR_STK_00298	500 uL	1,2-Dichloroethane-d4 (Surr)	125 ug/mL
							4-Bromofluorobenzene (Surr)	125 ug/mL
							Toluene-d8 (Surr)	125 ug/mL
.MV_SURR_STK_00298	05/12/13	Ultra Scientific, Lot CH-2969			(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
S_8260_IS_00048	01/21/13	11/21/12	P&T Methanol, Lot DG860	10 mL	MV_IS_STK_00230	500 uL	1,4-Dichlorobenzene-d4	125 ug/mL
							1,4-Difluorobenzene	125 ug/mL
							Chlorobenzene-d5	125 ug/mL
.MV_IS_STK_00230	05/21/13	Restek, Lot A090187			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							1,4-Difluorobenzene	2500 ug/mL
							Chlorobenzene-d5	2500 ug/mL
S_8260_Surr_00048	01/26/13	11/26/12	P&T Methanol, Lot DG596	10 mL	MV_SURR_STK_00292	460 uL	1,2-Dichloroethane-d4 (Surr)	115 ug/mL
							4-Bromofluorobenzene (Surr)	115 ug/mL
							Toluene-d8 (Surr)	115 ug/mL
.MV_SURR_STK_00292	10/31/14	Ultra Scientific, Lot CH-2969			(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL

8/01/2012

Certificate of Composition 8260+#1 SS_STK 00072→00081

DESCRIPTION: TEST AMERICA LABS

QUOTE 21454758 LOT NO.: LB91821 EXPIRATION DATE: Apr-2013

SOLVENT: METHANOL

ANALYTE (1)	CAS NUMBER	PERCENT PURITY (2)		WEIGHT CONCENTRATION (3)		SUPELCO LOT NO
ACETONITRILE	75-05-8	99.9		40002	+/- 200.0	LB75769
CARBON DISULFIDE	75-15-0	99.9	(a)	1001	+/- 5.0	LB86532
CYCLOHEXANE	110-82-7	99.9		1000	+/- 5.0	LB90822
ETHYL METHACRYLATE	97-63-2	99.4		1001	+/- 5.0	LB40444
FREON 113	76-13-1	99.9	(b)	1002	+/- 5.0	LA33286
METHYL ACETATE	79-20-9	99.9		1000	+/- 5.0	LB79659
METHYL CYCLOHEXANE	108-87-2	99.9		1000	+/- 5.0	LB89729
METHYL TERT-BUTYL ETHER	1634-04-4	99.9		1001	+/- 5.0	LB88393
TETRAHYDROFURAN	109-99-9	99.9		5001	+/- 25.0	LB88899
TRANS-1,4-DICHLORO-2-BUTENE	110-57-6	99.9		5000	+/- 25.0	LB88070
1-CHLOROHEXANE	544-10-5	99.9		1000	+/- 5.0	LB18907

(1) Listed in alphabetical order.

(2) Determined by capillary GC-FID, unless otherwise noted.
a) GC; detector FPD
b) GC; detector HALL

(3) NIST traceable weights are used to verify balance calibration with the preparation of each lot. Concentration of analyte in solution is ug/ml +/- 0.5%, uncertainty based upon balance and Class A volumetric glassware. Weights are corrected for analytes less than 98% pure.

Elwood Doughty
QA Manager

SUPELCO Analytical
595 North Harrison Road • Bellefonte, PA
16823-0048 USA • Phone (814) 359-3441

8/01/2012

Certificate of Composition 8260+#1 SS_STK 00072→00081

DESCRIPTION: TEST AMERICA LABS

QUOTE 21454758 LOT NO.: LB91821 EXPIRATION DATE: Apr-2013

SOLVENT: METHANOL

ANALYTE (1)	CAS NUMBER	PERCENT PURITY (2)	WEIGHT CONCENTRATION (3)	SUPELCO LOT NO
ACETONITRILE	75-05-8	99.9	40002 +/- 200.0	LB75769
CARBON DISULFIDE	75-15-0	99.9 (a)	1001 +/- 5.0	LB86532
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ETHYL METHACRYLATE	97-63-2	99.4	1001 +/- 5.0	LB40444
FREON 113	76-13-1	99.9 (b)	1002 +/- 5.0	LA33286
METHYL ACETATE	79-20-9	99.9	1000 +/- 5.0	LB79659
METHYL CYCLOHEXANE	108-87-2	99.9	1000 +/- 5.0	LB89729
METHYL TERT-BUTYL ETHER	1634-04-4	99.9	1001 +/- 5.0	LB88393
TETRAHYDROFURAN	109-99-9	99.9	5001 +/- 25.0	LB88899
TRANS-1,4-DICHLORO-2-BUTENE	110-57-6	99.9	5000 +/- 25.0	LB88070
1-CHLOROHEXANE	544-10-5	99.9	1000 +/- 5.0	LB18907

(1) Listed in alphabetical order.

(2) Determined by capillary GC-FID, unless otherwise noted.
a) GC; detector FPD
b) GC; detector HALL

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Elwood Doughty
QA Manager

SUPELCO® Analytical
595 North Harrison Road • Bellefonte, PA
16823-0048 USA • Phone (814) 359-3441

8/1/12

Certificate of Composition 8260+SS #3 STK

00071 → 00080

DESCRIPTION: TEST AMERICA LABS

QUOTE 21454762 LOT NO.: LB94232 MFG DATE: Jul-2012

SOLVENT: DEIONIZED WATER

ANALYTE (1)	CAS NUMBER	PERCENT PURITY (2)	WEIGHT CONCENTRATION (3)	SUPELCO LOT NO
ACROLEIN	107-02-8	97.6	20000 +/- 100.0	LB89930
ACRYLONITRILE	107-13-1	99.9	5008 +/- 25.0	LB65897

(1) Listed in alphabetical order.

(2) Determined by capillary GC-FID, unless otherwise noted.

(3) NIST traceable weights are used to verify balance calibration with the preparation of each lot. Concentration of analyte in solution is ug/ml +/- 0.5%, uncertainty based upon balance and Class A volumetric glassware. Weights are corrected for analytes less than 98% pure.

Elwood Doughty
QA Manager

SUPELCO® Analytical
595 North Harrison Road • Bellefonte, PA
16823-0048 USA • Phone (814) 359-3441

Certification Summary

Client: Malcolm Pirnie, Inc. Invoice to Arcadis
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-28908-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Buffalo	Arkansas DEQ	State Program	6	88-0686
TestAmerica Buffalo	California	NELAC	9	1169CA
TestAmerica Buffalo	Connecticut	State Program	1	PH-0568
TestAmerica Buffalo	Florida	NELAC	4	E87672
TestAmerica Buffalo	Georgia	State Program	4	956
TestAmerica Buffalo	Georgia	State Program	4	956
TestAmerica Buffalo	Georgia	State Program	4	N/A
TestAmerica Buffalo	Illinois	NELAC	5	200003
TestAmerica Buffalo	Iowa	State Program	7	374
TestAmerica Buffalo	Kansas	NELAC	7	E-10187
TestAmerica Buffalo	Kentucky	State Program	4	90029
TestAmerica Buffalo	Kentucky (UST)	State Program	4	30
TestAmerica Buffalo	Louisiana	NELAC	6	02031
TestAmerica Buffalo	Maine	State Program	1	NY00044
TestAmerica Buffalo	Maryland	State Program	3	294
TestAmerica Buffalo	Massachusetts	State Program	1	M-NY044
TestAmerica Buffalo	Michigan	State Program	5	9937
TestAmerica Buffalo	Minnesota	NELAC	5	036-999-337
TestAmerica Buffalo	New Hampshire	NELAC	1	2337
TestAmerica Buffalo	New Hampshire	NELAC	1	2973
TestAmerica Buffalo	New Jersey	NELAC	2	NY455
TestAmerica Buffalo	New York	NELAC	2	10026
TestAmerica Buffalo	North Dakota	State Program	8	R-176
TestAmerica Buffalo	Oklahoma	State Program	6	9421
TestAmerica Buffalo	Oregon	NELAC	10	NY200003
TestAmerica Buffalo	Pennsylvania	NELAC	3	68-00281
TestAmerica Buffalo	Rhode Island	State Program	1	LAO00328
TestAmerica Buffalo	Tennessee	State Program	4	TN02970
TestAmerica Buffalo	Texas	NELAC	6	T104704412-11-2
TestAmerica Buffalo	USDA	Federal		P330-11-00386
TestAmerica Buffalo	Virginia	NELAC	3	460185
TestAmerica Buffalo	Washington	State Program	10	C784
TestAmerica Buffalo	West Virginia DEP	State Program	3	252
TestAmerica Buffalo	Wisconsin	State Program	5	998310390

