

# ROSS ENVIRONMENTAL ASSOCIATES, INC.

Hydrogeology, Water Quality, GIS Planning, Remediation,  
Geothermal Technology, Regulatory Compliance & Permitting  
Environmental Site Assessments, and Radon Mitigation



18 August 2011

Mr. Scott Oeschger  
Fred's Plumbing and Heating  
PO Box 17  
Derby, VT 05829

RE: *Progress Report and Groundwater Sampling Results for May 2011*  
*Fred's Plumbing and Heating Bulk Facility (SMS Site #2007-3639)*  
*Policy #06PKG01328 / Claim #82567*

Dear Mr. Oeschger:

On 23 May 2011, Ross Environmental Associates, Inc. (**R.E.A.**) completed groundwater monitoring at the Fred's Plumbing and Heating Bulk Facility (FPH Bulk Facility) located at 1683 US Route 5 in Derby, Vermont (**Figure 1 & 2**, Attachment A). This work was completed as part of the quarterly sampling program approved by Mr. Matt Moran of the Vermont Department of Environmental Conservation (VT DEC).

The findings of this groundwater sampling event are summarized below:

- Approximately 0.28 feet of residual free-phase petroleum was encountered in MW-22 during this monitoring period.
- The Vermont Groundwater Enforcement Standards (VGESs) for one or more volatile petroleum compounds were exceeded in the groundwater samples collected from MW-2, MW-3, MW-4, MW-6, MW-7, MW-14, RW-2, and RW-3.
- Low concentrations of several VOCs were detected in the samples collected from MW-2, MW-3, MW-4, MW-6, MW-7, MW-14, MW-15, MW-19, RW-1, RW-2, and RW-3.
- No VOCs were detected in the samples collected from MW-9(d), MW-17, and MW-21.
- The SVE system has removed an estimated 1,322 equivalent gallons of gasoline during its operation since November 2008.
- The catalytic oxidizer used in the SVE system has had an average vapor phase VOC destruction efficiency of 100% since January 2011 and 97.5% since system start-up on November 2008.

## Conclusion/Recommendations

Comparing May 2011 results in like monitoring wells to April 2010 results yields an approximate 52% reduction in total VOCs. This data suggests that the remediation system is effectively reducing overall contaminant concentrations; although several VGESs were exceeded in multiple groundwater samples collected during the May 2011 sampling event. The free-phase product that was discovered in MW-22 appears to be an isolated pocket created by the large concrete saddle footings that still remain in place.

Based on the most recent groundwater analytical results, **R.E.A.** recommends the following:

- Weekly inspection, operation and maintenance of the SVE remediation system should continue.
- A vac-trailer should be used to periodically apply vacuum to MW-22 to remove free product. These events should be performed periodically in order to assess free product reduction.

- Quarterly sampling should also continue at the site with the next sampling event occurring in August 2011. Groundwater samples should be analyzed for the possible presence of volatile petroleum compounds in accordance with EPA method 8021b.
- The FALCO®100 catalytic oxidizer coupled with the air sparge system should continue to be used in conjunction with the periodic vacuum applications to MW-22.

Copies of site maps showing approximate monitoring well locations (**Figure 3**), ground water flow direction (**Figure 4**), and contaminant distribution (**Figure 5**) are included in Attachment A. Tables summarizing ground-water elevation data (**Table 1**), ground water analytical results (**Table 2**), field measurement data (**Table 3**), routine SVE system operation and maintenance log (**Table 4**), SVE system product recovery rates (**Table 5**), SVE system Influent Readings (**Table 6**), and vapor-phase VOC destruction efficiency (**Table 7**) are included in Attachment B. Time-series graphs for water quality data are included in Attachment C, and laboratory analytical reports are included in Attachment D.

### **Ground Water Elevation and Flow Direction**

On 23 May 2011, ground-water flow in the unconfined surficial aquifer at the site was toward the north with an average hydraulic gradient of approximately 5.3 percent in the region between MW-6 and MW-14 and approximately 1.4 percent between MW-7 and MW-19, which is consistent with previous groundwater elevation data. Water level measurements and elevation calculations for 23 May 2011 are presented in **Table 1** and the ground-water contour map prepared using this data is presented as **Figure 4**, Attachment A.

Static water-table elevations were computed for each monitoring well by subtracting measured depth-to-water or corrected depth to water readings from the surveyed top-of-casing (TOC) elevations, which are relative to an arbitrary site datum of 100.00 feet.

### **Ground Water Sampling and Analysis**

In general, since the previous sampling event in November 2010, site wide contamination has decreased by approximately 23 percent, illustrating the benefit of the SVE/Sparge system on overall site-wide contaminant reduction. VOC concentrations in monitoring wells MW-2, MW-3, MW-4, MW-6, MW-7, MW-15, MW-19 and RW-2 have increased since November 2010, but VOC concentrations in MW-9d, MW-14, MW-17, MW-21, RW-1, and RW-3 have generally decreased. In general, the extreme precipitation recorded for the Newport/Derby area in the spring and early summer of 2011 increased groundwater elevations above typical levels, possibly mobilizing a portion of gasoline contamination that, until this spring had remained in the vadose zone. Despite the increased groundwater elevations, which range from 0.34 to 1.90 feet above the November 2011 groundwater elevations, overall contaminant concentrations have decreased during this sampling event.

The Vermont Groundwater Enforcement Standards (VGESs) for one or more volatile petroleum compounds were exceeded in the groundwater samples collected from MW-2, MW-3, MW-4, MW-6, MW-7, MW-14, RW-2, and RW-3. The VGES for benzene was exceeded in the samples collected from MW-2, MW-3, MW-4, MW-6, MW-7, MW-14, RW-2 and RW-3 and the VGESs for toluene and ethylbenzene were exceeded in the MW-3, MW-7 and RW-3 samples. In addition, the VGESs for naphthalene, 1,3,5-trimethylbenzene, and 1,2,4-trimethylbenzene were exceeded in the samples collected from MW-2, MW-3 and MW-6 and the VGESs for 1,3,5-trimethylbenzene, and 1,2,4-trimethylbenzene were exceeded in the sample collected from RW-3. Low concentrations of several volatile petroleum compounds were detected in the samples collected from MW-15, MW-19 and RW-1; however, none of the corresponding VGESs were exceeded. No volatile petroleum compounds were detected in the MW-9d, MW-17 and MW-21 samples.

No volatile petroleum compounds were detected in the trip-blank sample, and the duplicate sample results (RW-2) were generally within 20 percent of the original sample results. Contaminant distribution, based on samples collected on 23 May 2011, is shown on **Figure 5** in Attachment A. The analytical results are summarized on **Table 2** in Attachment B, time series graphs showing contaminant concentrations versus

time are included in Attachment C and copies of the laboratory analytical reports are included as Attachment D.

Prior to sample collection, **R.E.A.** field personnel measured the water level/product level in each monitoring well and purged approximately three standing volumes of water from each monitoring well. All monitoring well samples were collected by pouring water from the bailer directly into 40-milliliter glass vials with Teflon-lined septum lids. Each sample vial was preserved with hydrochloric acid to reduce the pH to less than 2 standard units (su). Immediately after sample collection, field measurements were obtained for pH, specific conductivity, temperature, total dissolved solids (TDS), and oxygen reduction potential (ORP). A summary of the field measurement data is included on **Table 3**, in Attachment B.

On 23 May 2011, groundwater samples were collected from fourteen monitoring wells as requested by the VT DEC (MW-2, MW-3, MW-4, MW-6, MW-7, MW-9d, MW-14, MW-15, MW-17, MW-19, MW-21, RW-1, RW-2, and RW-3). Monitoring well MW-9s was dry and could not be sampled. Approximately 0.28 feet of free-phased product was detected in MW-22 during this sampling event, therefore this location was not sampled. All of the samples were analyzed for the possible presence of volatile petroleum compounds in accordance with U.S. EPA Methods 8021b. All samples were transported under chain-of-custody in ice-filled coolers to AMRO Environmental Laboratories in Merrimack, NH for analysis.

### SVE System Operation and Performance

Monitoring data suggest the SVE system is effectively removing contaminant mass at the Site. Since SVE installation and startup, the remediation system has helped reduce the overall size of the contaminant plume and has reduced contaminant migration from the source of the spill toward the northern side of the property. Since the initial system start-up on 10 November 2008, the SVE system coupled with the catalytic oxidizer has removed an estimated 8,591 pounds of gasoline which is equivalent to approximately 1,322 gallons, based on gasoline weighing 6.5 pounds per gallon assuming the specific gravity for gasoline ranges between 0.73 and 0.83 yielding an average of 0.78.<sup>1</sup>

Highlights of the system's performance throughout the period between 30 November 2010 and 23 May 2011 are provided below.

- Total estimated mass of gasoline removed (Nov. 08 – May 11) – 8,591 pounds;
- Total influent SVE vapor-phase gasoline concentrations (November 10 – May 11) – 21 to 249 ppmv;
- Total SVE air flow rate (November 10-May 11) – 125 CFM (cubic feet per minute);
- PID readings at FALCO®100 effluent (November 10- May 11) – 0.0 ppmv.
- Catalytic oxidizer vapor-phase destruction efficiency (November 10-May 11) – 100.0 percent.

The SVE system has been continuously operated during this reporting period with a few exceptions due to power outages.

During routine O&M monitoring, total volatile organic compounds are measured using a portable photo-ionization detector (PID). Readings are collected from the main FALCO®100 influent port and the influent ports located at each vapor point leg (if they were not frozen). Effluent readings were collected directly from the exhaust valve on the FALCO®100 unit. The FALCO®100 temperatures T<sub>1</sub>, T<sub>2</sub>, and T<sub>3</sub> are recorded from the FALCO®100 control box display. All of this data is presented in **Table 4** and **Table 5**. Obtaining pressure, temperature and vapor concentration data during each site visit allows **R.E.A.** field personnel to properly adjust the system to achieve maximum efficiency for VOC removal in areas of the key contaminant plume. The vapor-phase removal efficiency of the Catalytic Oxidizer, FALCO®100 unit, used for vapor abatement, is documented on **Table 6**.

<sup>1</sup> MSDS Reported from Cornell University. (Taking the average specific gravity for gasoline 0.78 and multiplying by 8.34 lbs/gal water yields the conversion factor 6.5 lbs/gal for gasoline)

\*\*\*\*\*  
Please call me if you have any questions or concerns regarding the enclosed results or recommendations.

Sincerely,

*Ross Environmental Associates, Inc.*



Megan McConville  
Environmental Chemist



Robert J. Ross, CGWP, PG  
Principal Hydrogeologist

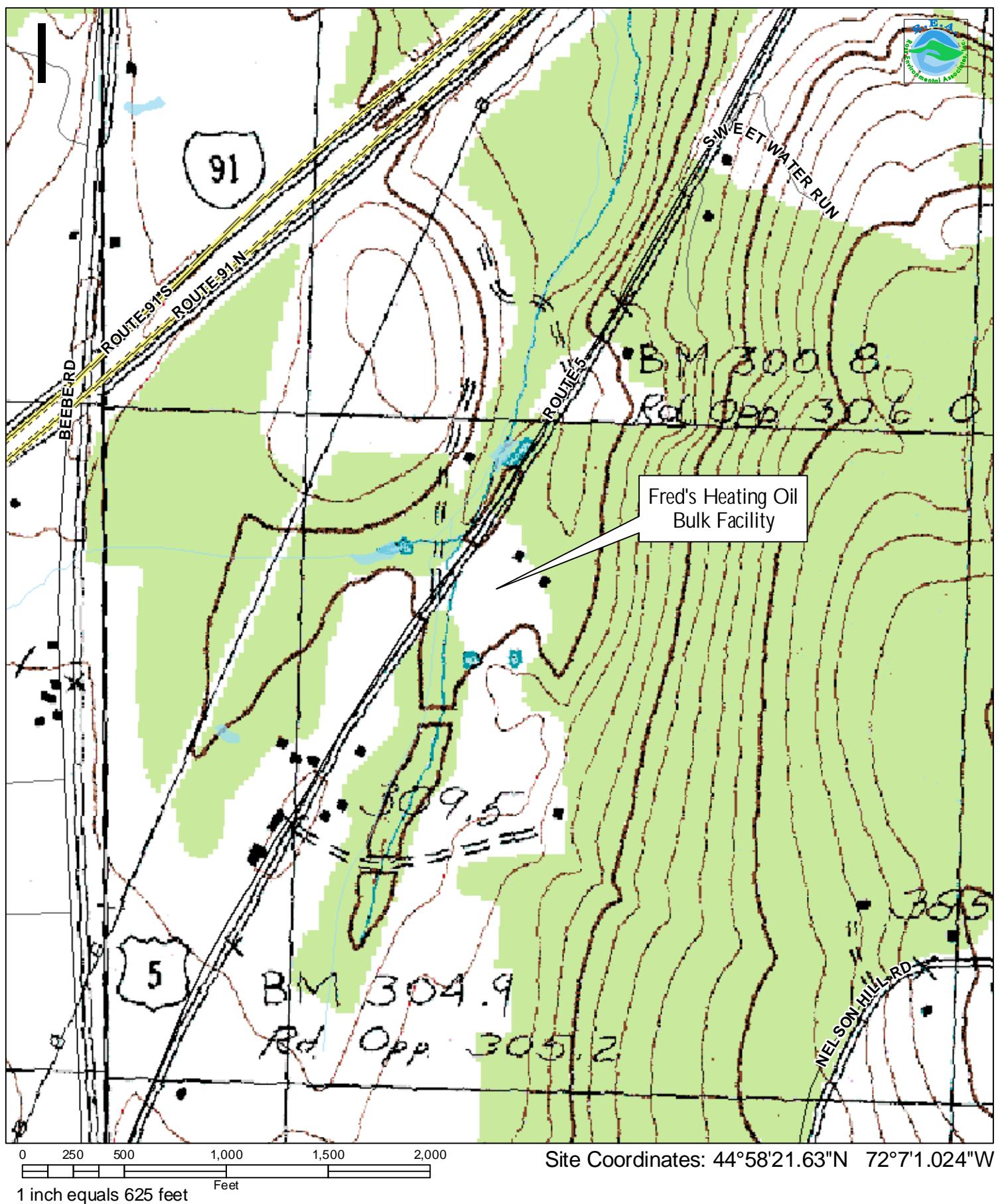
Attachments

cc.      Mr. Matt Moran - VT DEC  
          Ms. Maureen M. Howell, CCLA, Senior Claims Examiner - Environmental.