Accreditation may not be offered or required for all methods and analytes reported in this package Please contact your project manager for the laboratory's current list of certified methods and analytes.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

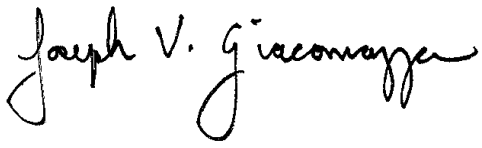
ANALYTICAL REPORT

Job Number: 480-30842-1

Job Description: NYSDEC-Standby VESTAL

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

Attention: Mr. Jeremy Wyckoff



Approved for release.
Joe Giacomazza
Project Administrator
1/22/2013 10:45 AM

Designee for
Sally Hoffman
Project Manager II
sally.hoffman@testamericainc.com
01/22/2013

The test results in this report meet all NELAP requirements for analytes for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this test report should be directed to the TestAmerica Project Manager who has signed this report. TestAmerica Buffalo NELAC Certifications: CADPH 01169CA, FLDOH E87672, ILEPA 200003, KSDOH E-10187, LADEQ 30708, MDH 036-999-337, NHELAP 2973, NJDEP NY455, NHDOH 10026, ORELAP NY200003, PADEP 68-00281, TXCEQ T-104704412-10-1

Table of Contents

Table of Contents

Job Narrative
480-30842-1

Receipt
The samples were received on 12/27/2012 11:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.8° C.

GC/MS VOA
Method 8260B: The following sample was diluted to bring the concentration of target analytes within the calibration range: WELL 1-1A INF (480-30842-1). Elevated reporting limits (RLs) are provided.

Method 8260B: The continuing calibration verification (CCV) for Cyclohexanone associated with batch 98284 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No other analytical or quality issues were noted.

GC/MS Semi VOA
Method 8270C LL: The spiking solution was omitted during the extraction process for the laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) associated with preparation batch 97869; therefore, percent recoveries are unavailable. Due to the fact that this analyte is not routinely requested in the laboratories 8270LL analysis.

No other analytical or quality issues were noted.

Organic Prep
Method 3510C: Insufficient sample volume was available to perform batch matrix spike/matrix spike duplicate (MS/MSD) associated with batch 97869. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

No other analytical or quality issues were noted.

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-30842-1

SDG No.:

Instrument ID: HP5973X Analysis Batch Number: 96346

Lab Sample ID: IC 480-96346/2 Client Sample ID:

Date Analyzed: 12/18/12 11:20 Lab File ID: X3131.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acenaphthene	11.18	Assign Peak	mckernar	12/18/12 11:48
Diphenylamine	12.19	Assign Peak	mckernar	12/18/12 11:48
N-Nitrosodiphenylamine	12.19	Assign Peak	mckernar	12/18/12 11:48
Anthracene	13.29	Assign Peak	mckernar	12/18/12 11:48
Benzo(a)pyrene	17.09	Assign Peak	mckernar	12/18/12 11:48

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-30842-1

SDG No.:

Instrument ID: HP5973X Analysis Batch Number: 96346

Lab Sample ID: IC 480-96346/3 Client Sample ID:

Date Analyzed: 12/18/12 11:45 Lab File ID: X3132.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	2.44	Assign Peak	mckernar	12/18/12 13:05
N-Nitrosodimethylamine	2.79	Assign Peak	mckernar	12/18/12 13:05
Pyridine	2.93	Assign Peak	mckernar	12/18/12 13:05
Aniline	6.09	Assign Peak	mckernar	12/18/12 13:05
Phenol	6.14	Assign Peak	mckernar	12/18/12 13:05
2,2'-oxybis[1-chloropropane]	7.00	Assign Peak	mckernar	12/18/12 13:05
2-Methylphenol	7.01	Assign Peak	mckernar	12/18/12 13:05
Acetophenone	7.20	Assign Peak	mckernar	12/18/12 13:05
4-Methylphenol	7.38	Assign Peak	mckernar	12/18/12 13:05
Nitrobenzene	7.45	Assign Peak	mckernar	12/18/12 13:05
Isophorone	7.81	Assign Peak	mckernar	12/18/12 13:05
2-Nitrophenol	7.99	Assign Peak	mckernar	12/18/12 13:05
2,4-Dimethylphenol	8.10	Assign Peak	mckernar	12/18/12 13:05
Bis(2-chloroethoxy)methane	8.21	Assign Peak	mckernar	12/18/12 13:05
1,2,4-Trichlorobenzene	8.41	Assign Peak	mckernar	12/18/12 13:05
2,4-Dichlorophenol	8.45	Assign Peak	mckernar	12/18/12 13:05
4-Chloroaniline	8.72	Assign Peak	mckernar	12/18/12 13:05
Caprolactam	9.34	Assign Peak	mckernar	12/18/12 13:05
4-Chloro-3-methylphenol	9.56	Assign Peak	mckernar	12/18/12 13:05
2,4,6-Trichlorophenol	10.11	Assign Peak	mckernar	12/18/12 13:05
2,4,5-Trichlorophenol	10.26	Assign Peak	mckernar	12/18/12 13:05
1,1'-Biphenyl	10.30	Assign Peak	mckernar	12/18/12 13:05
2-Chloronaphthalene	10.35	Coelution	mckernar	12/18/12 13:05
2-Nitroaniline	10.64	Assign Peak	mckernar	12/18/12 13:05
2,6-Dinitrotoluene	10.92	Assign Peak	mckernar	12/18/12 13:05
Acenaphthylene	10.92	Assign Peak	mckernar	12/18/12 13:05
Dibenzofuran	11.47	Assign Peak	mckernar	12/18/12 13:05
2,4-Dinitrotoluene	11.57	Assign Peak	mckernar	12/18/12 13:05
Fluorene	11.97	Assign Peak	mckernar	12/18/12 13:05
4,6-Dinitro-2-methylphenol	12.15	Assign Peak	mckernar	12/18/12 13:05

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-30842-1

SDG No.:

Instrument ID: HP5973X Analysis Batch Number: 96346

Lab Sample ID: IC 480-96346/3 Client Sample ID:

Date Analyzed: 12/18/12 11:45 Lab File ID: X3132.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Diphenylamine	12.16	Assign Peak	mckernar	12/18/12 13:05
N-Nitrosodiphenylamine	12.16	Assign Peak	mckernar	12/18/12 13:05
1,2-Diphenylhydrazine	12.20	Assign Peak	mckernar	12/18/12 13:05
Azobenzene	12.20	Assign Peak	mckernar	12/18/12 13:05
2,4,6-Tribromophenol (Surr)	12.31	Assign Peak	mckernar	12/18/12 13:05
Simazine	12.85	Coelution	mckernar	12/18/12 15:43
Atrazine	12.87	Assign Peak	mckernar	12/18/12 13:05
Pentachloronitrobenzene	12.94	Assign Peak	mckernar	12/18/12 13:05
Pentachlorophenol	13.00	Assign Peak	mckernar	12/18/12 13:05
Phenanthrene	13.18	Assign Peak	mckernar	12/18/12 13:05
Anthracene	13.25	Assign Peak	mckernar	12/18/12 13:05
Carbazole	13.48	Assign Peak	mckernar	12/18/12 13:05
Alachlor	13.58	Assign Peak	mckernar	12/18/12 13:05
Benzidine	14.65	Assign Peak	mckernar	12/18/12 13:05
Benzo(a)pyrene	17.04	Assign Peak	mckernar	12/18/12 13:05
Dibenz(a,h)anthracene	18.21	Assign Peak	mckernar	12/18/12 13:05
Indeno(1,2,3-cd)pyrene	18.22	Assign Peak	mckernar	12/18/12 13:05
Benzo(g,h,i) perylene	18.53	Assign Peak	mckernar	12/18/12 13:05

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-30842-1

SDG No.:

Instrument ID: HP5973X Analysis Batch Number: 96346

Lab Sample ID: IC 480-96346/4 Client Sample ID:

Date Analyzed: 12/18/12 12:11 Lab File ID: X3133.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	2.46	Assign Peak	mckernar	12/18/12 13:05
N-Nitrosodimethylamine	2.82	Assign Peak	mckernar	12/18/12 13:05
Pyridine	2.91	Assign Peak	mckernar	12/18/12 13:05
2-Fluorophenol (Surr)	4.69	Assign Peak	mckernar	12/18/12 13:05
Benzaldehyde	5.95	Assign Peak	mckernar	12/18/12 13:05
Phenol-d5 (Surr)	6.12	Assign Peak	mckernar	12/18/12 13:05
Phenol	6.14	Assign Peak	mckernar	12/18/12 13:05
2-Chlorophenol	6.29	Assign Peak	mckernar	12/18/12 13:05
Benzyl alcohol	6.89	Assign Peak	mckernar	12/18/12 13:05
2,2'-oxybis[1-chloropropane]	7.02	Assign Peak	mckernar	12/18/12 13:05
2-Methylphenol	7.02	Assign Peak	mckernar	12/18/12 13:05
Acetophenone	7.21	Assign Peak	mckernar	12/18/12 13:05
4-Methylphenol	7.31	Assign Peak	mckernar	12/18/12 13:05
2-Nitrophenol	7.93	Assign Peak	mckernar	12/18/12 13:05
2,4-Dimethylphenol	8.06	Assign Peak	mckernar	12/18/12 13:05
Bis(2-chloroethoxy)methane	8.18	Assign Peak	mckernar	12/18/12 13:05
2,4-Dichlorophenol	8.38	Assign Peak	mckernar	12/18/12 13:05
Caprolactam	9.28	Assign Peak	mckernar	12/18/12 13:05
4-Chloro-3-methylphenol	9.52	Assign Peak	mckernar	12/18/12 13:05
2,4,6-Trichlorophenol	10.07	Assign Peak	mckernar	12/18/12 13:05
2,4,5-Trichlorophenol	10.21	Assign Peak	mckernar	12/18/12 13:05
2-Chloronaphthalene	10.32	Coelution	mckernar	12/18/12 13:05
2-Nitroaniline	10.55	Assign Peak	mckernar	12/18/12 13:05
1,4-Dinitrobenzene	10.78	Assign Peak	mckernar	12/18/12 13:05
3-Nitroaniline	11.22	Assign Peak	mckernar	12/18/12 13:05
2,4-Dinitrophenol	11.38	Assign Peak	mckernar	12/18/12 13:05
2,4-Dinitrotoluene	11.52	Assign Peak	mckernar	12/18/12 13:05
2,3,4,6-Tetrachlorophenol	11.69	Assign Peak	mckernar	12/18/12 15:43
4-Nitrophenol	11.69	Assign Peak	mckernar	12/18/12 13:05
Diethyl phthalate	11.83	Assign Peak	mckernar	12/18/12 13:05

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-30842-1

SDG No.:

Instrument ID: HP5973X Analysis Batch Number: 96346

Lab Sample ID: IC 480-96346/4 Client Sample ID:

Date Analyzed: 12/18/12 12:11 Lab File ID: X3133.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4,6-Dinitro-2-methylphenol	12.11	Assign Peak	mckernar	12/18/12 13:05
4-Nitroaniline	12.12	Assign Peak	mckernar	12/18/12 13:05
2,4,6-Tribromophenol (Surr)	12.30	Assign Peak	mckernar	12/18/12 13:05
Carbazole	13.44	Assign Peak	mckernar	12/18/12 13:05
Benzidine	14.62	Assign Peak	mckernar	12/18/12 13:05
Benzo(a)pyrene	17.01	Assign Peak	mckernar	12/18/12 13:05
Dibenz(a,h)anthracene	18.14	Assign Peak	mckernar	12/18/12 13:05
Indeno(1,2,3-cd)pyrene	18.14	Assign Peak	mckernar	12/18/12 13:05
Benzo(g,h,i) perylene	18.46	Assign Peak	mckernar	12/18/12 13:05

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-30842-1

SDG No.:

Instrument ID: HP5973X Analysis Batch Number: 96346

Lab Sample ID: IC 480-96346/5 Client Sample ID:

Date Analyzed: 12/18/12 12:36 Lab File ID: X3134.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	2.47	Assign Peak	mckernar	12/18/12 13:08
N-Nitrosodimethylamine	2.81	Assign Peak	mckernar	12/18/12 13:08
Pyridine	2.91	Assign Peak	mckernar	12/18/12 13:08
Phenol	6.14	Assign Peak	mckernar	12/18/12 13:08
Benzyl alcohol	6.85	Assign Peak	mckernar	12/18/12 13:08
4-Methylphenol	7.29	Assign Peak	mckernar	12/18/12 13:08
2,4-Dimethylphenol	8.06	Assign Peak	mckernar	12/18/12 13:08
Benzoic acid	8.27	Assign Peak	mckernar	12/18/12 13:08
2,4-Dichlorophenol	8.36	Assign Peak	mckernar	12/18/12 13:08
4-Chloroaniline	8.66	Assign Peak	mckernar	12/18/12 13:08
Caprolactam	9.21	Assign Peak	mckernar	12/18/12 13:08
4-Chloro-3-methylphenol	9.47	Assign Peak	mckernar	12/18/12 13:08
2,4,6-Trichlorophenol	10.04	Assign Peak	mckernar	12/18/12 13:08
2,4,5-Trichlorophenol	10.15	Assign Peak	mckernar	12/18/12 13:08
1,4-Dinitrobenzene	10.76	Assign Peak	mckernar	12/18/12 13:08
3-Nitroaniline	11.16	Assign Peak	mckernar	12/18/12 13:08
2,4-Dinitrophenol	11.35	Assign Peak	mckernar	12/18/12 13:08
4-Nitrophenol	11.61	Assign Peak	mckernar	12/18/12 13:08
2,3,4,6-Tetrachlorophenol	11.67	Peak Tail	mckernar	12/18/12 15:40
4-Nitroaniline	12.07	Assign Peak	mckernar	12/18/12 13:08
Dibenz(a,h)anthracene	18.15	Assign Peak	mckernar	12/18/12 13:08
Benzo(g,h,i) perylene	18.47	Assign Peak	mckernar	12/18/12 13:08

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-30842-1

SDG No.:

Instrument ID: HP5973X Analysis Batch Number: 96346

Lab Sample ID: ICIS 480-96346/6 Client Sample ID:

Date Analyzed: 12/18/12 13:01 Lab File ID: X3135.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Pyridine	2.87	Assign Peak	mckernar	12/18/12 13:38
Benzaldehyde	5.94	Split Peak	mckernar	12/18/12 15:36
Benzoic acid	8.23	Assign Peak	mckernar	12/18/12 13:38
2,4-Dichlorophenol	8.32	Assign Peak	mckernar	12/18/12 13:38
4-Chloroaniline	8.63	Assign Peak	mckernar	12/18/12 13:38
Caprolactam	9.17	Assign Peak	mckernar	12/18/12 13:38
4-Chloro-3-methylphenol	9.43	Assign Peak	mckernar	12/18/12 13:38
2,4-Dinitrophenol	11.30	Assign Peak	mckernar	12/18/12 13:38
4-Nitrophenol	11.52	Assign Peak	mckernar	12/18/12 13:39