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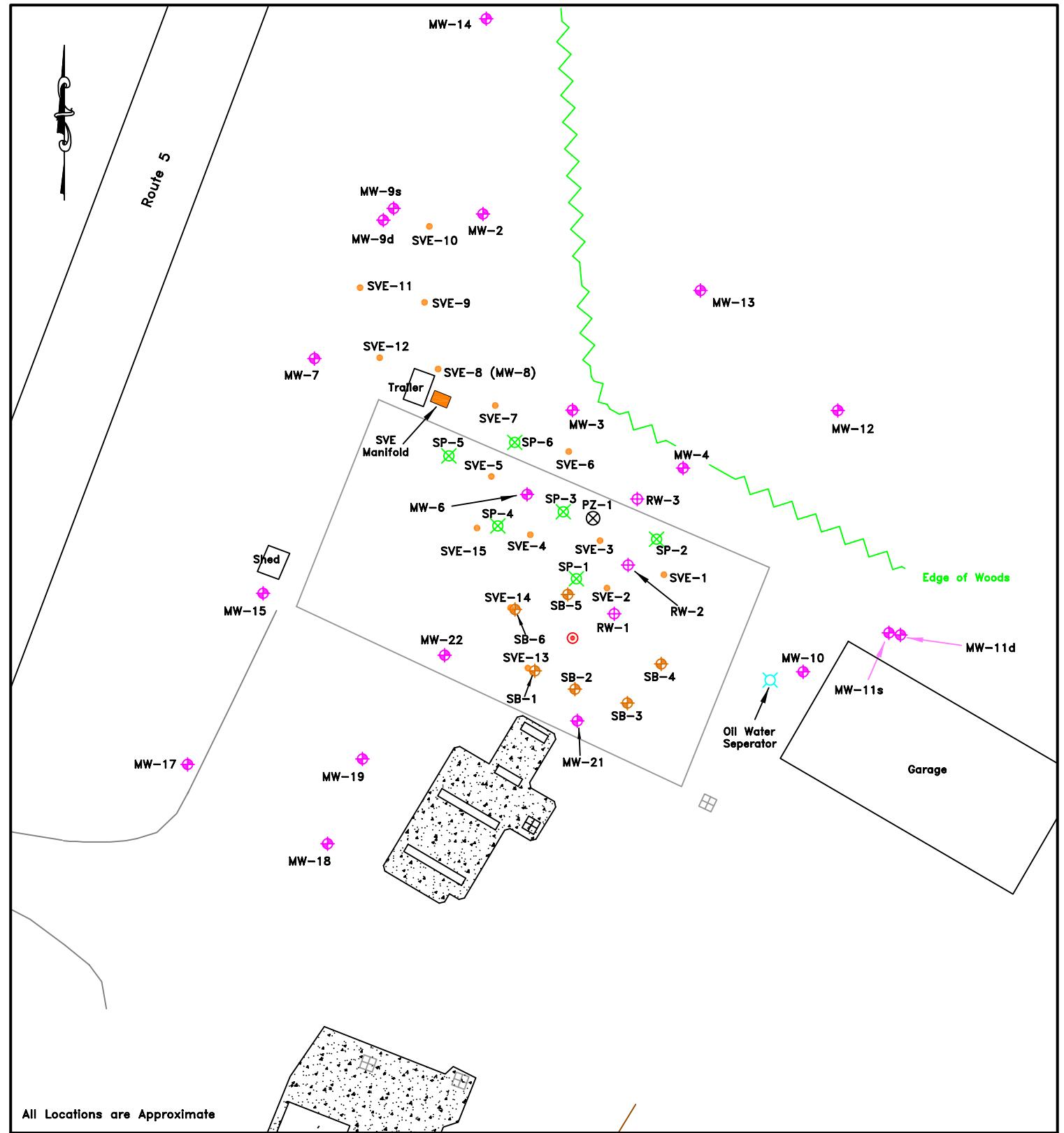




NAIP Aerial Photos, 2008

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Y:\Projects\GIS Maps\Derby\27013Fig2Ortho.mxd

Figure 2  
Fred's Plumbing and Heating Bulk Facility  
1683 VT Route 5 Derby, Vermont



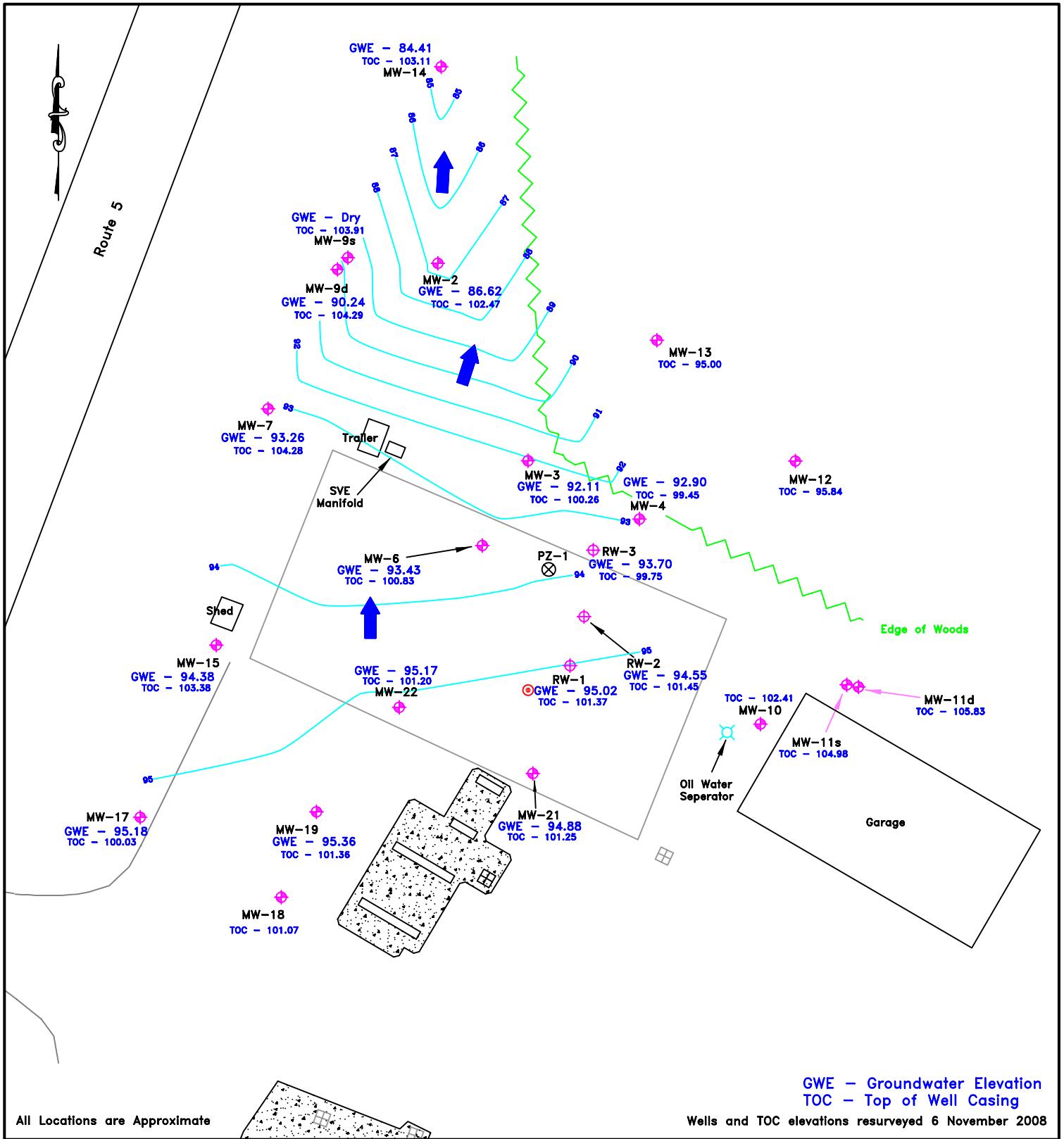
<b>Legend:</b>	Oil Water Separator	Ditch
Monitoring Well	Drainage Basin	SVE Point
Recovery Well	Edge of Woods	Sparge Point
Piezometer	Point of Release	Soil Boring

<b>Scale:</b>	1" = 50'	<b>Date:</b>	6 November 2008
<b>File Name:</b>	27-013_DerbyBulk +2010 data.dwg	<b>Drawn By:</b>	MM

**FIGURE 3.**  
**SITE PLAN**  
(with monitoring well locations)  
FPH Derby Bulk Facility - Derby, VT



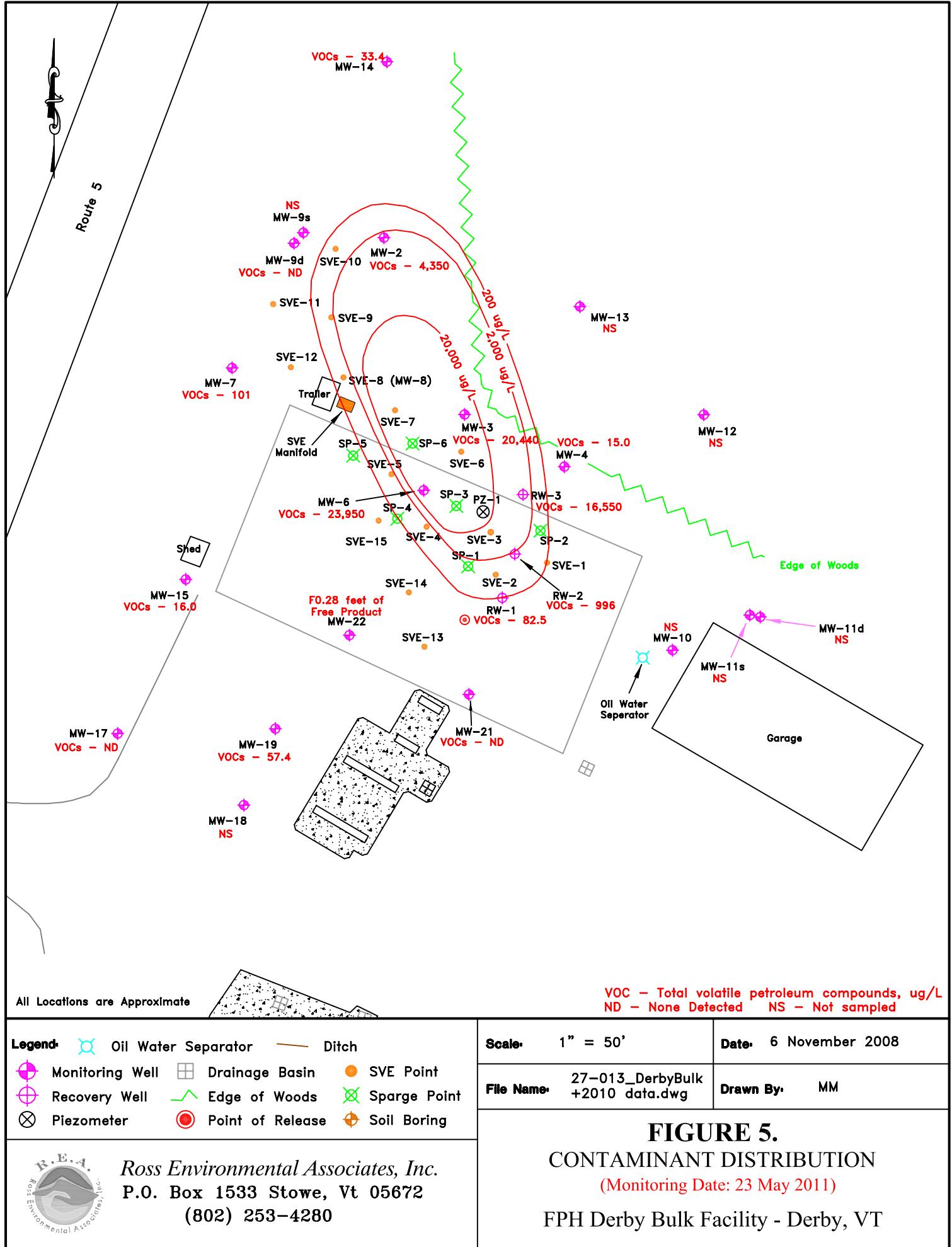
Ross Environmental Associates, Inc.  
P.O. Box 1533 Stowe, Vt 05672  
(802) 253-4280



<b>Legend:</b>	Oil Water Separator	Ditch
Monitoring Well	Drainage Basin	SVE Point
Recovery Well	Edge of Woods	Sparge Point
Piezometer	Point of Release	Soil Boring

R.E.A.  
Ross Environmental Associates, Inc.  
P.O. Box 1533 Stowe, Vt 05672  
(802) 253-4280

**FIGURE 4.**  
**GROUNDWATER CONTOUR MAP**  
(Monitoring Date: 23 May 2011)  
FPH Derby Bulk Facility - Derby, VT



A  
T  
T  
A  
C  
H  
M  
E  
N  
T

B

**TABLE 1**  
**GROUND WATER ELEVATION CALCULATIONS**

FPH Bulk Facility  
Derby, Vermont

Monitoring Date: 23 & 24 May 2011

Well I.D.	Top of Casing Elevation (ft)	Depth to Product (feet, TOC)	Depth to Water (feet, TOC)	Product Thickness (feet)	Corrected Depth to Water (feet)	Water Table Elevation (ft)
MW-2	102.47	---	15.85	---	---	86.62
MW-3	100.26	---	8.15	---	---	92.11
MW-4	99.45	---	6.55	---	---	92.90
MW-6	100.83	---	7.40	---	---	93.43
MW-7	104.28	---	11.02	---	---	93.26
MW-9d	104.29	---	14.05	---	---	90.24
MW-14	103.11	---	18.70	---	---	84.41
MW-15	103.38	---	9.00	---	---	94.38
MW-17	100.03	---	4.85	---	---	95.18
MW-19	101.36	---	6.00	---	---	95.36
MW-21	101.25	---	6.37	---	---	94.88
MW-22	101.20	5.95	6.23	<b>0.28</b>	6.03	95.17
RW-1	101.37	---	6.35	---	---	95.02
RW-2	101.45	---	6.90	---	---	94.55
RW-3	99.75	---	6.05	---	---	93.70

Notes: All values reported in feet relative to arbitrary site datum of 100.00 feet which was re-surveyed on 6 November 2008 & again surveyed on 21 July 2010.

**TABLE 2**  
**SUMMARY OF ANALYTICAL RESULTS**

FPH Derby Bulk Facility  
Derby, Vermont

Monitoring Date: 23 & 24 May 2011

Well ID	MtBE	Benzene	Toluene	ethylbenzene	Total Xylenes	1,3,5-TMB	1,2,4-TMB	naphthalene	Total VOCs
<b>MW-2</b>	ND<10	900	380	500	1,510	180	730	150	4,350
<b>MW-3</b>	ND<100	1,200	9,800	1,200	6,400	310	1,200	330	20,440
<b>MW-4</b>	ND<1.0	15	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<2.0	15.0
<b>MW-6</b>	ND<100	750	13,000	1,500	7,300	240	900	260	23,950
<b>MW-7</b>	ND<1.0	35	3.2	9.9	19.2	4.1	25.0	4.2	101
<b>MW-9(d)</b>	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<2.0	ND
<b>MW-14</b>	2.4	31	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<2.0	33.4
<b>MW-15</b>	ND<1.0	ND<1.0	ND<1.0	2.6	5.9	1.2	6.3	ND<2.0	16.0
<b>MW-17</b>	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<2.0	ND
<b>MW-19</b>	ND<1.0	ND<1.0	ND<1.0	2.7	3.5	7.2	44.0	ND<2.0	57.4
<b>MW-21</b>	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<2.0	ND
<b>RW-1</b>	ND<1.0	ND<1.0	2.5	7.4	53	7.4	8.9	3.3	82.5
<b>RW-2</b>	ND<1.0	74	200	47	600	19	43	13.0	996
<b>RW-3</b>	ND<100	200	6,800	970	8,000	120	460	ND<200	16,550
<b>VGES</b>	40	5.0	1,000	700	10,000	350 (combined)	20	---	---
<b>QA/QC samples</b>									
<b>RW-2</b>	ND<1.0	74	200	47	600	19	43	13	996
<b>Duplicate (RW-2)</b>	ND<1.0	72	210	40	530	18	35	ND<20	905
<b>% Difference</b>	---	2.7	5.0	14.9	11.7	5.3	18.6	---	9.1
<b>Trip blank</b>	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND

Notes:

Water results reported as micrograms per liter (ug/L), unless reported otherwise.

ND: Not detected at indicated detection limit. TPH: Total Petroleum Hydrocarbons NS: Not Sampled.

VGES = Vermont Groundwater Enforcement Standards. Shaded values exceed corresponding VGES.

**TABLE 3**  
**FIELD MEASUREMENT DATA**

FPH Derby Bulk Facility  
Derby, Vermont

Monitoring Date: 23 & 24 May 2011

Well ID	pH (su)	Temperature (°C)	Specific conductivity (µS/cm)	ORP (mV)	TDS (ppm)	Comments
MW-2	6.95	10.4	416	24	207	Petroleum odor noted
MW-3	6.76	9.9	510	-28	256	Petroleum odor noted
MW-4	6.60	11.1	515	195	256	
MW-6	7.23	13.3	368	-92	183	Road box damaged, petroleum odor noted
MW-7	6.89	11.3	530	4	266	
MW-9S				Dry - Unable to Sample		
MW-9D	7.02	10.9	418	77	209	
MW-14	6.78	10.5	417	57	208	
MW-15	7.08	11.9	607	-26	303	
MW-17	7.02	13.4	464	40	232	Iron coloring during purge
MW-19	7.00	13.1	779	95	388	
MW-21	7.11	12.3	519	45	260	
MW-22	6.86	13.3	542	-80	267	Approx. 0.28' of FP, strong odor & heavy sheen
RW-1	7.20	12.3	571	255	285	
RW-2	7.07	12.4	978	120	487	Iron coloring during purge
RW-3	6.94	10.9	479	135	239	

Notes: pH reported in standard units (s.u.).

Temperature reported in degrees celcius (°C)

Specific conductivity reported in microsiemens per centimeter (µS/cm) or millisiemens per centimeter (mS/cm).

Oxidation-reduction potential (ORP) reported in millivolts (mV).

Total dissolved solids (TDS) reported in parts per million (ppm) or parts per (ppt) thousand.

**TABLE 4**  
**OPERATION AND MAINTENANCE LOG**  
FPH Bulk Facility  
Derby, Vermont  
7 April 2010 - 24 May 2011

Date	Purpose of Visit	Site Activities	System Status
April 7, 2010	O&M and Quarterly Sampling	Routine System check by MM. System appears to be running well, though a new relay for the 3 HP blower will need to be purchased and reinstalled by a certified electrician. Air compressor system is not currently running.	Running
May 28, 2010	O and M	Routine System check by MM. System off on low alarm. Electrician will need to be on-site during start up to measure amperage and flow as starter continues to trip causing the system to go off on alarm.	Not Running
June 2, 2010	O and M	Routine System check by JG. System off on arrival. Troubleshooting system while on-site. Discovered a spiders nest inside the pressure switch which is likely affecting the system performance. A new pressure switch will need to be ordered. Also contacted FALCO regarding proper cleaning of the flame arrestor.	Not Running
June 8, 2010	O and M	Routine System check by JG. JG installed the new pressure switch, cleaned out the flame arrestor. Following these two modifications system startup was drastically improved, though system continues to be tripped periodically, though with some set-point modifications JG was able to keep the system running.	Not Running
June 9, 2010	O and M	Routine System check by MM. System running on arrival. Opened and closed individual lines in an attempt to optimize system performance and increase temperature set points. During modifications, the system would occasionally trip. The system was re-started and was running upon MM's departure.	Running
June 14, 2010	O and M	Further troubleshooting by JG. Heater Relay is potentially bad	Not Running
June 15, 2010	O and M	Further troubleshooting by JG. Spoke with representative from Falmouth products. Determined that the heater output on the T1 controller was bad. With Falmouth's assistance the T1 and T2 controllers were re-programmed to assume the other controllers job. The 3 HP blower may be too large for the configuration. System running on departure.	Not Running on Arrival

**TABLE 4**  
**OPERATION AND MAINTENANCE LOG**

FPH Bulk Facility  
Derby, Vermont  
7 April 2010 - 24 May 2011

Date	Purpose of Visit	Site Activities	System Status
June 18, 2010	O and M	Routine System check by GL. System not running. Again an electrician may need to be on-site during start up to measure amperage and flow during start up.	Not Running
June 30, 2010	O and M	Routine System check by MM & GL. System not running. System tripped.	Not Running
July 13, 2010	Driling	Started drilling for the Sparge points, MM.	Not Running
July 19, 2010	Driling	Drilling sparge points, MM.	Not Running
July 20, 2010	Driling	Drilling sparge points, MM.	Not Running
July 21, 2010	Driling	Completed drilling sparge points, MM.	Not Running
July 28, 2010	O and M	JG rebuilt compressor, MM Started Falco	Running
July 29, 2010	Sparge Trenching	JG & MM trenched and ran airlines for sparging system	Tripped/restarted
August 6, 2010	O and M	System not running - off on low alarm	Not Running
August 19, 2010	O and M	System not running - off on low alarm	Not Running
September 1, 2010	O and M	Routine system check by MM	Running
September 16, 2010	O and M	Panel wiring upgrade by J&S Electric - increased electrical feed wire to the 3 hp blower motor from 14 gauge to 10 gauge - recommended by Maple Leaf Environmental (MLE, Matt, 9/9/2010). MLE also recommended increasing the overload setting for the Rotron blower to 22 amps.	Running
September 29, 2010	O and M	System Start-up after system wiring was found to be bad/replaced. Started sparge system	Running
September 30, 2010	O and M	Routine system check by JG, Intorduced sparge wells by opening 1,3,4,5,6 to 50%.	Running
October 5, 2010	O and M	Routine system check by JG, Opened sparge points 1,3,4,5,6 to 100%. New wiring amperage was checked = 16.9 amps.	Running
October 6, 2010	O and M	Routine system check by JG	Running
October 22, 2010	O and M	Routine system check by JG	Running

**TABLE 4**  
**OPERATION AND MAINTENANCE LOG**  
FPH Bulk Facility  
Derby, Vermont  
7 April 2010 - 24 May 2011

Date	Purpose of Visit	Site Activities	System Status
October 28, 2010	O and M	Routine system check by JG	Running
November 4, 2010	O and M	Routine system check by JG	Running
November 30, 2010	O&M and Quarterly Sampling	Routine quarterly sampling by MM and JG	Running
December 23, 2010	O and M	Routine system check by JG	Running
May 16, 2011	O and M	Routine system check by JW	Running
May 23, 2011	O and M	Routine system check by JW	Running
May 24, 2011	O&M and Quarterly Sampling	Routine quarterly sampling by JW	Running

**TABLE 5**  
**SVE SYSTEM PRODUCT RECOVERY**  
**Catalytic Oxidizer**

FPH Bulk Facility  
Derby, Vermont

Date	Influent (ppmv)	Influent (mg/m3)	T1 (Celsius)	T2 (Celsius)	Flow Rate (cfm)	lbs/hr	lbs/day	gal/day	Operational Time between Monitoring Events (hours)	Recovered Gasoline (lbs)	Cumulative Recovery (lbs)	Cumulative Recovery (Gal)
11/10/08 12:00 AM	0.00	0.00	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/11/08 12:00 AM	0.00	0.00	360	570	55	0.00	0.00	0.00	24.00	0.00	0.00	0.00
11/12/08 12:00 AM	202	892.27	329	417	55	0.18	4.41	0.65	24.00	4.41	4.41	0.68
11/13/08 12:00 AM	202	892.27	332	430	55	0.18	4.41	0.65	24.00	4.41	8.82	1.36
11/14/08 4:30 PM	202	892.27	330	434	55	0.18	4.41	0.65	40.50	7.44	16.27	2.50
11/18/08 3:00 PM	406	1,793.37	331	412	55	0.37	8.87	1.30	94.50	34.91	51.17	7.87
11/25/08 1:00 PM	295	1,303.07	330	600	55	0.27	6.44	0.95	166.00	44.55	95.73	14.73
12/4/08 11:30 AM	426	1,881.72	331	447	55	0.39	9.30	1.37	214.50	83.14	178.87	27.52
12/18/08 4:40 PM	412	1,819.88	334	501	55	0.37	9.00	1.32	341.17	127.89	306.75	47.19
1/6/09 3:30 PM	370	1,634.36	330	507	55	0.34	8.08	1.19	454.83	153.12	459.87	70.75
1/30/09 12:00 AM	529	2,336.69	337	513	55	0.48	11.55	1.70	560.50	269.77	729.64	112.25
2/11/09 3:00 PM	824	3,639.75	346	523	55	0.75	17.99	2.65	303.00	227.16	956.80	147.20
2/24/09 1:30 PM	549	2,425.03	336	512	55	0.50	11.99	1.76	310.50	155.10	1,111.90	171.06
3/24/09 3:30 PM	544	2,402.94	330	485	55	0.49	11.88	1.75	674.00	333.60	1,445.50	222.38
4/8/09 3:35 PM	465	2,053.99	330	392	55	0.42	10.15	1.49	360.08	152.34	1,597.84	245.82
4/30/09 2:30 PM	140	618.40	329	401	55	0.13	3.06	0.45	526.92	67.12	1,664.96	256.15
5/13/09 2:00 PM	517	2,283.68	353	502	55	0.47	11.29	1.66	311.50	146.53	1,811.48	278.69
5/28/09 12:00 PM	420	1,855.21	329	431	55	0.38	9.17	1.35	358.00	136.80	1,948.29	299.74
6/11/09 2:30 PM	399	1,762.45	330	419	55	0.36	8.71	1.28	338.50	122.88	2,071.17	318.64
6/25/09 12:00 PM	415	1,833.13	331	409	55	0.38	9.06	1.33	333.50	125.92	2,197.09	338.01
7/16/09 1:15 PM	217	958.53	331	384	55	0.20	4.74	0.70	505.25	99.75	2,296.85	353.36
7/31/09 9:40 AM	215	949.69	336	453	55	0.20	4.69	0.69	356.42	69.72	2,366.57	364.09
8/19/09 2:00 PM	301	1,329.57	330	432	125	0.62	14.94	2.20	460.33	286.52	2,653.09	408.17
9/9/09 2:45 PM	263	1,161.72	331	462	125	0.54	13.05	1.92	504.75	274.50	2,927.59	450.40
9/30/09 12:30 PM	363	1,603.44	330	439	125	0.75	18.01	2.65	501.75	376.62	3,304.21	508.34
10/6/09 5:45 PM	228	1,007.12	329	396	125	0.47	11.32	1.66	149.25	70.37	3,374.58	519.17
10/29/09 5:45 PM	192	848.10	330	413	125	0.40	9.53	1.40	552.00	219.16	3,593.73	552.88
11/17/09 1:30 PM	449	1,983.31	337	467	125	0.93	22.28	3.28	451.75	419.43	4,013.16	617.41
12/3/09 2:30 PM	173	764.17	327	384	125	0.36	8.59	1.26	385.00	137.73	4,150.89	638.60
12/15/09 2:30 PM	62	273.87	301	318	125	0.13	3.08	0.45	288.00	36.92	4,187.81	644.28
1/14/10 2:00 PM	116	512.39	330	352	125	0.24	5.76	0.85	719.50	172.58	4,360.39	670.83
2/23/10 12:00 PM	224	989.45			125	0.46	11.12	1.63	958.00	443.74	4,804.13	739.10
3/4/10 2:15 PM	193	852.52	331	361	125	0.40	9.58	1.41	218.25	87.10	4,891.23	752.50
3/16/10 3:05 PM	127	560.98	322	362	125	0.26	6.30	0.93	288.83	75.85	4,967.08	764.17
4/7/10 11:30 AM	51	223.51	330	347	125	0.10	2.51	0.37	524.42	54.87	5,021.95	772.61
6/9/10 10:30 AM	133	587.48	299	336	125	0.28	6.60	0.97	1,511.00	415.56	5,437.51	836.54
9/28/10 10:00 AM	196	865.77	374	584	125	0.41	9.73	1.43	2,663.50	1,079.50	6,517.01	1,002.62

**TABLE 5**  
**SVE SYSTEM PRODUCT RECOVERY**  
**Catalytic Oxidizer**

FPH Bulk Facility  
Derby, Vermont

Date	Influent (ppmv)	Influent (mg/m3)	T1 (Celsius)	T2 (Celsius)	Flow Rate (cfm)	lbs/hr	lbs/day	gal/day	Operational Time between Monitoring Events (hours)	Recovered Gasoline (lbs)	Cumulative Recovery (lbs)	Cumulative Recovery (Gal)
9/30/10 10:00 AM	320	1,413.50	330	460	125	0.66	15.88	2.34	48.00	31.76	6,548.77	1,007.50
10/5/10 10:00 AM	290	1,280.98	331	432	125	0.60	14.39	2.12	120.00	71.96	6,620.73	1,018.57
10/6/10 10:00 AM	340	1,501.84	330	415	125	0.70	16.87	2.48	24.00	16.87	6,633.19	1,020.49
10/22/10 10:00 AM	585	2,584.05	330	408	125	1.21	29.03	4.27	384.00	464.51	7,093.29	1,091.28
10/28/10 10:00 AM	248	1,095.46	330	408	125	0.51	12.31	1.81	144.00	73.85	7,159.70	1,101.49
11/4/10 10:00 AM	198	874.60	331	385	125	0.41	9.83	1.45	168.00	68.78	7,244.75	1,114.58
11/30/10 12:00 AM	200	883.44	331	364	125	0.41	9.93	1.46	614.00	253.93	7,498.67	1,153.64
12/23/10 12:00 AM	195	861.35	330	368	125	0.40	9.68	1.42	552.00	222.58	7,721.25	1,187.89
1/7/11 12:00 AM	227	1,002.70	330	340	125	0.47	11.27	1.66	360.00	168.98	7,885.82	1,213.20
1/27/11 12:00 AM	155	684.66	330	386	125	0.32	7.69	1.13	480.00	153.85	8,039.67	1,236.87
1/31/11 12:00 AM	196	865.77	330	386	125	0.41	9.73	1.43	96.00	38.91	8,074.17	1,242.18
2/7/11 12:00 AM	249	1,099.88	330	399	125	0.51	12.36	1.82	168.00	86.50	8,153.23	1,254.34
3/2/11 12:00 AM	155	684.66	330	386	125	0.32	7.69	1.13	552.00	176.92	8,295.24	1,276.19
3/17/11 12:00 AM	155	684.66	330	386	125	0.32	7.69	1.13	360.00	115.38	8,366.07	1,287.09
4/8/11 12:00 AM	78	344.54	330	348	125	0.16	3.87	0.57	528.00	85.16	8,368.09	1,287.40
4/14/11 12:00 AM	21	92.76	330	346	125	0.04	1.04	0.15	144.00	6.25	8,536.95	1,313.38
5/16/11 8:00 AM	27	121.03	329	346	125	0.06	1.36	0.20	776.00	43.97	8,580.91	1,320.14
5/23/11 10:40 AM	29	126.77	330	346	125	0.06	1.42	0.21	170.67	10.13	8,591.04	1,321.70

Notes:

- values in red were not recorded in the field and are therefore assumed to be equivalent to the previous PID value (220.00 ppmv)
- converting between lbs of gasoline and gallons of gasoline is based on the ration: 6.5 pounds of gasoline = 1 gallon of gasoline this conversion uses 0.78 as the aerage specific gravity of gasoline (From the MSDS Reported by Cornell University)
- ppmv = parts per million per volume cfm = cubic feet per minute
- 3 horsepower blower installed 8/13/09, increasing flow rate from 55 to 125 CFM. All readings were altered to reflect the higher flow rate.

**TABLE 6**  
**VAPOR-PHASE VOC DESTRUCTION EFFICIENCY**  
**Catalytic Oxidizer**

FPH Bulk Facility  
 Derby, Vermont

Date	Catox Influent VOC Concentrations (ppmv)	Catox Effluent VOC Concentrations (ppmv)	Destruction Efficiency (%)
12/4/08 11:30 AM	426	3.1	99.3
12/18/08 4:40 PM	412	2.6	99.4
1/6/09 3:30 PM	370	3.6	99.0
1/30/09 4:00 PM	529	6.5	98.8
2/11/09 3:00 PM	824	5.0	99.4
2/24/09 1:30 PM	549	5.6	99.0
3/24/09 3:30 PM	544	3.0	99.4
4/8/09 3:35 PM	465	0.0	100
4/30/09 2:30 PM	140	0.7	100
5/13/09 2:00 PM	517	0.0	100
5/28/09 12:00 PM	420	19.4	95.4
6/11/09 2:30 PM	399	1.8	99.5
6/25/09 12:00 PM	415	0.0	100
7/16/09 1:15 PM	217	1.4	99
7/31/09 2:00 PM	215	0.7	100
8/19/09 2:00 PM	301	0.4	100
9/9/09 2:45 PM	263	11.4	95.7
9/30/09 12:30 PM	363	9.8	97.3
10/6/09 5:45 PM	228	9.8	95.7
10/29/09 2:30 PM	192	3.1	98.4
11/17/09 1:30 PM	449	1.6	99.6
12/3/09 2:30 PM	110	7.8	92.9
12/15/09 2:30 PM	62	2.7	95.6
1/14/10 2:00 PM	116	1.4	98.8
2/23/10 12:00 PM	224	124.0	44.6
3/4/10 2:15 PM	193	5.3	97.3
3/16/10 3:05 PM	127	4.6	96.4
4/7/10 11:30 AM	51	0.0	100
6/9/10 10:30 AM	133	0.0	100
9/28/10 10:00 AM	196	0.0	100

**TABLE 6**  
**VAPOR-PHASE VOC DESTRUCTION EFFICIENCY**  
**Catalytic Oxidizer**

FPH Bulk Facility  
 Derby, Vermont

Date	Catox Influent VOC Concentrations (ppmv)	Catox Effluent VOC Concentrations (ppmv)	Destruction Efficiency (%)
9/30/10 10:00 AM	320	0.0	100
10/5/10 10:00 AM	290	0.0	100
10/6/10 10:00 AM	340	0.0	100
10/22/10 10:00 AM	585	0.0	100
10/28/10 10:00 AM	248	0.0	100
11/4/10 10:00 AM	198	0.0	100
11/30/10 12:00 AM	200	0.0	100
12/23/10 12:00 AM	195	0.0	100
5/16/11 8:00 AM	27.4	0.0	100
5/23/11 10:00 AM	28.7	0.0	100
Average Dec '08 - May '11 =			<b>97.5</b>