Lab Sample ID: IC 480-96346/7 Client Sample ID:

Date Analyzed: 12/18/12 13:27 Lab File ID: X3136.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzyl alcohol	6.80	Assign Peak	mckernar	12/18/12 15:37
2,2'-oxybis[1-chloropropane]	7.00	Split Peak	mckernar	12/18/12 15:19
4-Nitrophenol	11.48	Assign Peak	mckernar	12/18/12 15:24

Lab Sample ID: IC 480-96346/8 Client Sample ID:

Date Analyzed: 12/18/12 13:52 Lab File ID: X3137.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Pyridine	2.83	Assign Peak	mckernar	12/18/12 15:21
Benzoic acid	8.21	Assign Peak	mckernar	12/18/12 15:21
4-Nitrophenol	11.49	Assign Peak	mckernar	12/18/12 15:24

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-30842-1

SDG No.:

Instrument ID: HP5973X Analysis Batch Number: 96346

Lab Sample ID: IC 480-96346/9 Client Sample ID:

Date Analyzed: 12/18/12 14:18 Lab File ID: X3138.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,2'-oxybis[1-chloropropane]	6.98	Assign Peak	mckernar	12/18/12 15:24
4-Nitrophenol	11.47	Assign Peak	mckernar	12/18/12 15:24

Lab Sample ID: IC 480-96346/10 Client Sample ID:

Date Analyzed: 12/18/12 14:44 Lab File ID: X3139.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,2'-oxybis[1-chloropropane]	6.98	Assign Peak	mckernar	12/18/12 15:28
4-Chloro-3-methylphenol	9.38	Assign Peak	mckernar	12/18/12 15:28
4-Nitrophenol	11.45	Assign Peak	mckernar	12/18/12 15:28

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-30842-1

SDG No.:

Instrument ID: HP5973X Analysis Batch Number: 98172

Lab Sample ID: CCVIS 480-98172/2 Client Sample ID:

Date Analyzed: 01/03/13 11:58 Lab File ID: X3466.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Nitrophenol	11.44	Assign Peak	mckernar	01/03/13 13:16

Lab Sample ID: MB 480-97869/1-A Client Sample ID:

Date Analyzed: 01/03/13 13:14 Lab File ID: X3469.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorophenol (Surr)	4.63	Assign Peak	mckernar	01/03/13 13:41

Lab Sample ID: LCS 480-97869/2-A Client Sample ID:

Date Analyzed: 01/03/13 13:39 Lab File ID: X3470.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorophenol (Surr)	4.64	Assign Peak	mckernar	01/03/13 14:26
Phenol-d5 (Surr)	6.05	Assign Peak	mckernar	01/03/13 14:26

Lab Sample ID: LCSD 480-97869/3-A Client Sample ID:

Date Analyzed: 01/03/13 14:05 Lab File ID: X3471.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorophenol (Surr)	4.63	Assign Peak	mckernar	01/03/13 14:28
Phenol-d5 (Surr)	6.06	Assign Peak	mckernar	01/03/13 14:28

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Buffalo Job No.: 480-30842-1

SDG No.:

Instrument ID: HP5973X Analysis Batch Number: 98172

Lab Sample ID: 480-30842-1 Client Sample ID: WELL 1-1A INF

Date Analyzed: 01/03/13 14:30 Lab File ID: X3472.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorophenol (Surr)	4.64	Assign Peak	mckernar	01/03/13 15:47
Phenol-d5 (Surr)	6.09	Assign Peak	mckernar	01/03/13 15:47

Lab Sample ID: 480-30842-2 Client Sample ID: WELL 1-1A EFF

Date Analyzed: 01/03/13 14:56 Lab File ID: X3473.D GC Column: RXI-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Fluorophenol (Surr)	4.64	Assign Peak	mckernar	01/03/13 15:48
Phenol-d5 (Surr)	6.09	Assign Peak	mckernar	01/03/13 15:48

SAMPLE SUMMARY

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-30842-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
480-30842-1	WELL 1-1A INF	Water	12/26/2012 1230	12/27/2012 1100
480-30842-2	WELL 1-1A EFF	Water	12/26/2012 1235	12/27/2012 1100
480-30842-3	TRIP BLANK	Water	12/26/2012 0000	12/27/2012 1100

EXECUTIVE SUMMARY - Detections

Client: Malcolm Pirnie, Inc. Invoice to Arcadis Job Number: 480-30842-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
480-30842-1	**WELL 1-1A INF**					
1,1,1-Trichloroethane		130		2.0	ug/L	8260B
1,1-Dichloroethane		18		2.0	ug/L	8260B
1,1-Dichloroethene		12		2.0	ug/L	8260B
cis-1,2-Dichloroethene		37		2.0	ug/L	8260B
Trichloroethene		42		2.0	ug/L	8260B
Vinyl chloride		5.7		2.0	ug/L	8260B
Methyl tert-butyl ether		3.2		2.0	ug/L	8260B
480-30842-2	**WELL 1-1A EFF**					
Methyl tert-butyl ether		0.68	J	1.0	ug/L	8260B

METHOD SUMMARY

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-30842-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL BUF	SW846 8260B	
Purge and Trap	TAL BUF		SW846 5030B
Semivolatile Organic Compounds by GCMS - Low Levels	TAL BUF	SW846 8270C LL	
Liquid-Liquid Extraction (Separatory Funnel)	TAL BUF		SW846 3510C

Lab References:

TAL BUF = TestAmerica Buffalo

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. Invoice to Arcadis

Job Number: 480-30842-1

Method	Analyst	Analyst ID
SW846 8260B	Hill, Leah	LH
SW846 8270C LL	McKernan, Ryan	RMM

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-30842-1

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

Lab Sample ID: 480-30842-1
Client Matrix: Water

Date Sampled: 12/26/2012 1230
Date Received: 12/27/2012 1100

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-98284	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T5015.D
Dilution:	2.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/04/2013 0249			Final Weight/Volume:	5 mL
Prep Date:	01/04/2013 0249				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	130		1.6	2.0
1,1,2,2-Tetrachloroethane	2.0	U	0.42	2.0
1,1,2-Trichloroethane	2.0	U	0.46	2.0
1,1-Dichloroethane	18		0.76	2.0
1,1-Dichloroethene	12		0.58	2.0
1,2-Dibromoethane	2.0	U	1.5	2.0
1,2-Dichloroethane	2.0	U	0.42	2.0
1,2-Dichloropropane	2.0	U	1.4	2.0
2-Hexanone	10	U	2.5	10
2-Butanone (MEK)	20	U	2.6	20
4-Methyl-2-pentanone (MIBK)	10	U	4.2	10
Acetone	20	U	6.0	20
Benzene	2.0	U	0.82	2.0
Bromodichloromethane	2.0	U	0.78	2.0
Bromoform	2.0	U	0.52	2.0
Bromomethane	2.0	U	1.4	2.0
Carbon disulfide	2.0	U	0.38	2.0
Carbon tetrachloride	2.0	U	0.54	2.0
Chlorobenzene	2.0	U	1.5	2.0
Dibromochloromethane	2.0	U	0.64	2.0
Chloroethane	2.0	U	0.64	2.0
Chloroform	2.0	U	0.68	2.0
Chloromethane	2.0	U	0.70	2.0
cis-1,2-Dichloroethene	37		1.6	2.0
cis-1,3-Dichloropropene	2.0	U	0.72	2.0
Ethylbenzene	2.0	U	1.5	2.0
Methylene Chloride	2.0	U	0.88	2.0
Styrene	2.0	U	1.5	2.0
Tetrachloroethene	2.0	U	0.72	2.0
Toluene	2.0	U	1.0	2.0
trans-1,2-Dichloroethene	2.0	U	1.8	2.0
trans-1,3-Dichloropropene	2.0	U	0.74	2.0
Trichloroethene	42		0.92	2.0
Vinyl chloride	5.7		1.8	2.0
Xylenes, Total	4.0	U	1.3	4.0
m,p-Xylene	4.0	U	1.3	4.0
o-Xylene	2.0	U	1.5	2.0
Methyl tert-butyl ether	3.2		0.32	2.0
Isopropylbenzene	2.0	U	1.6	2.0
n-Butylbenzene	2.0	U	1.3	2.0
1,2,4-Trimethylbenzene	2.0	U	1.5	2.0
Naphthalene	2.0	U	0.86	2.0
sec-Butylbenzene	2.0	U	1.5	2.0
N-Propylbenzene	2.0	U	1.4	2.0
4-Isopropyltoluene	2.0	U	0.62	2.0
1,3,5-Trimethylbenzene	2.0	U	1.5	2.0