Notes:

ppmv = parts per million volume

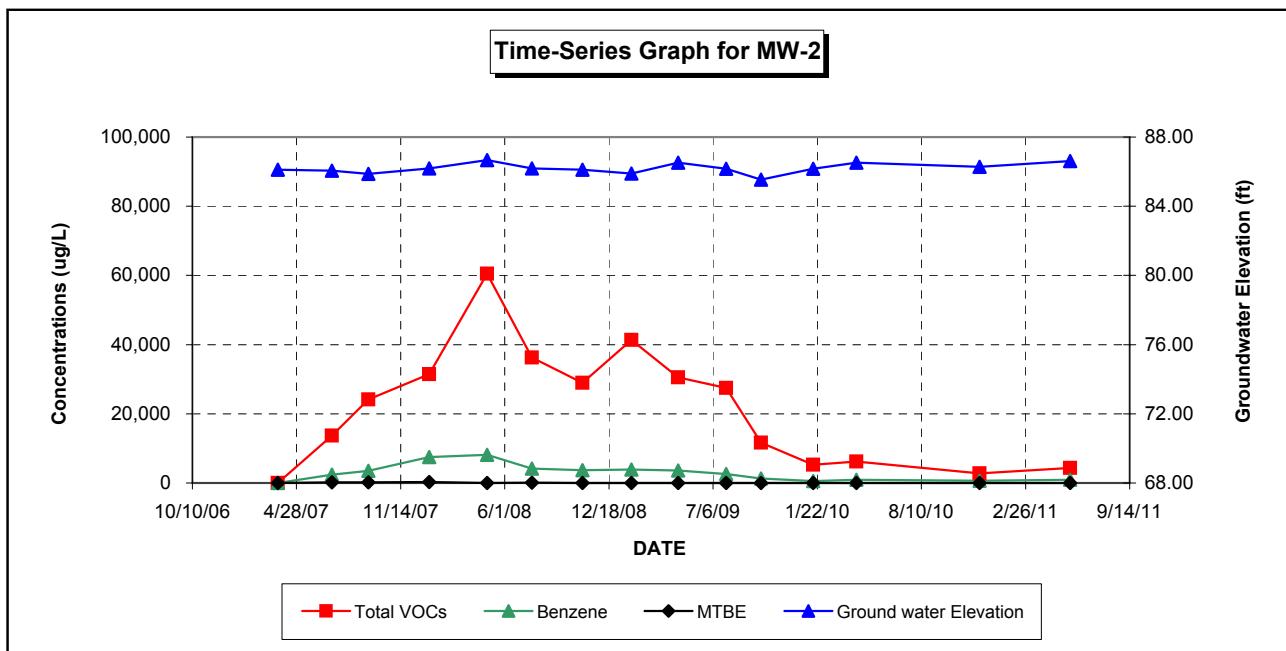
VOC = Volatile Organic Compound

Catox influent and effluent VOC concentrations measured with a Photoionization Detector, calibrated to a benzene reference.

on 2/10/2010 the FALCO system was temporarily replaced by two GAC drums while system was repaired

on 3/4/2010 the FALCO system was brought back online

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### Summary of Ground Water Analytical Results for MW-2

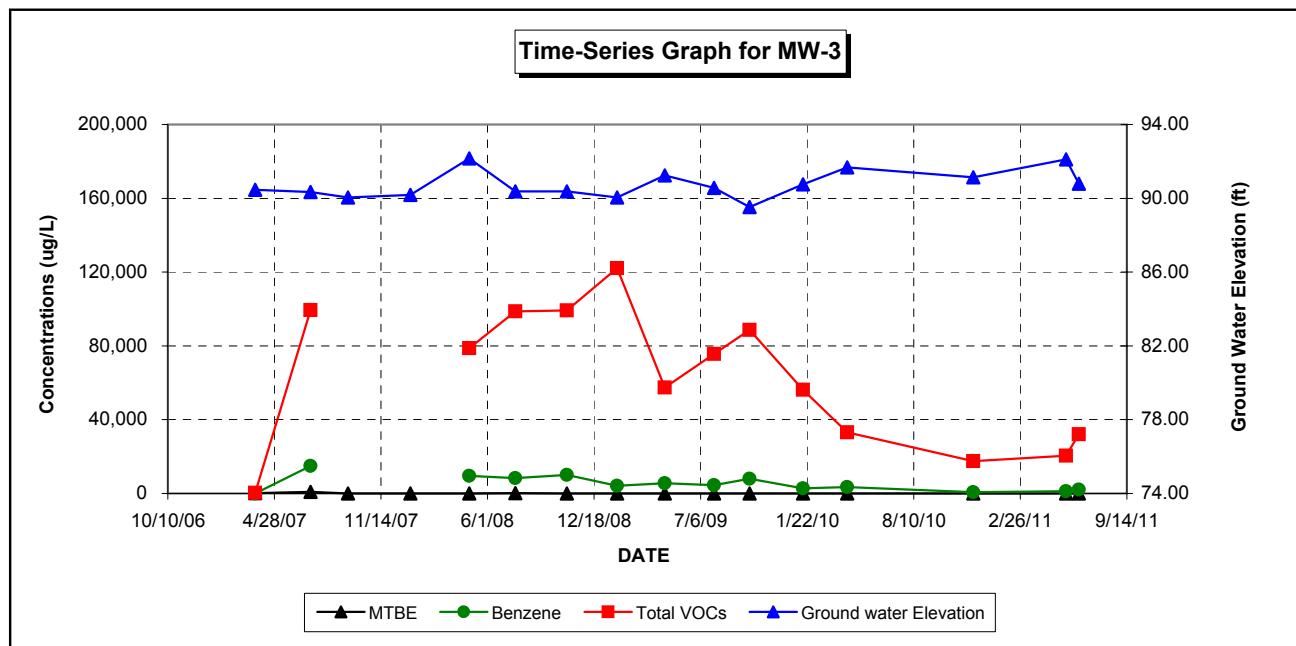
FPH Derby Bulk Facility  
Derby, Vermont

Date	MTBE	Benzene	ethyl benzene	naphthalene	Toluene	1,3,5-TMB	1,2,4-TMB	Total xylenes	Total VOCs	Ground water Elevation
3/23/2007	6.2	ND<1.0	ND<2.0	ND<5.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	22.5	86.12
7/5/2007	190	2,400	320	65	8,700	62	170	1,700	13,721	86.05
9/13/2007	190	3,500	1,000	180	15,000	110	560	3,500	24,185	85.87
1/8/2008	320	7,500	1,400	ND<500	17,000	ND<200	660	4,600	31,480	86.18
4/28/2008	ND<100	8,100	2,300	210	36,000	330	1,400	12,200	60,540	86.66
7/23/2008	120	4,200	2,300	320	20,000	390	1,400	7,500	36,230	86.19
10/28/2008	ND<100	3,700	2,100	460	15,000	350	1,400	5,900	28,910	86.12
1/30/2009	ND<100	3,900	2,300	290	24,000	360	1,500	9,000	41,350	85.90
4/30/2009	ND<100	3,600	2,200	330	13,000	380	1,400	9,600	30,510	86.52
7/31/2009	ND<100	2,600	2,100	340	11,000	420	1,500	9,500	27,460	86.17
10/6/2009	ND<100	1,300	1,700	300	1,500	400	1,300	5,190	11,690	85.54
1/14/2010	14.0	580	620	170	290	250	790	2,550	5,264	86.17
4/7/2010	16	890	1,000	180	260	260	980	2,610	6,196	86.52
11/30/2010	ND<10	630	380	99	180	140	420	932	2,781	86.28
5/23/2011	ND<10	900	500	150	380	180	730	1,510	4,350	86.62
<b>VGES</b>	<b>40</b>	<b>5.0</b>	<b>700</b>	<b>20</b>	<b>1,000</b>	<b>350 (combined)</b>	<b>10,000</b>	<b>---</b>	<b>---</b>	<b>---</b>

Notes: Results given in micrograms per liter ( $\mu\text{g/L}$ ), unless indicated otherwise.

ND- None detected at indicated detection limit. UIP: Unidentified Peaks.

VGES - Vermont Groundwater Enforcement Standards



### Summary of Ground Water Analytical Results for MW-3

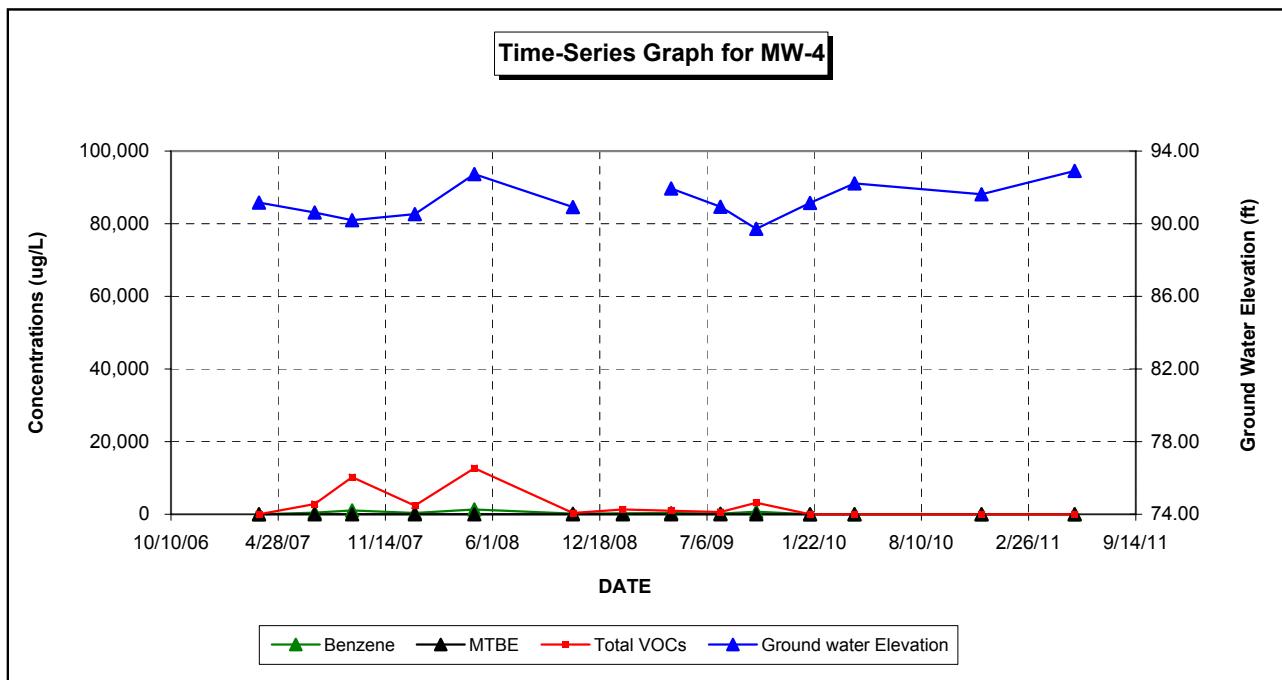
FPH Derby Bulk Facility  
Derby, Vermont

Date	MTBE	Benzene	ethyl benzene	naphtha lene	Toluene	1,3,5-TMB	1,2,4-TMB	Total xylenes	Total VOCs	Ground water Elevation
3/23/2007	230	72	3.3	ND<5.0	ND<2.0	ND<2.0	20.0	5.6	422.2	90.46
7/5/2007	910	15,000	3,000	420	61,000	380	1,500	15,200	99,350	90.34
9/13/2007	Approximately 0.22 Free-Phase Petroleum									90.04
1/8/2008	Approximately 0.11 Free-Phase Petroleum									90.18
4/28/2008	ND<100	9,500	2,800	360	49,000	460	1,900	14,800	78,820	92.16
7/23/2008	120	8,300	5,000	640	60,000	740	3,100	20,800	98,700	90.37
10/28/2008	ND<100	10,000	4,000	800	62,000	600	2,600	19,300	99,300	90.37
1/30/2009	ND<100	4,200	5,400	950	81,000	660	3,100	26,800	122,110	90.05
4/30/2009	ND<100	5,600	3,000	450	33,000	490	1,800	13,100	57,440	91.24
7/31/2009	ND<100	4,500	3,800	660	43,000	540	2,200	21,000	75,700	90.57
10/6/2009	ND<100	7,900	4,200	630	51,000	650	2,600	21,700	88,680	89.53
1/14/2010	ND<100	2,700	3,200	600	29,000	690	2,700	17,300	56,190	90.76
4/7/2010	ND<100	3,400	2,100	520	16,000	480	1,800	8,900	33,200	91.67
11/30/2010	ND<100	630	1,400	260	6,200	350	1,300	7,400	17,540	91.13
5/23/2011	ND<100	1,200	1,200	330	9,800	310	1,200	6,400	20,440	92.11
6/16/2011	ND<2.0	2,100	1,900	350	15,000	560	2,000	9,800	32,127	90.79
<b>VGES</b>	<b>40</b>	<b>5.0</b>	<b>700</b>	<b>20</b>	<b>1,000</b>	<b>350 (combined)</b>	<b>10,000</b>	<b>---</b>	<b>% reduction</b>	<b>73.69</b>

Notes: Results given in micrograms per liter ( $\mu\text{g}/\text{L}$ ), unless indicated otherwise.

ND- None detected at indicated detection limit. UIP: Unidentified Peaks.

VGES - Vermont Groundwater Enforcement Standards



### Summary of Ground Water Analytical Results for MW-4

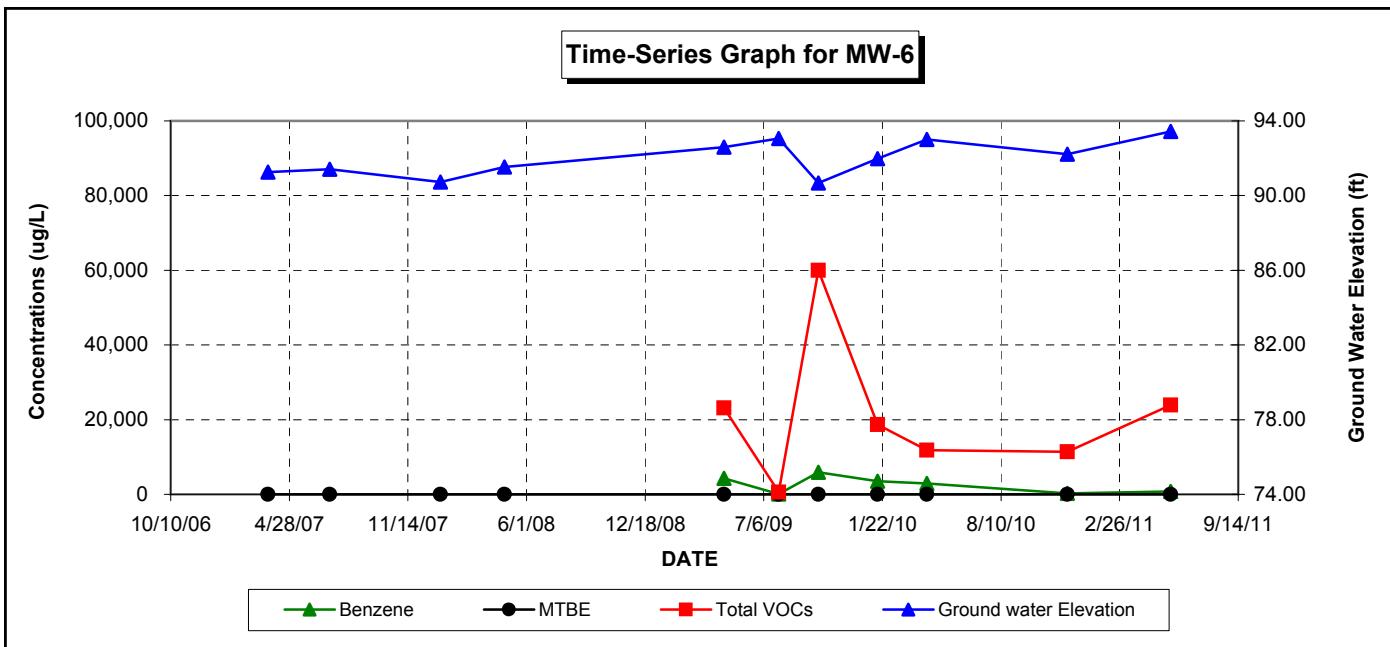
FPH Derby Bulk Facility  
Derby, Vermont

Date	MTBE	Benzene	ethyl benzene	naphthalene	Toluene	1,3,5-TMB	1,2,4-TMB	Total xylenes	Total VOCs	Ground water Elevation
3/23/2007	ND<2.0	ND<1.0	ND<2.0	ND<5.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	20.3	91.17
7/5/2007	16.0	440	120	7.0	1,700	8.5	41	420	2,788	90.61
9/13/2007	30.0	1,100	500	49	6,700	23	230	1,450	10,193	90.19
1/8/2008	ND<20	370	320	ND<50	1,200	30	130	340	2,419	90.53
4/28/2008	ND<20	1,300	1,700	87	ND<20	180	810	8,500	12,716	92.74
10/29/2008	ND<1.0	140	16	23	84	23	20	61	367	90.91
1/30/2009	15	290	350	46	250	19	110	214	1,294	
4/30/2009	ND<10	310	46	50	11	110	200	250	977	91.94
7/31/2009	6.0	170	170	28	40	4.9	47	147.3	613	90.94
10/6/2009	21	690	710	190	290	16	400	811	3,128	89.71
1/14/2010	ND<1.0	18	8.9	ND<1.0	ND<1.0	ND<1.0	2.6	2.1	31.6	91.15
4/7/2010	ND<1.0	2.6	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	2.6	92.22
11/30/2010	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	91.62
5/23/2011	ND<1.0	15.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	15.0	92.90
<b>VGES</b>	<b>40</b>	<b>5.0</b>	<b>700</b>	<b>20</b>	<b>1,000</b>	<b>350 (combined)</b>	<b>10,000</b>	<b>---</b>	<b>---</b>	<b>---</b>

Notes: Results given in micrograms per liter ( $\mu\text{g/L}$ ), unless indicated otherwise.

ND- None detected at indicated detection limit.

VGES - Vermont Groundwater Enforcement Standards



### Summary of Ground Water Analytical Results for MW-6

#### FPH Derby Bulk Facility Derby, Vermont

Date	MTBE	Benzene	Toluene	ethyl benzene	Total xylenes	1,3,5-TMB	1,2,4-TMB	naphthalene	Total VOCs	Ground water Elevation
3/23/2007	<b>0.83 Feet Free-Phase Petroleum</b>									91.26
7/5/2007	<b>1.6 Feet Free-Phase Petroleum</b>									91.41
1/8/2008	<b>1.58 Feet Free-Phase Petroleum</b>									90.73
4/25/2008	<b>0.65 Feet Free-Phase Petroleum</b>									91.53
4/30/2009	ND<100	<b>4,300</b>	<b>15,000</b>	<b>440</b>	<b>2,600</b>	<b>220</b>	<b>450</b>	<b>100</b>	<b>23,110</b>	<b>92.59</b>
7/31/2009	ND<10	<b>120</b>	<b>310</b>	ND<10	<b>96</b>	<b>56</b>	<b>23</b>	ND<10	<b>605</b>	<b>93.06</b>
10/6/2009	ND<100	<b>5,900</b>	<b>41,000</b>	<b>2,000</b>	<b>9,500</b>	<b>280</b>	<b>790</b>	<b>530</b>	<b>60,000</b>	<b>90.67</b>
1/14/2010	ND<100	<b>3,500</b>	<b>12,000</b>	<b>510</b>	<b>2,350</b>	<b>130</b>	<b>220</b>	ND<100	<b>18,710</b>	<b>91.98</b>
4/7/2010	ND<100	<b>2,900</b>	<b>6,500</b>	<b>370</b>	<b>1,660</b>	<b>120</b>	<b>260</b>	ND<100	<b>11,810</b>	<b>93.00</b>
11/30/2010	ND<20	<b>290</b>	<b>4,900</b>	<b>1,000</b>	<b>3,900</b>	<b>220</b>	<b>880</b>	<b>170</b>	<b>11,360</b>	<b>92.22</b>
5/23/2011	ND<100	<b>750</b>	<b>13,000</b>	<b>1,500</b>	<b>7,300</b>	<b>240</b>	<b>900</b>	<b>260</b>	<b>23,950</b>	<b>93.43</b>
<b>VGES</b>	<b>40</b>	<b>5.0</b>	<b>1,000</b>	<b>700</b>	<b>10,000</b>	<b>350 (combined)</b>	<b>20</b>	---	---	---

Notes: Results given in micrograms per liter (µg/L), unless indicated otherwise.

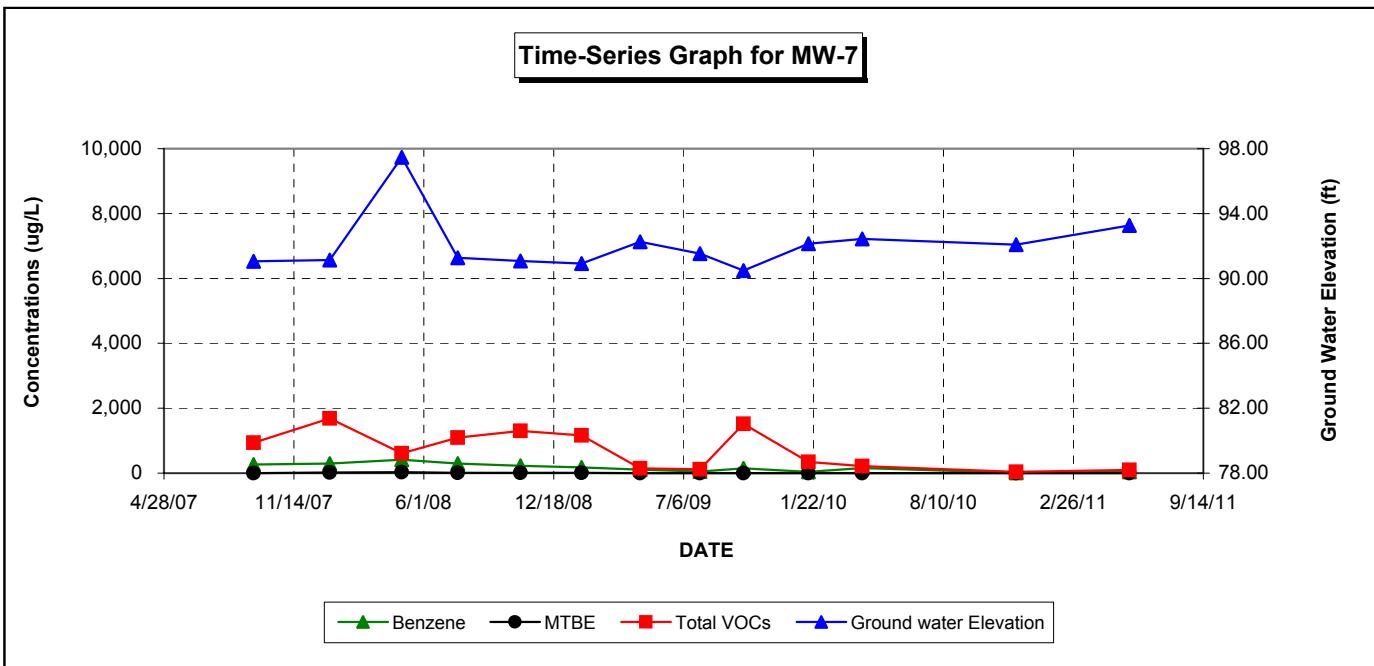
ND- None detected at indicated detection limit.

UIP: Unidentified Peaks.

VGES - Vermont Groundwater Enforcement Standards

TPH = Total Petroleum Hydrocarbons

1,4-dichlorobenzene was detected at a concentration of 3.3 ug/L during the 23 March 2007 Sampling Event.



### Summary of Ground Water Analytical Results for MW-7

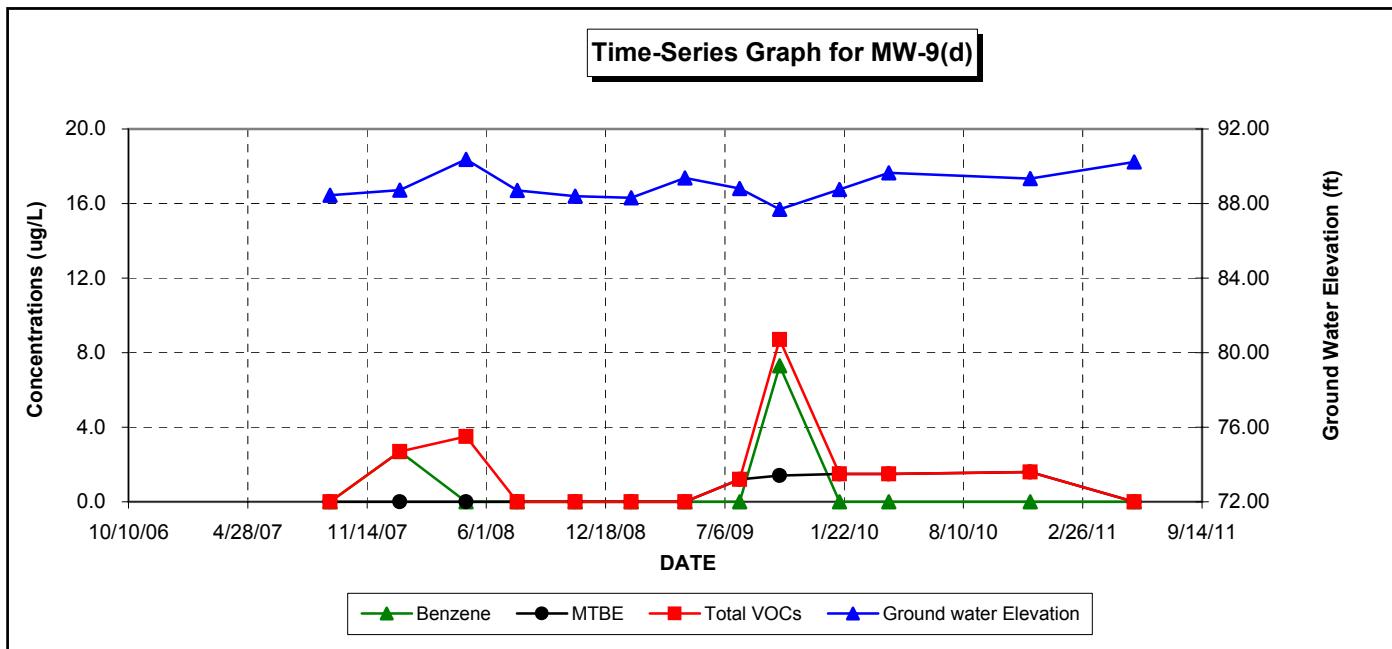
FPH Derby Bulk Facility  
Derby, Vermont

Date	MTBE	Benzene	ethyl benzene	naphthalene	Toluene	1,3,5-TMB	1,2,4-TMB	Total xylenes	Total VOCs	Ground water Elevation
9/13/2007	ND<20	270	ND<20	120	92.0	73	290	ND<20	939	91.05
1/8/2008	21.0	300	25.0	130	30.0	120	500	412.1	1,685	91.13
4/28/2008	28.0	410	11	16	79.0	ND<10	30	37	611	97.47
7/23/2008	10.0	300	24	82	190.0	55	220	210	1,091	91.27
10/28/2008	6.0	230	44	190	100	71	300	359	1,300	91.07
1/30/2009	5.1	180	66	150	52	61	270	384.1	1,168	90.92
4/30/2009	ND<1.0	110	2.7	ND<1.0	2.1	4.8	19	14.0	153	92.27
7/31/2009	ND<1.0	46	8.3	2.2	2.0	6.1	29	22.0	116	91.54
10/6/2009	ND<1.0	150	140	180	49.0	160	380	459	1,518	90.49
1/14/2010	ND<1.0	43	23	27	6.0	23	110	110	342	92.14
4/7/2010	ND<1.0	160	13	2.7	9.3	2.8	9.5	21	218	92.43
11/30/2010	ND<1.0	10	1.7	2.9	ND<1.0	2.5	12.0	10	39.1	92.08
5/23/2011	ND<1.0	35	9.9	4.2	3.2	4.1	25.0	19.2	101	93.26
<b>VGES</b>	<b>40</b>	<b>5.0</b>	<b>700</b>	<b>20</b>	<b>1,000</b>	<b>350 (combined)</b>	<b>10,000</b>	<b>---</b>	<b>---</b>	<b>---</b>

Notes: Results given in micrograms per liter ( $\mu\text{g/L}$ ), unless indicated otherwise.

ND- None detected at indicated detection limit.

VGES - Vermont Groundwater Enforcement Standards



### Summary of Ground Water Analytical Results for MW-9(d)

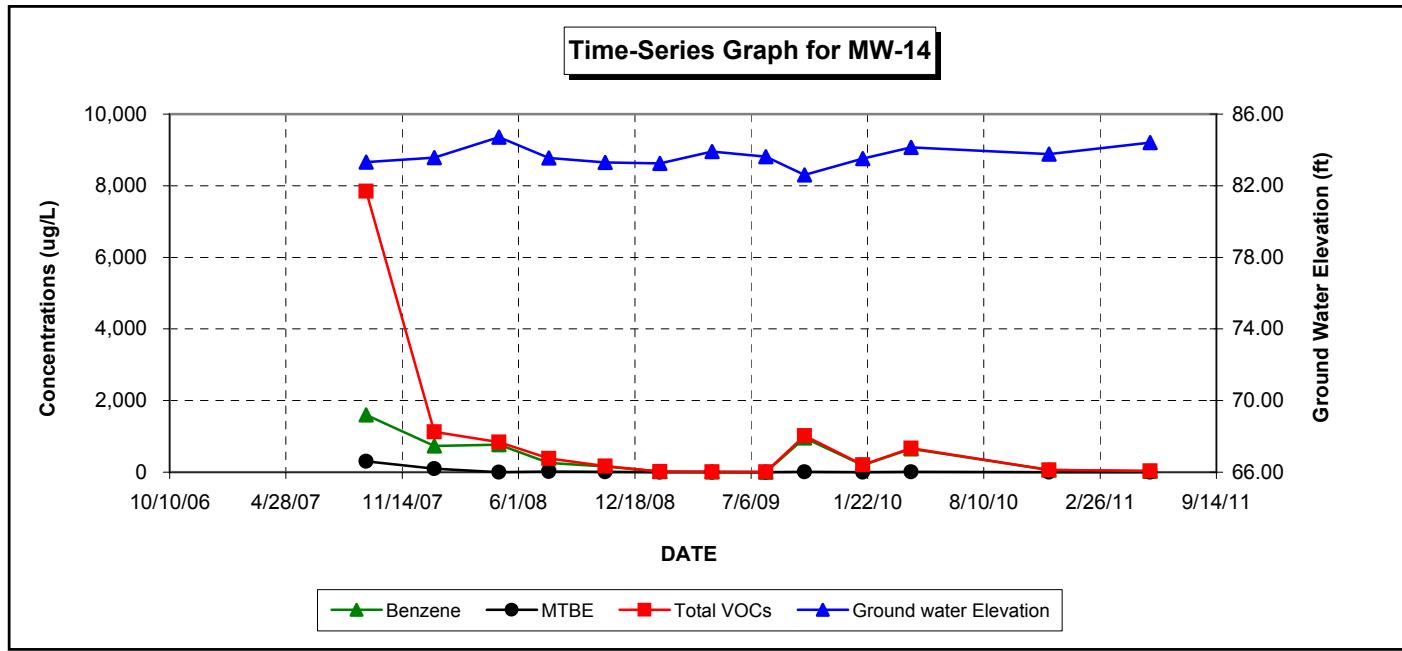
FPH Derby Bulk Facility  
Derby, Vermont

Date	MTBE	Benzene	ethyl benzene	naphthalene	Toluene	1,3,5-TMB	1,2,4-TMB	Total xylenes	Total VOCs	Ground water Elevation
9/13/2007	ND<2.0	ND<1.0	ND<2.0	ND<5.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND	88.45
1/8/2008	ND<2.0	2.7	ND<2.0	ND<5.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	2.7	88.72
4/28/2008	ND<1.0	ND<1.0	ND<1.0	ND<1.0	1.9	ND<2.0	1.6	ND<2.0	3.5	90.37
7/23/2008	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND	88.71
10/28/2008	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND	88.4
1/30/2009	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND	88.31
4/30/2009	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	ND	89.37
7/31/2009	1.2	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	1.2	88.81
10/6/2009	1.4	7.3	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	8.7	87.69
1/14/2010	1.5	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	1.5	88.76
4/7/2010	1.5	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<2.0	1.5	89.65
11/30/2010	1.6	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	1.6	89.34
5/23/2011	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	90.24
<b>VGES</b>	<b>40</b>	<b>5.0</b>	<b>700</b>	<b>20</b>	<b>1,000</b>	<b>350 (combined)</b>	<b>10,000</b>	<b>---</b>	<b>---</b>	<b>---</b>

Notes: Results given in micrograms per liter ( $\mu\text{g/L}$ ), unless indicated otherwise.

ND- None detected at indicated detection limit.