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-30842-1

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

Lab Sample ID: 480-30842-1
Client Matrix: Water

Date Sampled: 12/26/2012 1230
Date Received: 12/27/2012 1100

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-98284	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T5015.D
Dilution:	2.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/04/2013 0249			Final Weight/Volume:	5 mL
Prep Date:	01/04/2013 0249				

Analyte	Result (ug/L)	Qualifier	MDL	RL
tert-Butylbenzene	2.0	U	1.6	2.0
1,4-Dioxane	80	U	19	80

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	118		66 - 137
Toluene-d8 (Surr)	109		71 - 126
4-Bromofluorobenzene (Surr)	106		73 - 120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-30842-1

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

Lab Sample ID: 480-30842-2
Client Matrix: Water

Date Sampled: 12/26/2012 1235
Date Received: 12/27/2012 1100

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-98284	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T5016.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/04/2013 0313			Final Weight/Volume:	5 mL
Prep Date:	01/04/2013 0313				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.82	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.21	1.0
1,1,2-Trichloroethane	1.0	U	0.23	1.0
1,1-Dichloroethane	1.0	U	0.38	1.0
1,1-Dichloroethene	1.0	U	0.29	1.0
1,2-Dibromoethane	1.0	U	0.73	1.0
1,2-Dichloroethane	1.0	U	0.21	1.0
1,2-Dichloropropane	1.0	U	0.72	1.0
2-Hexanone	5.0	U	1.2	5.0
2-Butanone (MEK)	10	U	1.3	10
4-Methyl-2-pentanone (MIBK)	5.0	U	2.1	5.0
Acetone	10	U	3.0	10
Benzene	1.0	U	0.41	1.0
Bromodichloromethane	1.0	U	0.39	1.0
Bromoform	1.0	U	0.26	1.0
Bromomethane	1.0	U	0.69	1.0
Carbon disulfide	1.0	U	0.19	1.0
Carbon tetrachloride	1.0	U	0.27	1.0
Chlorobenzene	1.0	U	0.75	1.0
Dibromochloromethane	1.0	U	0.32	1.0
Chloroethane	1.0	U	0.32	1.0
Chloroform	1.0	U	0.34	1.0
Chloromethane	1.0	U	0.35	1.0
cis-1,2-Dichloroethene	1.0	U	0.81	1.0
cis-1,3-Dichloropropene	1.0	U	0.36	1.0
Ethylbenzene	1.0	U	0.74	1.0
Methylene Chloride	1.0	U	0.44	1.0
Styrene	1.0	U	0.73	1.0
Tetrachloroethene	1.0	U	0.36	1.0
Toluene	1.0	U	0.51	1.0
trans-1,2-Dichloroethene	1.0	U	0.90	1.0
trans-1,3-Dichloropropene	1.0	U	0.37	1.0
Trichloroethene	1.0	U	0.46	1.0
Vinyl chloride	1.0	U	0.90	1.0
Xylenes, Total	2.0	U	0.66	2.0
m,p-Xylene	2.0	U	0.66	2.0
o-Xylene	1.0	U	0.76	1.0
Methyl tert-butyl ether	0.68	J	0.16	1.0
Isopropylbenzene	1.0	U	0.79	1.0
n-Butylbenzene	1.0	U	0.64	1.0
1,2,4-Trimethylbenzene	1.0	U	0.75	1.0
Naphthalene	1.0	U	0.43	1.0
sec-Butylbenzene	1.0	U	0.75	1.0
N-Propylbenzene	1.0	U	0.69	1.0
4-Isopropyltoluene	1.0	U	0.31	1.0
1,3,5-Trimethylbenzene	1.0	U	0.77	1.0

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-30842-1

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

Lab Sample ID: 480-30842-2
Client Matrix: Water

Date Sampled: 12/26/2012 1235
Date Received: 12/27/2012 1100

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-98284	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T5016.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/04/2013 0313			Final Weight/Volume:	5 mL
Prep Date:	01/04/2013 0313				

Analyte	Result (ug/L)	Qualifier	MDL	RL
tert-Butylbenzene	1.0	U	0.81	1.0
1,4-Dioxane	40	U	9.3	40

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	118		66 - 137
Toluene-d8 (Surr)	108		71 - 126
4-Bromofluorobenzene (Surr)	106		73 - 120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-30842-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 480-30842-3
Client Matrix: Water

Date Sampled: 12/26/2012 0000
Date Received: 12/27/2012 1100

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-98284	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T5017.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/04/2013 0337			Final Weight/Volume:	5 mL
Prep Date:	01/04/2013 0337				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.82	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.21	1.0
1,1,2-Trichloroethane	1.0	U	0.23	1.0
1,1-Dichloroethane	1.0	U	0.38	1.0
1,1-Dichloroethene	1.0	U	0.29	1.0
1,2-Dibromoethane	1.0	U	0.73	1.0
1,2-Dichloroethane	1.0	U	0.21	1.0
1,2-Dichloropropane	1.0	U	0.72	1.0
2-Hexanone	5.0	U	1.2	5.0
2-Butanone (MEK)	10	U	1.3	10
4-Methyl-2-pentanone (MIBK)	5.0	U	2.1	5.0
Acetone	10	U	3.0	10
Benzene	1.0	U	0.41	1.0
Bromodichloromethane	1.0	U	0.39	1.0
Bromoform	1.0	U	0.26	1.0
Bromomethane	1.0	U	0.69	1.0
Carbon disulfide	1.0	U	0.19	1.0
Carbon tetrachloride	1.0	U	0.27	1.0
Chlorobenzene	1.0	U	0.75	1.0
Dibromochloromethane	1.0	U	0.32	1.0
Chloroethane	1.0	U	0.32	1.0
Chloroform	1.0	U	0.34	1.0
Chloromethane	1.0	U	0.35	1.0
cis-1,2-Dichloroethene	1.0	U	0.81	1.0
cis-1,3-Dichloropropene	1.0	U	0.36	1.0
Ethylbenzene	1.0	U	0.74	1.0
Methylene Chloride	1.0	U	0.44	1.0
Styrene	1.0	U	0.73	1.0
Tetrachloroethene	1.0	U	0.36	1.0
Toluene	1.0	U	0.51	1.0
trans-1,2-Dichloroethene	1.0	U	0.90	1.0
trans-1,3-Dichloropropene	1.0	U	0.37	1.0
Trichloroethene	1.0	U	0.46	1.0
Vinyl chloride	1.0	U	0.90	1.0
Xylenes, Total	2.0	U	0.66	2.0
m,p-Xylene	2.0	U	0.66	2.0
o-Xylene	1.0	U	0.76	1.0
Methyl tert-butyl ether	1.0	U	0.16	1.0
Isopropylbenzene	1.0	U	0.79	1.0
n-Butylbenzene	1.0	U	0.64	1.0
1,2,4-Trimethylbenzene	1.0	U	0.75	1.0
Naphthalene	1.0	U	0.43	1.0
sec-Butylbenzene	1.0	U	0.75	1.0
N-Propylbenzene	1.0	U	0.69	1.0
4-Isopropyltoluene	1.0	U	0.31	1.0
1,3,5-Trimethylbenzene	1.0	U	0.77	1.0

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-30842-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 480-30842-3
Client Matrix: Water

Date Sampled: 12/26/2012 0000
Date Received: 12/27/2012 1100

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	480-98284	Instrument ID:	HP5975T
Prep Method:	5030B	Prep Batch:	N/A	Lab File ID:	T5017.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/04/2013 0337			Final Weight/Volume:	5 mL
Prep Date:	01/04/2013 0337				

Analyte	Result (ug/L)	Qualifier	MDL	RL
tert-Butylbenzene	1.0	U	0.81	1.0
1,4-Dioxane	40	U	9.3	40

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	118		66 - 137
Toluene-d8 (Surr)	110		71 - 126
4-Bromofluorobenzene (Surr)	104		73 - 120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-30842-1

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

Lab Sample ID: 480-30842-1
Client Matrix: Water

Date Sampled: 12/26/2012 1230
Date Received: 12/27/2012 1100

8270C LL Semivolatile Organic Compounds by GCMS - Low Levels

Analysis Method:	8270C LL	Analysis Batch:	480-98172	Instrument ID:	HP5973X
Prep Method:	3510C	Prep Batch:	480-97869	Lab File ID:	X3472.D
Dilution:	1.0			Initial Weight/Volume:	1005 mL
Analysis Date:	01/03/2013 1430			Final Weight/Volume:	1 mL
Prep Date:	12/31/2012 0931			Injection Volume:	1 uL

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	62		39 - 146
2-Fluorophenol (Surr)	25		18 - 120
p-Terphenyl-d14	83		58 - 147
Phenol-d5 (Surr)	18		11 - 120
Nitrobenzene-d5 (Surr)	66		34 - 132
2-Fluorobiphenyl	70		37 - 120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-30842-1

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

Lab Sample ID: 480-30842-1
Client Matrix: Water

Date Sampled: 12/26/2012 1230
Date Received: 12/27/2012 1100

8270C LL Semivolatile Organic Compounds by GCMS - Low Levels

Analysis Method:	8270C LL	Analysis Batch:	480-98172	Instrument ID:	HP5973X
Prep Method:	3510C	Prep Batch:	480-97869	Lab File ID:	X3472.D
Dilution:	1.0			Initial Weight/Volume:	1005 mL
Analysis Date:	01/03/2013 1430			Final Weight/Volume:	1 mL
Prep Date:	12/31/2012 0931			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **1**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Unknown	15.81	12	J

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
123-91-1	1,4-Dioxane TIC	5.0	U

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-30842-1

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

Lab Sample ID: 480-30842-2
Client Matrix: Water

Date Sampled: 12/26/2012 1235
Date Received: 12/27/2012 1100

8270C LL Semivolatile Organic Compounds by GCMS - Low Levels

Analysis Method:	8270C LL	Analysis Batch:	480-98172	Instrument ID:	HP5973X
Prep Method:	3510C	Prep Batch:	480-97869	Lab File ID:	X3473.D
Dilution:	1.0			Initial Weight/Volume:	1020 mL
Analysis Date:	01/03/2013 1456			Final Weight/Volume:	1 mL
Prep Date:	12/31/2012 0931			Injection Volume:	1 uL

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	41		39 - 146
2-Fluorophenol (Surr)	30		18 - 120
p-Terphenyl-d14	69		58 - 147
Phenol-d5 (Surr)	19		11 - 120
Nitrobenzene-d5 (Surr)	68		34 - 132
2-Fluorobiphenyl	75		37 - 120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-30842-1

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

Lab Sample ID: 480-30842-2
Client Matrix: Water

Date Sampled: 12/26/2012 1235
Date Received: 12/27/2012 1100

8270C LL Semivolatile Organic Compounds by GCMS - Low Levels

Analysis Method:	8270C LL	Analysis Batch:	480-98172	Instrument ID:	HP5973X
Prep Method:	3510C	Prep Batch:	480-97869	Lab File ID:	X3473.D
Dilution:	1.0			Initial Weight/Volume:	1020 mL
Analysis Date:	01/03/2013 1456			Final Weight/Volume:	1 mL
Prep Date:	12/31/2012 0931			Injection Volume:	1 uL

Tentatively Identified Compounds **Number TIC's Found:** **1**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Unknown	15.35	5.4	J

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
123-91-1	1,4-Dioxane TIC	4.9	U

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-30842-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	TOL %Rec	BFB %Rec
480-30842-1	WELL 1-1A INF	118	109	106
480-30842-2	WELL 1-1A EFF	118	108	106
480-30842-3	TRIP BLANK	118	110	104
MB 480-98284/5		119	107	108
LCS 480-98284/4		113	108	111

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	66-137
TOL = Toluene-d8 (Surr)	71-126
BFB = 4-Bromofluorobenzene (Surr)	73-120

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-30842-1

Surrogate Recovery Report

8270C LL Semivolatile Organic Compounds by GCMS - Low Levels

Client Matrix: Water

Lab Sample ID	Client Sample ID	2FP %Rec	PHL %Rec	NBZ %Rec	FBP %Rec	TBP %Rec	TPH %Rec
480-30842-1	WELL 1-1A INF	25	18	66	70	62	83
480-30842-2	WELL 1-1A EFF	30	19	68	75	41	69
MB 480-97869/1-A		25	14	48	61	56	87
LCS 480-97869/2-A		37	28	68	73	93	85
LCSD 480-97869/3-A		34	24	62	74	86	86

Surrogate	Acceptance Limits
2FP = 2-Fluorophenol (Surr)	18-120
PHL = Phenol-d5 (Surr)	11-120
NBZ = Nitrobenzene-d5 (Surr)	34-132
FBP = 2-Fluorobiphenyl	37-120
TBP = 2,4,6-Tribromophenol (Surr)	39-146
TPH = p-Terphenyl-d14	58-147

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-30842-1

Method Blank - Batch: 480-98284

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 480-98284/5	Analysis Batch:	480-98284	Instrument ID:	HP5975T
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	T5013.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/04/2013 0144	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/04/2013 0144				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.82	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.21	1.0
1,1,2-Trichloroethane	1.0	U	0.23	1.0
1,1-Dichloroethane	1.0	U	0.38	1.0
1,1-Dichloroethene	1.0	U	0.29	1.0
1,2-Dibromoethane	1.0	U	0.73	1.0
1,2-Dichloroethane	1.0	U	0.21	1.0
1,2-Dichloropropane	1.0	U	0.72	1.0
2-Hexanone	5.0	U	1.2	5.0
2-Butanone (MEK)	10	U	1.3	10
4-Methyl-2-pentanone (MIBK)	5.0	U	2.1	5.0
Acetone	10	U	3.0	10
Benzene	1.0	U	0.41	1.0
Bromodichloromethane	1.0	U	0.39	1.0
Bromoform	1.0	U	0.26	1.0
Bromomethane	1.0	U	0.69	1.0
Carbon disulfide	1.0	U	0.19	1.0
Carbon tetrachloride	1.0	U	0.27	1.0
Chlorobenzene	1.0	U	0.75	1.0
Dibromochloromethane	1.0	U	0.32	1.0
Chloroethane	1.0	U	0.32	1.0
Chloroform	1.0	U	0.34	1.0
Chloromethane	1.0	U	0.35	1.0
cis-1,2-Dichloroethene	1.0	U	0.81	1.0
cis-1,3-Dichloropropene	1.0	U	0.36	1.0
Ethylbenzene	1.0	U	0.74	1.0
Methylene Chloride	1.0	U	0.44	1.0
Styrene	1.0	U	0.73	1.0
Tetrachloroethene	1.0	U	0.36	1.0
Toluene	1.0	U	0.51	1.0
trans-1,2-Dichloroethene	1.0	U	0.90	1.0
trans-1,3-Dichloropropene	1.0	U	0.37	1.0
Trichloroethene	1.0	U	0.46	1.0
Vinyl chloride	1.0	U	0.90	1.0
Xylenes, Total	2.0	U	0.66	2.0
m,p-Xylene	2.0	U	0.66	2.0
o-Xylene	1.0	U	0.76	1.0
Methyl tert-butyl ether	1.0	U	0.16	1.0
Isopropylbenzene	1.0	U	0.79	1.0
n-Butylbenzene	1.0	U	0.64	1.0
1,2,4-Trimethylbenzene	1.0	U	0.75	1.0
Naphthalene	1.0	U	0.43	1.0
sec-Butylbenzene	1.0	U	0.75	1.0
N-Propylbenzene	1.0	U	0.69	1.0
4-Isopropyltoluene	1.0	U	0.31	1.0