VGES - Vermont Groundwater Enforcement Standards



### Summary of Ground Water Analytical Results for MW-14

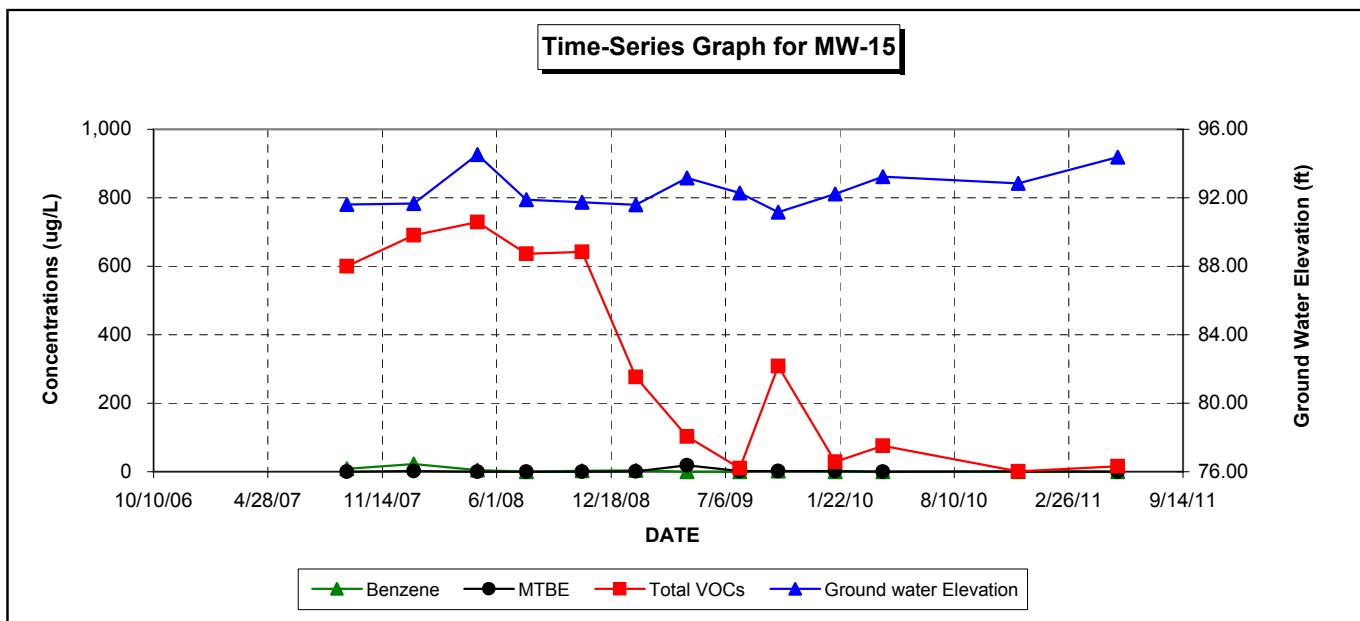
FPH Derby Bulk Facility  
Derby, Vermont

Date	MTBE	Benzene	ethyl benzene	naphthalene	Toluene	1,3,5-TMB	1,2,4-TMB	Total xylenes	Total VOCs	Ground water Elevation
9/13/2007	300	1,600	100	ND<5.0	4,700	15.0	29.0	1,080	7,844	83.32
1/8/2008	95	730	ND<2.0	ND<5.0	120	2.7	9.5	166	1,126	83.57
4/28/2008	ND<10	770	ND<10	11.0	28.0	ND<10	ND<10	32	841	84.71
7/23/2008	14.0	260	ND<10	ND<10	15.0	ND<10	ND<10	99	388	83.56
10/28/2008	7.5	160	ND<1.0	2.1	1.2	ND<1.0	ND<1.0	ND<2.0	171	83.31
1/30/2009	ND<1.0	20	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	20	83.24
4/30/2009	ND<1.0	9.8	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	9.8	83.90
7/31/2009	1.2	4.2	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	5.4	83.63
10/6/2009	7.6	960	ND<1.0	15	22	ND<1.0	1.8	11.7	1,018	82.60
1/14/2010	2.2	200	ND<1.0	4.3	1.7	ND<1.0	ND<1.0	ND<2.0	208	83.52
4/7/2010	4.5	650	ND<1.0	9.4	5.6	ND<1.0	ND<1.0	4.0	674	84.15
11/30/2010	ND<1.0	60	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	60	83.77
5/23/2011	2.4	31	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	33.4	84.41
<b>VGES</b>	<b>40</b>	<b>5.0</b>	<b>700</b>	<b>20</b>	<b>1,000</b>	<b>350 (combined)</b>	<b>10,000</b>	<b>---</b>	<b>---</b>	<b>---</b>

Notes: Results given in micrograms per liter ( $\mu\text{g/L}$ ), unless indicated otherwise.

ND- None detected at indicated detection limit.

VGES - Vermont Groundwater Enforcement Standards



### Summary of Ground Water Analytical Results for MW-15

FPH Derby Bulk Facility  
Derby, Vermont

Date	MTBE	Benzene	ethyl benzene	naphthalene	Toluene	1,3,5-TMB	1,2,4-TMB	Total xylenes	Total VOCs	Ground water Elevation
9/13/2007	ND<2.0	8.3	2.2	75	5.6	54.0	200	152	600	91.61
1/8/2008	2.3	22.0	100	22	11.0	17.0	170	224	690	91.67
4/28/2008	ND<1.0	4.3	96	59	4.5	35	380	150	729	94.52
7/23/2008	ND<10.0	ND<10.0	12.0	42	ND<10.0	72	290	220	636	91.89
10/28/2008	ND<1.0	3.1	4.0	86	2.1	83	310	154	642	91.73
1/30/2009	1.3	3.9	16	2.1	1.0	1.6	230	20.9	277	91.58
4/30/2009	19	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	84	ND<1.0	103	93.15
7/31/2009	1.9	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	5.6	2.4	9.9	92.28
10/6/2009	1.6	2.3	1.0	35	5.6	44	170	48.6	308	91.16
1/14/2010	1.9	ND<1.0	3.0	ND<1.0	ND<1.0	ND<1.0	24	ND<2.0	28.9	92.23
4/7/2010	ND<1.0	ND<1.0	4.3	2.1	ND<1.0	1.4	65	2.7	75.5	93.24
11/30/2010	1.3	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	1.3	92.84
5/23/2011	ND<1.0	ND<1.0	2.6	ND<1.0	ND<1.0	1.2	6.3	5.9	16.0	94.38
<b>VGES</b>	<b>40</b>	<b>5.0</b>	<b>700</b>	<b>20</b>	<b>1,000</b>	<b>350 (combined)</b>	<b>10,000</b>	---	---	---

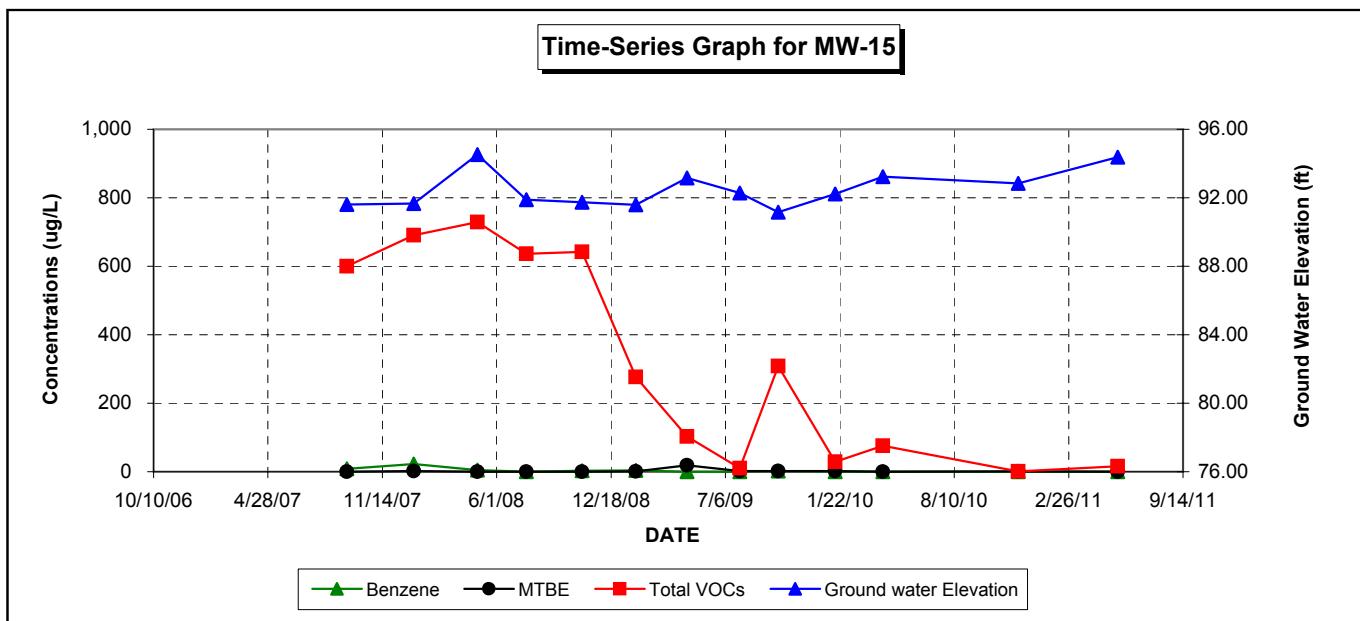
Notes: Results given in micrograms per liter ( $\mu\text{g/L}$ ), unless indicated otherwise.

ND- None detected at indicated detection limit.

UIP: Unidentified Peaks.

VGES - Vermont Groundwater Enforcement Standards

TPH = Total Petroleum Hydrocarbons



### Summary of Ground Water Analytical Results for MW-15

FPH Derby Bulk Facility  
Derby, Vermont

Date	MTBE	Benzene	ethyl benzene	naphthalene	Toluene	1,3,5-TMB	1,2,4-TMB	Total xylenes	Total VOCs	Ground water Elevation
9/13/2007	ND<2.0	8.3	2.2	75	5.6	54.0	200	152	600	91.61
1/8/2008	2.3	22.0	100	22	11.0	17.0	170	224	690	91.67
4/28/2008	ND<1.0	4.3	96	59	4.5	35	380	150	729	94.52
7/23/2008	ND<10.0	ND<10.0	12.0	42	ND<10.0	72	290	220	636	91.89
10/28/2008	ND<1.0	3.1	4.0	86	2.1	83	310	154	642	91.73
1/30/2009	1.3	3.9	16	2.1	1.0	1.6	230	20.9	277	91.58
4/30/2009	19	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	84	ND<1.0	103	93.15
7/31/2009	1.9	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	5.6	2.4	9.9	92.28
10/6/2009	1.6	2.3	1.0	35	5.6	44	170	48.6	308	91.16
1/14/2010	1.9	ND<1.0	3.0	ND<1.0	ND<1.0	ND<1.0	24	ND<2.0	28.9	92.23
4/7/2010	ND<1.0	ND<1.0	4.3	2.1	ND<1.0	1.4	65	2.7	75.5	93.24
11/30/2010	1.3	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	1.3	92.84
5/23/2011	ND<1.0	ND<1.0	2.6	ND<1.0	ND<1.0	1.2	6.3	5.9	16.0	94.38
<b>VGES</b>	<b>40</b>	<b>5.0</b>	<b>700</b>	<b>20</b>	<b>1,000</b>	<b>350 (combined)</b>	<b>10,000</b>	<b>---</b>	<b>---</b>	<b>---</b>

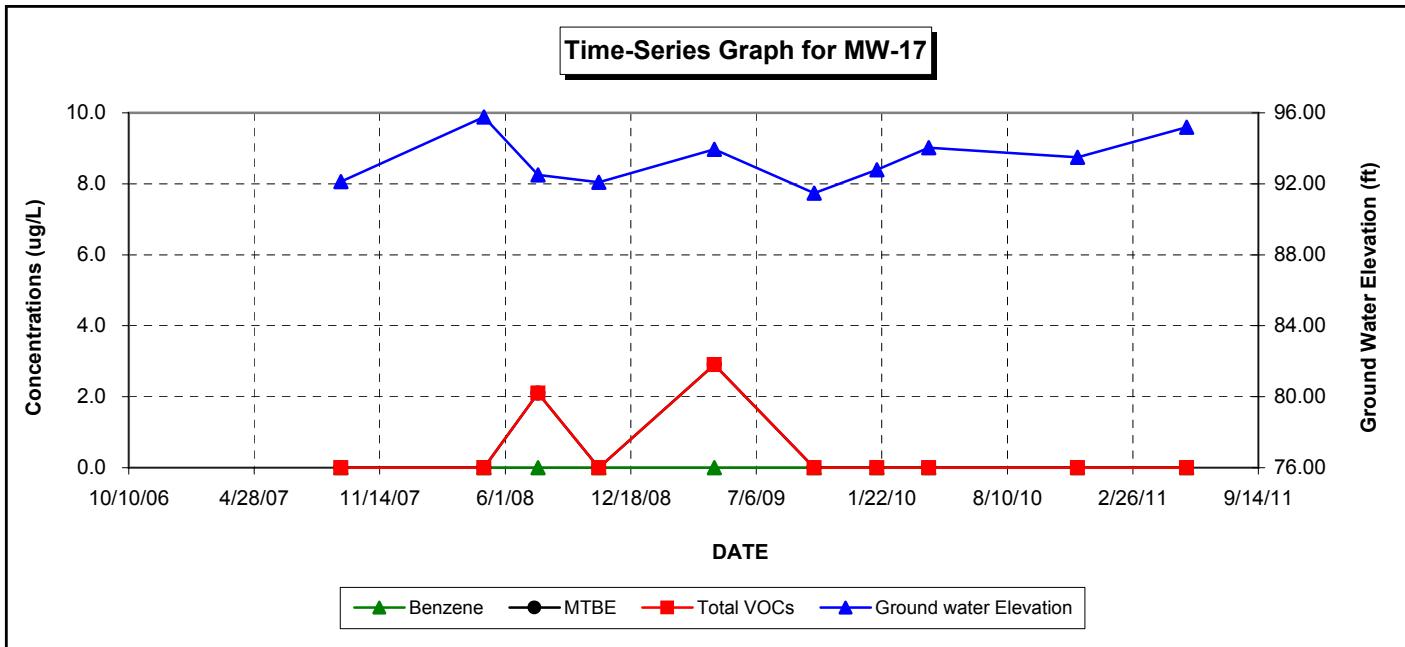
Notes: Results given in micrograms per liter ( $\mu\text{g/L}$ ), unless indicated otherwise.

ND- None detected at indicated detection limit.

UIP: Unidentified Peaks.

VGES - Vermont Groundwater Enforcement Standards

TPH = Total Petroleum Hydrocarbons



### Summary of Ground Water Analytical Results for MW-17

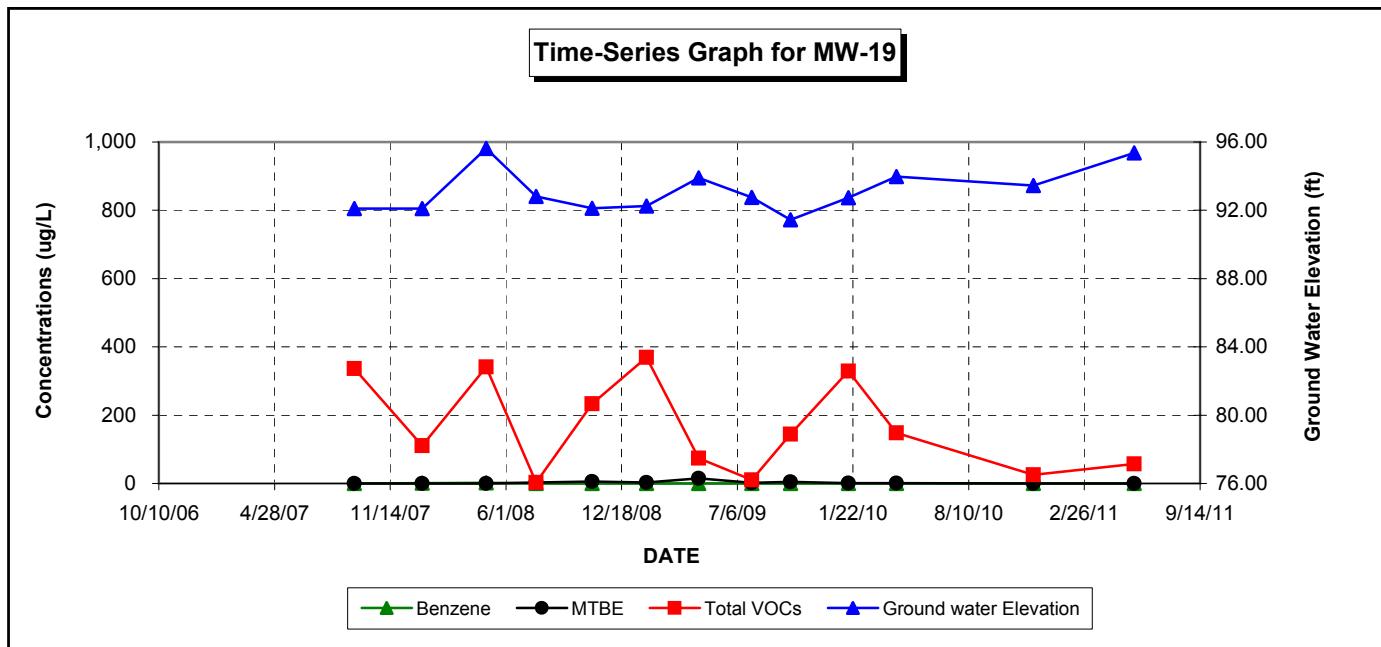
FPH Derby Bulk Facility  
Derby, Vermont

Date	MTBE	Benzene	ethyl benzene	naphthalene	Toluene	1,3,5-TMB	1,2,4-TMB	Total xylenes	Total VOCs	Ground water Elevation
9/13/2007	ND<2.0	ND<1.0	ND<2.0	ND<5.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND	92.12
4/28/2008	ND<2.0	ND<1.0	ND<2.0	ND<5.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND	95.77
7/23/2008	<b>2.1</b>	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	<b>2.1</b>	92.50
10/28/2008	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	92.08
4/30/2009	<b>2.9</b>	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	<b>2.9</b>	93.94
10/6/2009	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	91.48
1/14/2010	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	92.79
4/7/2010	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	94.03
11/30/2010	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	93.50
5/23/2011	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND	95.18
<b>VGES</b>	<b>40</b>	<b>5.0</b>	<b>700</b>	<b>20</b>	<b>1,000</b>	<b>350 (combined)</b>		<b>10,000</b>	---	---

Notes: Results given in micrograms per liter (µg/L), unless indicated otherwise.