Method Blank - Batch: 480-98284

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 480-98284/5	Analysis Batch:	480-98284	Instrument ID:	HP5975T
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	T5013.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/04/2013 0144	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/04/2013 0144				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,3,5-Trimethylbenzene	1.0	U	0.77	1.0
tert-Butylbenzene	1.0	U	0.81	1.0
1,4-Dioxane	40	U	9.3	40

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	119	66 - 137
Toluene-d8 (Surr)	107	71 - 126
4-Bromofluorobenzene (Surr)	108	73 - 120

Lab Control Sample - Batch: 480-98284

Method: 8260B
Preparation: 5030B

Lab Sample ID:	LCS 480-98284/4	Analysis Batch:	480-98284	Instrument ID:	HP5975T
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	T5012.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/04/2013 0120	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/04/2013 0120				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1-Dichloroethane	25.0	25.6	103	71 - 129	
1,1-Dichloroethene	25.0	29.3	117	58 - 121	
1,2-Dichloroethane	25.0	30.4	122	75 - 127	
Benzene	25.0	24.8	99	71 - 124	
Chlorobenzene	25.0	26.7	107	72 - 120	
cis-1,2-Dichloroethene	25.0	25.3	101	74 - 124	
Ethylbenzene	25.0	26.0	104	77 - 123	
Tetrachloroethene	25.0	28.5	114	74 - 122	
Toluene	25.0	24.9	100	80 - 122	
trans-1,2-Dichloroethene	25.0	26.3	105	73 - 127	
Trichloroethene	25.0	27.2	109	74 - 123	
m,p-Xylene	50.0	54.1	108	76 - 122	
o-Xylene	25.0	26.0	104	76 - 122	
Methyl tert-butyl ether	25.0	24.7	99	64 - 127	
1,2,4-Trimethylbenzene	25.0	28.9	116	76 - 121	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	113	66 - 137
Toluene-d8 (Surr)	108	71 - 126
4-Bromofluorobenzene (Surr)	111	73 - 120

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol (Surr)	56	39 - 146
2-Fluorophenol (Surr)	25	18 - 120
p-Terphenyl-d14	87	58 - 147
Phenol-d5 (Surr)	14	11 - 120
Nitrobenzene-d5 (Surr)	48	34 - 132
2-Fluorobiphenyl	61	37 - 120

Method Blank TICs- Batch: 480-97869

Cas Number	Analyte	RT	Est. Result	Qual
	Unknown	16.51	12.8	J

Method Blank TICs- Batch: 480-97869

Cas Number	Analyte	RT	Est. Result	Qual
123-91-1	1,4-Dioxane TIC	0.00	5.0	U

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2,4,6-Tribromophenol (Surr)	93	86	39 - 146
2-Fluorophenol (Surr)	37	34	18 - 120
p-Terphenyl-d14	85	86	58 - 147
Phenol-d5 (Surr)	28	24	11 - 120
Nitrobenzene-d5 (Surr)	68	62	34 - 132
2-Fluorobiphenyl	73	74	37 - 120

DATA REPORTING QUALIFIERS

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-30842-1

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

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-30842-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:480-98284					
LCS 480-98284/4	Lab Control Sample	T	Water	8260B	
MB 480-98284/5	Method Blank	T	Water	8260B	
480-30842-1	WELL 1-1A INF	T	Water	8260B	
480-30842-2	WELL 1-1A EFF	T	Water	8260B	
480-30842-3	TRIP BLANK	T	Water	8260B	

Report Basis
T = Total

GC/MS Semi VOA					
Prep Batch: 480-97869					
LCS 480-97869/2-A	Lab Control Sample	T	Water	3510C	
LCSD 480-97869/3-A	Lab Control Sample Duplicate	T	Water	3510C	
MB 480-97869/1-A	Method Blank	T	Water	3510C	
480-30842-1	WELL 1-1A INF	T	Water	3510C	
480-30842-2	WELL 1-1A EFF	T	Water	3510C	
Analysis Batch:480-98172					
LCS 480-97869/2-A	Lab Control Sample	T	Water	8270C LL	480-97869
LCSD 480-97869/3-A	Lab Control Sample Duplicate	T	Water	8270C LL	480-97869
MB 480-97869/1-A	Method Blank	T	Water	8270C LL	480-97869
480-30842-1	WELL 1-1A INF	T	Water	8270C LL	480-97869
480-30842-2	WELL 1-1A EFF	T	Water	8270C LL	480-97869

Report Basis
T = Total

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-30842-1

Laboratory Chronicle

Lab ID: 480-30842-1 **Client ID:** WELL 1-1A INF

Sample Date/Time: 12/26/2012 12:30 Received Date/Time: 12/27/2012 11:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	480-30842-B-1		480-98284		01/04/2013 02:49	2	TAL BUF	LH
A:8260B	480-30842-B-1		480-98284		01/04/2013 02:49	2	TAL BUF	LH
P:3510C	480-30842-A-1-A		480-98172	480-97869	12/31/2012 09:31	1	TAL BUF	TR
A:8270C LL	480-30842-A-1-A		480-98172	480-97869	01/03/2013 14:30	1	TAL BUF	RMM

Lab ID: 480-30842-2 **Client ID:** WELL 1-1A EFF

Sample Date/Time: 12/26/2012 12:35 Received Date/Time: 12/27/2012 11:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	480-30842-B-2		480-98284		01/04/2013 03:13	1	TAL BUF	LH
A:8260B	480-30842-B-2		480-98284		01/04/2013 03:13	1	TAL BUF	LH
P:3510C	480-30842-A-2-A		480-98172	480-97869	12/31/2012 09:31	1	TAL BUF	TR
A:8270C LL	480-30842-A-2-A		480-98172	480-97869	01/03/2013 14:56	1	TAL BUF	RMM

Lab ID: 480-30842-3 **Client ID:** TRIP BLANK

Sample Date/Time: 12/26/2012 00:00 Received Date/Time: 12/27/2012 11:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	480-30842-A-3		480-98284		01/04/2013 03:37	1	TAL BUF	LH
A:8260B	480-30842-A-3		480-98284		01/04/2013 03:37	1	TAL BUF	LH

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 480-98284/5		480-98284		01/04/2013 01:44	1	TAL BUF	LH
A:8260B	MB 480-98284/5		480-98284		01/04/2013 01:44	1	TAL BUF	LH
P:3510C	MB 480-97869/1-A		480-98172	480-97869	12/31/2012 09:31	1	TAL BUF	TR
A:8270C LL	MB 480-97869/1-A		480-98172	480-97869	01/03/2013 13:14	1	TAL BUF	RMM

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 480-98284/4		480-98284		01/04/2013 01:20	1	TAL BUF	LH
A:8260B	LCS 480-98284/4		480-98284		01/04/2013 01:20	1	TAL BUF	LH
P:3510C	LCS 480-97869/2-A		480-98172	480-97869	12/31/2012 09:31	1	TAL BUF	TR
A:8270C LL	LCS 480-97869/2-A		480-98172	480-97869	01/03/2013 13:39	1	TAL BUF	RMM

Client: Malcolm Pirnie, Inc. Invoice to Arcadis

Job Number: 480-30842-1

Laboratory Chronicle

Lab ID: **LCSD** **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:3510C	LCSD 480-97869/3-A		480-98172	480-97869	12/31/2012 09:31	1	TAL BUF	TR
A:8270C LL	LCSD 480-97869/3-A		480-98172	480-97869	01/03/2013 14:05	1	TAL BUF	RMM

Lab References:
TAL BUF = TestAmerica Buffalo

Certification Summary

Client: Malcolm Pirnie, Inc. Invoice to Arcadis
Project/Site: NYSDEC-Standby VESTAL

TestAmerica Job ID: 480-30842-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Buffalo	Arkansas DEQ	State Program	6	88-0686
TestAmerica Buffalo	California	NELAP	9	1169CA
TestAmerica Buffalo	Connecticut	State Program	1	PH-0568
TestAmerica Buffalo	Florida	NELAP	4	E87672
TestAmerica Buffalo	Georgia	State Program	4	956
TestAmerica Buffalo	Georgia	State Program	4	956
TestAmerica Buffalo	Georgia	State Program	4	N/A
TestAmerica Buffalo	Illinois	NELAP	5	200003
TestAmerica Buffalo	Iowa	State Program	7	374
TestAmerica Buffalo	Kansas	NELAP	7	E-10187
TestAmerica Buffalo	Kentucky	State Program	4	90029
TestAmerica Buffalo	Kentucky (UST)	State Program	4	30
TestAmerica Buffalo	Louisiana	NELAP	6	02031
TestAmerica Buffalo	Maine	State Program	1	NY00044
TestAmerica Buffalo	Maryland	State Program	3	294
TestAmerica Buffalo	Massachusetts	State Program	1	M-NY044
TestAmerica Buffalo	Michigan	State Program	5	9937
TestAmerica Buffalo	Minnesota	NELAP	5	036-999-337
TestAmerica Buffalo	New Hampshire	NELAP	1	2337
TestAmerica Buffalo	New Hampshire	NELAP	1	2973
TestAmerica Buffalo	New Jersey	NELAP	2	NY455
TestAmerica Buffalo	New York	NELAP	2	10026
TestAmerica Buffalo	North Dakota	State Program	8	R-176
TestAmerica Buffalo	Oklahoma	State Program	6	9421
TestAmerica Buffalo	Oregon	NELAP	10	NY200003
TestAmerica Buffalo	Pennsylvania	NELAP	3	68-00281
TestAmerica Buffalo	Rhode Island	State Program	1	LAO00328
TestAmerica Buffalo	Tennessee	State Program	4	TN02970
TestAmerica Buffalo	Texas	NELAP	6	T104704412-11-2
TestAmerica Buffalo	USDA	Federal		P330-11-00386
TestAmerica Buffalo	Virginia	NELAP	3	460185
TestAmerica Buffalo	Washington	State Program	10	C784
TestAmerica Buffalo	West Virginia DEP	State Program	3	252
TestAmerica Buffalo	Wisconsin	State Program	5	998310390

Accreditation may not be offered or required for all methods and analytes reported in this package Please contact your project manager for the laboratory's current list of certified methods and analytes.

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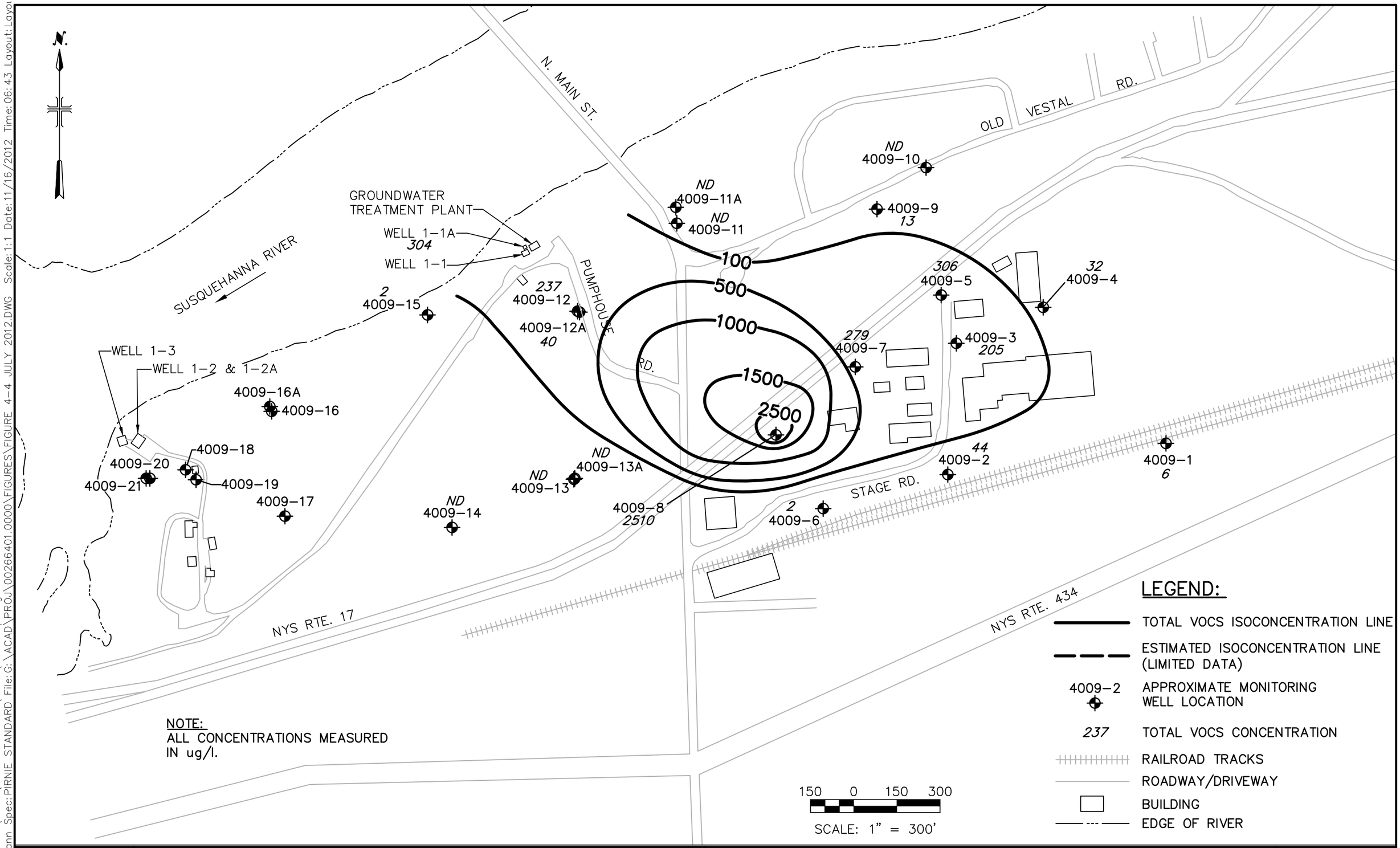
Appendix **C**

July 2012 VOC Isoconcentration Map



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NYSDEC STANDBY CONTRACT NO. D007618–7
NYSDEC SITE NO. 7–04–009
VESTAL WATER SUPPLY
VESTAL, NEW YORK

TOTAL VOC CONCENTRATIONS (JULY 2012)

SCALE: AS SHOWN

OCTOBER 2012
FIGURE 4–4