ND- None detected at indicated detection limit.

VGES - Vermont Groundwater Enforcement Standards



### Summary of Ground Water Analytical Results for MW-19

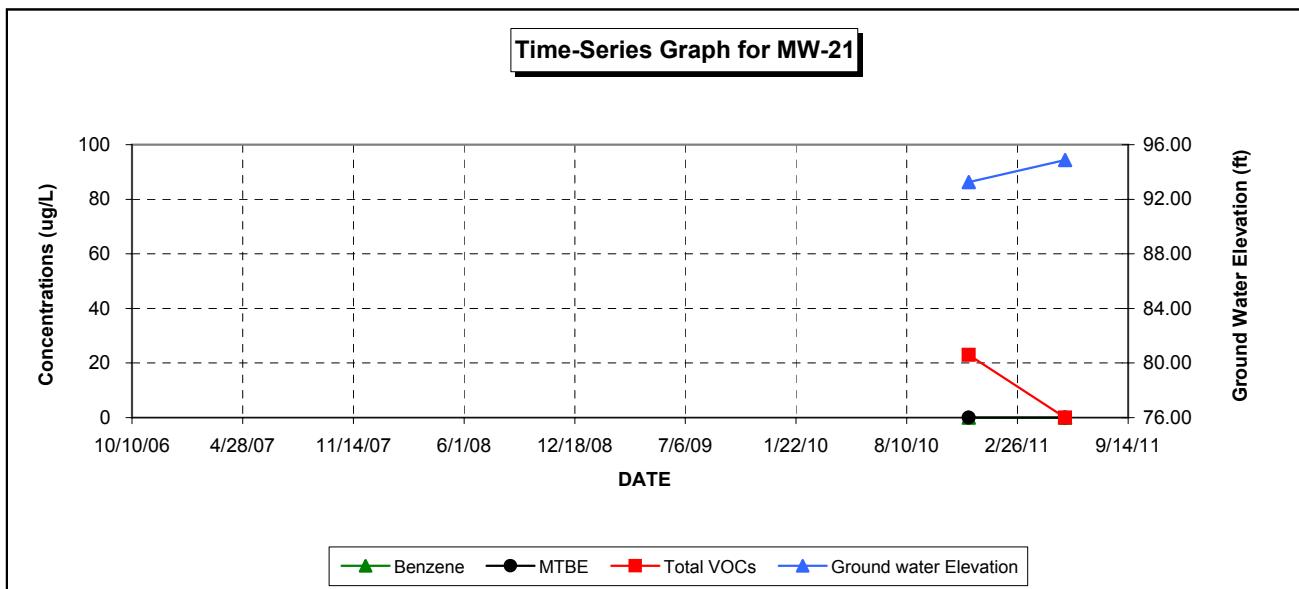
FPH Derby Bulk Facility  
Derby, Vermont

Date	MTBE	Benzene	ethyl benzene	naphthalene	Toluene	1,3,5-TMB	1,2,4-TMB	Total xylenes	Total VOCs	Ground water Elevation
9/13/2007	ND<2.0	ND<1.0	25.0	45.0	ND<2.0	20.0	120	67.5	336	92.10
1/8/2008	ND<2.0	1.0	26.0	5.3	ND<2.0	ND<2.0	10.0	3.5	110	92.11
4/28/2008	ND<1.0	1.5	38.0	110	ND<1.0	22.0	140	30.0	342	95.62
7/23/2008	2.4	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	2.4	92.81
10/28/2008	5.3	ND<1.0	9.0	33	ND<1.0	40	140	6.1	233	92.12
1/30/2009	2.9	ND<1.0	8.4	22	1.4	29	290	15.3	369	92.26
4/30/2009	15.0	ND<1.0	1.1	1.6	ND<1.0	13	40	3.0	73.7	93.91
7/31/2009	1.9	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	8.6	ND<1.0	10.5	92.75
10/6/2009	5.1	ND<1.0	ND<1.0	9.2	2.6	40	84	3.6	144.5	91.45
1/14/2010	1.4	ND<1.0	1.3	4.9	ND<1.0	56	260	5.6	329	92.73
4/7/2010	1.4	ND<1.0	ND<1.0	ND<1.0	ND<1.0	27	120	ND<2.0	148	93.97
11/30/2010	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	5.1	20	ND<2.0	25.1	93.46
5/23/2011	ND<1.0	ND<1.0	2.7	ND<1.0	ND<1.0	7.2	44	3.5	57.4	95.36
<b>VGES</b>	<b>40</b>	<b>5.0</b>	<b>700</b>	<b>20</b>	<b>1,000</b>	<b>350 (combined)</b>	<b>10,000</b>	<b>---</b>	<b>---</b>	<b>---</b>

Notes: Results given in micrograms per liter (µg/L), unless indicated otherwise.

ND- None detected at indicated detection limit.

VGES - Vermont Groundwater Enforcement Standards



### Summary of Ground Water Analytical Results for MW-21

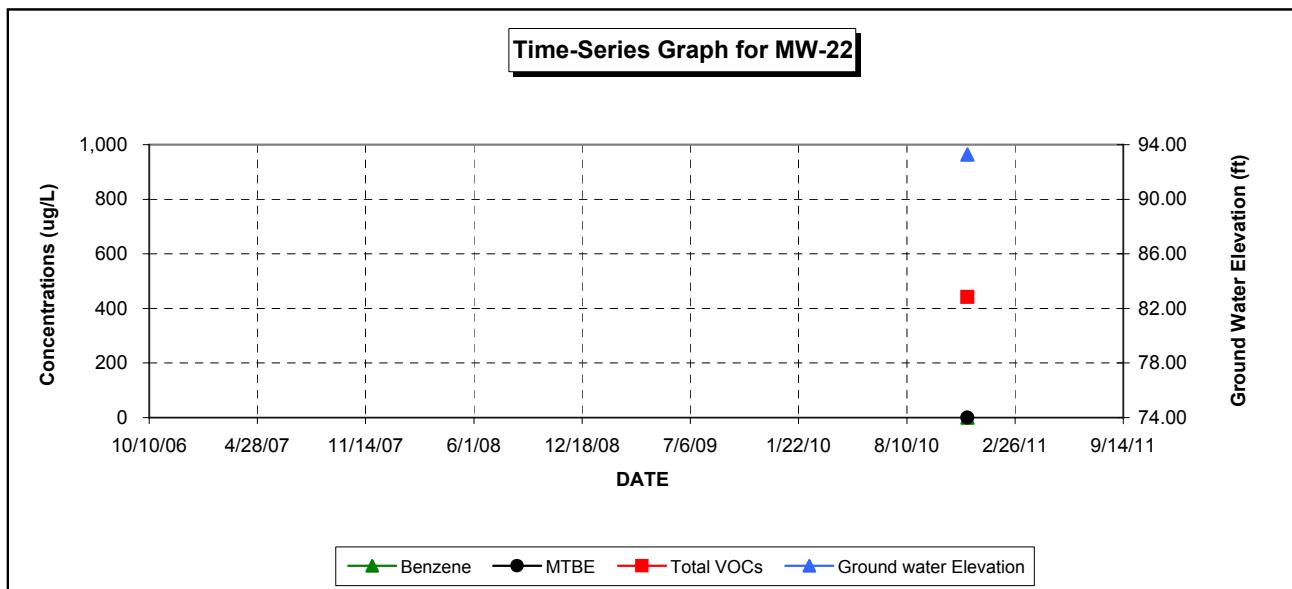
FPH Derby Bulk Facility  
Derby, Vermont

Date	MTBE	Benzene	ethyl benzene	naphthalene	Toluene	1,3,5-TMB	1,2,4-TMB	Total xylenes	Total VOCs	Ground water Elevation
11/30/2010	ND<2.0	ND<1.0	ND<2.0	ND<5.0	ND<2.0	12.0	11.0	ND<2.0	23.0	93.25
5/23/2011	ND<2.0	ND<1.0	ND<2.0	ND<5.0	ND<2.0	ND<1.0	ND<1.0	ND<2.0	ND	94.88
	<b>40</b>	<b>5.0</b>	<b>700</b>	<b>20</b>	<b>1,000</b>	<b>350 (combined)</b>		<b>10,000</b>	---	---

Notes: Results given in micrograms per liter (µg/L), unless indicated otherwise.

ND- None detected at indicated detection limit.

VGES - Vermont Groundwater Enforcement Standards



### Summary of Ground Water Analytical Results for MW-22

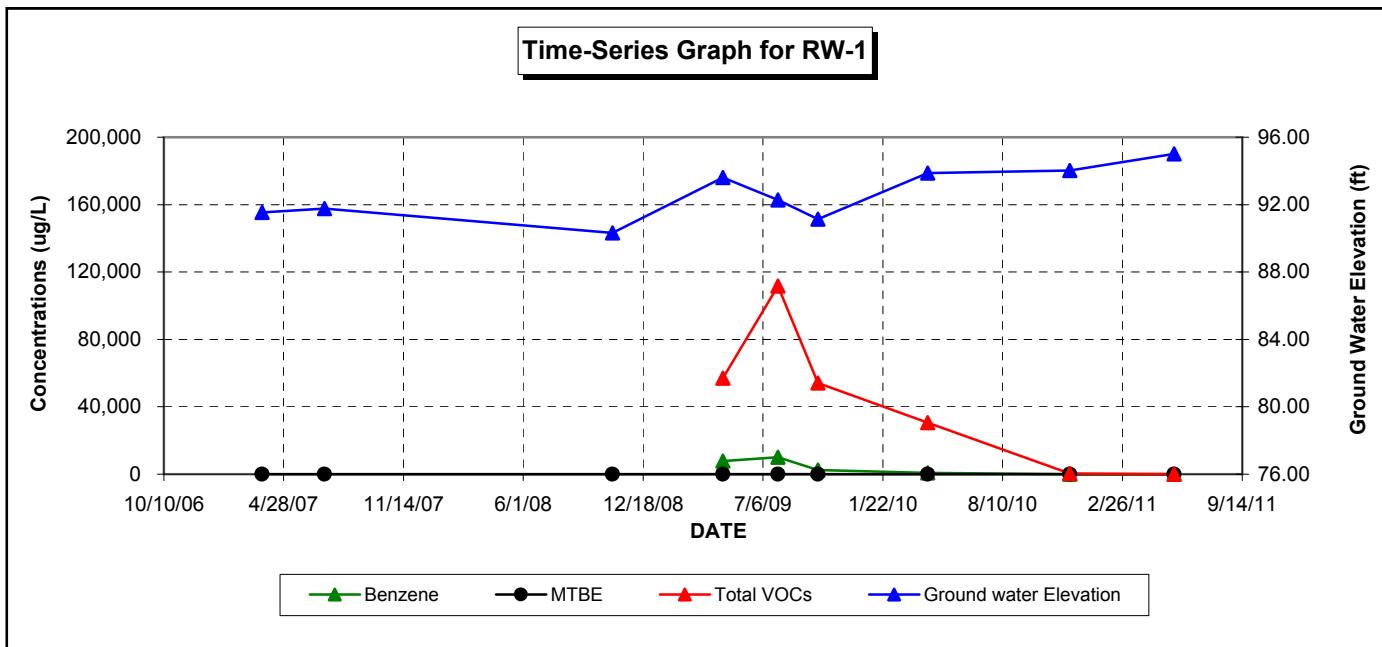
FPH Derby Bulk Facility  
Derby, Vermont

Date	MTBE	Benzene	ethyl benzene	naphthalene	Toluene	1,3,5-TMB	1,2,4-TMB	Total xylenes	Total VOCs	Ground water Elevation
11/30/2010	ND<2.0	ND<1.0	34	120	ND<2.0	45	220	23.3	442	93.28
	<b>40</b>	<b>5.0</b>	<b>700</b>	<b>20</b>	<b>1,000</b>	<b>350 (combined)</b>		<b>10,000</b>	---	---

Notes: Results given in micrograms per liter ( $\mu\text{g}/\text{L}$ ), unless indicated otherwise.

ND- None detected at indicated detection limit.

VGES - Vermont Groundwater Enforcement Standards



### Summary of Ground Water Analytical Results for RW-1

FPH Derby Bulk Facility  
Derby, Vermont

Date	MTBE	Benzene	Toluene	ethyl benzene	Total xylenes	1,3,5-TMB	1,2,4-TMB	naphthalene	Total VOCs	Ground water Elevation
3/23/2007	<b>2.28 Feet Free-Phase Petroleum</b>									91.53
7/5/2007	<b>0.07 Free-Phase Petroleum</b>									91.76
10/28/2008	<b>0.14 Free-Phase Petroleum</b>									90.33
4/30/2009	ND<100	7,700	29,000	1,700	13,100	830	3,500	1,100	56,930	93.61
7/31/2009	ND<100	10,000	68,000	3,800	24,600	860	3,400	980	111,640	92.27
10/6/2009	ND<100	2,500	29,000	2,700	15,500	780	2,900	670	54,050	91.14
4/7/2010	ND<100	820	15,000	1,700	10,600	450	1,700	320	30,590	93.87
11/30/2010	ND<1.0	ND<1.0	19	4.4	38	5.1	36	210	313	94.02
5/23/2011	ND<1.0	ND<1.0	2.5	7.4	53	7.4	8.9	3.3	82.5	95.02
<b>VGES</b>	<b>40</b>	<b>5.0</b>	<b>1,000</b>	<b>700</b>	<b>10,000</b>	<b>350 (combined)</b>	<b>20</b>	---	---	---

Notes: Results given in micrograms per liter ( $\mu\text{g/L}$ ), unless indicated otherwise.

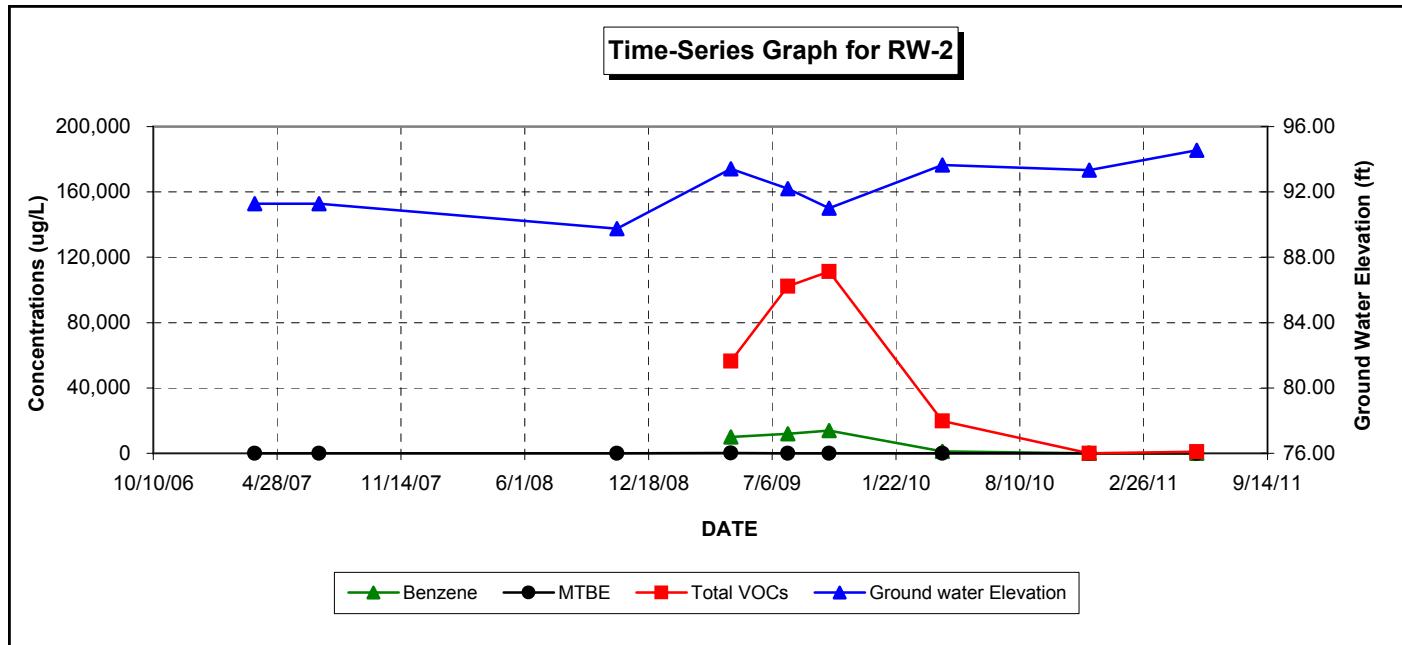
ND- None detected at indicated detection limit.

UIP: Unidentified Peaks.

VGES - Vermont Groundwater Enforcement Standards

TPH = Total Petroleum Hydrocarbons

1,4-dichlorobenzene was detected at a concentration of 3.3  $\mu\text{g/L}$  during the 23 March 2007 Sampling Event.



### Summary of Ground Water Analytical Results for RW-2

FPH Derby Bulk Facility  
Derby, Vermont

Date	MTBE	Benzene	Toluene	ethyl benzene	Total xylenes	1,3,5-TMB	1,2,4-TMB	naphthalene	Total VOCs	Ground water Elevation
3/23/2007										91.27
7/5/2007										91.28
10/28/2008										89.75
4/30/2009	170	10,000	34,000	910	8,600	300	1,400	960	56,340	93.41
7/31/2009	ND<100	12,000	66,000	3,200	18,000	450	1,900	690	102,240	92.20
10/6/2009	ND<100	14,000	73,000	3,600	17,800	470	1,800	590	111,260	91.00
4/7/2010	ND<100	1,100	10,000	1,100	6,000	310	1,000	200	19,710	93.64
11/30/2010	ND<1.0	ND<1.0	21	2.6	21.7	1.3	4.9	5.9	57.4	93.34
5/23/2011	ND<1.0	74	200	47	600	19	43	13	996	94.55
<b>VGES</b>	<b>40</b>	<b>5.0</b>	<b>1,000</b>	<b>700</b>	<b>10,000</b>	<b>350 (combined)</b>			<b>20</b>	<b>---</b>

Notes: Results given in micrograms per liter ( $\mu\text{g/L}$ ), unless indicated otherwise.

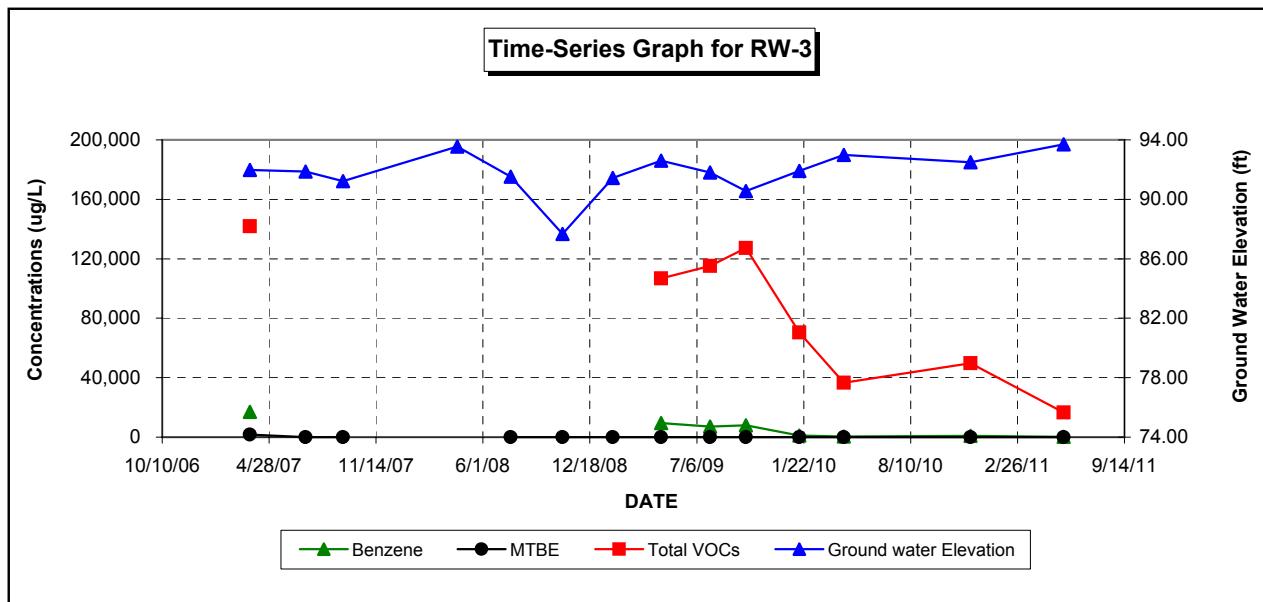
ND- None detected at indicated detection limit.

UIP: Unidentified Peaks.

VGES - Vermont Groundwater Enforcement Standards

TPH = Total Petroleum Hydrocarbons

1,4-dichlorobenzene was detected at a concentration of 3.3  $\mu\text{g/L}$  during the 23 March 2007 Sampling Event.



### Summary of Ground Water Analytical Results for RW-3

FPH Derby Bulk Facility  
Derby, Vermont

Date	MTBE	Benzene	Toluene	ethyl benzene	Total xylenes	1,3,5-TMB	1,2,4-TMB	naphthalene	Total VOCs	Ground water Elevation
3/23/2007	1,800	17,000	89,000	4,900	25,200	670	2,800	530	141,900	91.98
7/5/2007										91.86
9/13/2007										91.22
4/14/2008										93.55
7/23/2008										91.53
10/28/2008										87.68
1/30/2009										91.44
4/30/2009	ND<100	9,500	69,000	3,800	20,300	660	2,800	810	106,870	92.61
7/31/2009	ND<100	7,100	71,000	5,000	27,500	710	2,900	890	115,100	91.80
10/6/2009	ND<100	8,000	82,000	5,500	27,400	690	2,800	760	127,150	90.55
1/14/2010	ND<100	1,000	38,000	3,900	23,200	720	2,900	580	70,300	91.91
4/7/2010	ND<100	360	15,000	2,300	15,900	540	2,100	420	36,620	92.99
11/30/2010	ND<100	890	30,000	2,000	15,000	360	1,300	240	49,790	92.50
5/23/2011	ND<100	200	6,800	970	8,000	120	460	ND<200	16,550	93.70
<b>VGES</b>	<b>40</b>	<b>5.0</b>	<b>1,000</b>	<b>700</b>	<b>10,000</b>	<b>350 (combined)</b>	<b>20.0</b>	<b>---</b>	<b>---</b>	<b>---</b>

Notes: Results given in micrograms per liter ( $\mu\text{g}/\text{L}$ ), unless indicated otherwise.

ND- None detected at indicated detection limit.

UIP: Unidentified Peaks.

VGES - Vermont Groundwater Enforcement Standards

TPH = Total Petroleum Hydrocarbons

1,4-dichlorobenzene was detected at a concentration of 3.3  $\mu\text{g}/\text{L}$  during the 23 March 2007 Sampling Event.

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**CLIENT:** Ross Environmental Associates  
**Project:** 27013 Derby Bulk  
**Lab Order:** 1106001  
**Date Received:** 6/1/2011

**Work Order Sample Summary**

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Collection Date</b>	<b>Collection Time</b>
1106001-01A	MW-2	5/23/2011	3:40 PM
1106001-02A	MW-3	5/23/2011	2:45 PM
1106001-03A	MW-4	5/23/2011	2:30 PM
1106001-04A	MW-6	5/24/2011	11:30 AM
1106001-05A	MW-7	5/23/2011	3:50 PM
1106001-06A	MW-9d	5/23/2011	3:30 PM
1106001-07A	MW-14	5/23/2011	3:05 PM
1106001-08A	MW-15	5/24/2011	11:00 AM
1106001-09A	MW-17	5/24/2011	10:20 AM
1106001-10A	MW-19	5/24/2011	10:15 AM
1106001-11A	MW-21	5/24/2011	9:00 AM
1106001-12A	RW-1	5/23/2011	1:40 PM
1106001-13A	RW-2	5/24/2011	8:40 AM
1106001-14A	RW-3	5/23/2011	1:50 PM
1106001-15A	TB	5/24/2011	1:35 PM
1106001-16A	DUP	5/24/2011	8:40 AM

## DATA COMMENT PAGE

### **Organic Data Qualifiers**

- ND Indicates compound was analyzed for, but not detected at or above the reporting limit.
- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than the method detection limit.
- H Method prescribed holding time exceeded.
- E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- B This flag is used when the analyte is found in the associated blank as well as in the sample.
- R RPD outside accepted recovery limits
- RL Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
- S Spike Recovery outside accepted recovery limits.
- # See Case Narrative

### **Micro Data Qualifiers**

- TNTC Too numerous to count

### **Inorganic Data Qualifiers**

- ND or U Indicates element was analyzed for, but not detected at or above the reporting limit.
- J Indicates a value greater than or equal to the method detection limit, but less than the quantitation limit.
- H Indicates analytical holding time exceedance.
- B Indicates that the analyte is found in the associated blank, as well as in the sample.
- MSA Indicates value determined by the Method of Standard Addition
- E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- R RPD outside accepted recovery limits
- RL Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
- S Spike Recovery outside accepted recovery limits.
- W Post-digestion spike for Furnace AA analysis is out of control limits (85-115), while sample absorbance is less than 50% of spike absorbance.
- \*
- + Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995
- # See Case Narrative

#### **Report Comments:**

1. Soil, sediment and sludge sample results are reported on a "dry weight" basis.
2. Reporting limits are adjusted for sample size used, dilutions and moisture content, if applicable.

**AMRO Environmental Laboratories Corp.****Date:** 13-Jun-11

<b>CLIENT:</b>	Ross Environmental Associates	<b>Lab Order:</b>	1106001
<b>Project:</b>	27013 Derby Bulk		

**Lab ID:** 1106001-01      **Collection Date:** 5/23/2011 3:40:00 PM  
**Collection Time:**

**Client Sample ID:** MW-2      **Matrix:** AQUEOUS

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
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**EPA 8260B AROMATIC VOLATILES BY GC/MS      SW8260B**      **Analyst:** AL

Methyl tert-butyl ether	ND	10	µg/L	10	6/2/2011 7:23:00 PM
Benzene	900	10	µg/L	10	6/2/2011 7:23:00 PM
Toluene	380	10	µg/L	10	6/2/2011 7:23:00 PM
Ethylbenzene	500	10	µg/L	10	6/2/2011 7:23:00 PM
m,p-Xylene	1,400	20	µg/L	10	6/2/2011 7:23:00 PM
o-Xylene	110	20	µg/L	10	6/2/2011 7:23:00 PM
1,3,5-Trimethylbenzene	180	10	µg/L	10	6/2/2011 7:23:00 PM
1,2,4-Trimethylbenzene	730	10	µg/L	10	6/2/2011 7:23:00 PM
Naphthalene	150	20	µg/L	10	6/2/2011 7:23:00 PM
Surr: Dibromofluoromethane	88.7	82-122	%REC	10	6/2/2011 7:23:00 PM
Surr: 1,2-Dichloroethane-d4	76.7	73-135	%REC	10	6/2/2011 7:23:00 PM
Surr: Toluene-d8	86.2	82-117	%REC	10	6/2/2011 7:23:00 PM
Surr: 4-Bromofluorobenzene	118	77-119	%REC	10	6/2/2011 7:23:00 PM

**Lab ID:** 1106001-02      **Collection Date:** 5/23/2011 2:45:00 PM  
**Collection Time:**

**Client Sample ID:** MW-3      **Matrix:** AQUEOUS

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
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**EPA 8260B AROMATIC VOLATILES BY GC/MS      SW8260B**      **Analyst:** AL

Methyl tert-butyl ether	ND	100	µg/L	100	6/2/2011 7:58:00 PM
Benzene	1,200	100	µg/L	100	6/2/2011 7:58:00 PM
Toluene	9,800	100	µg/L	100	6/2/2011 7:58:00 PM
Ethylbenzene	1,200	100	µg/L	100	6/2/2011 7:58:00 PM
m,p-Xylene	4,500	200	µg/L	100	6/2/2011 7:58:00 PM
o-Xylene	1,900	200	µg/L	100	6/2/2011 7:58:00 PM
1,3,5-Trimethylbenzene	310	100	µg/L	100	6/2/2011 7:58:00 PM
1,2,4-Trimethylbenzene	1,200	100	µg/L	100	6/2/2011 7:58:00 PM
Naphthalene	330	200	µg/L	100	6/2/2011 7:58:00 PM
Surr: Dibromofluoromethane	88.9	82-122	%REC	100	6/2/2011 7:58:00 PM
Surr: 1,2-Dichloroethane-d4	78.1	73-135	%REC	100	6/2/2011 7:58:00 PM
Surr: Toluene-d8	86.5	82-117	%REC	100	6/2/2011 7:58:00 PM
Surr: 4-Bromofluorobenzene	116	77-119	%REC	100	6/2/2011 7:58:00 PM

**AMRO Environmental Laboratories Corp.****Date:** 13-Jun-11

<b>CLIENT:</b>	Ross Environmental Associates	<b>Lab Order:</b>	1106001
<b>Project:</b>	27013 Derby Bulk		

**Lab ID:** 1106001-03      **Collection Date:** 5/23/2011 2:30:00 PM  
**Collection Time:****Client Sample ID:** MW-4      **Matrix:** AQUEOUS**Analyses**      **Result**      **RL**      **Qual**      **Units**      **DF**      **Date Analyzed****EPA 8260B AROMATIC VOLATILES BY GC/MS      SW8260B**      **Analyst: AL**

Methyl tert-butyl ether	ND	1.0	µg/L	1	6/2/2011 2:00:00 PM
Benzene	15	1.0	µg/L	1	6/2/2011 2:00:00 PM
Toluene	ND	1.0	µg/L	1	6/2/2011 2:00:00 PM
Ethylbenzene	ND	1.0	µg/L	1	6/2/2011 2:00:00 PM
m,p-Xylene	ND	2.0	µg/L	1	6/2/2011 2:00:00 PM
o-Xylene	ND	2.0	µg/L	1	6/2/2011 2:00:00 PM
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1	6/2/2011 2:00:00 PM
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1	6/2/2011 2:00:00 PM
Naphthalene	ND	2.0	µg/L	1	6/2/2011 2:00:00 PM
Surr: Dibromofluoromethane	93.9	82-122	%REC	1	6/2/2011 2:00:00 PM
Surr: 1,2-Dichloroethane-d4	82.6	73-135	%REC	1	6/2/2011 2:00:00 PM
Surr: Toluene-d8	92.0	82-117	%REC	1	6/2/2011 2:00:00 PM
Surr: 4-Bromofluorobenzene	116	77-119	%REC	1	6/2/2011 2:00:00 PM

**Lab ID:** 1106001-04      **Collection Date:** 5/24/2011 11:30:00 AM  
**Collection Time:****Client Sample ID:** MW-6      **Matrix:** AQUEOUS**Analyses**      **Result**      **RL**      **Qual**      **Units**      **DF**      **Date Analyzed****EPA 8260B AROMATIC VOLATILES BY GC/MS      SW8260B**      **Analyst: AL**

Methyl tert-butyl ether	ND	100	µg/L	100	6/2/2011 8:32:00 PM
Benzene	750	100	µg/L	100	6/2/2011 8:32:00 PM
Toluene	13,000	100	µg/L	100	6/2/2011 8:32:00 PM
Ethylbenzene	1,500	100	µg/L	100	6/2/2011 8:32:00 PM
m,p-Xylene	5,400	200	µg/L	100	6/2/2011 8:32:00 PM
o-Xylene	1,900	200	µg/L	100	6/2/2011 8:32:00 PM
1,3,5-Trimethylbenzene	240	100	µg/L	100	6/2/2011 8:32:00 PM
1,2,4-Trimethylbenzene	900	100	µg/L	100	6/2/2011 8:32:00 PM
Naphthalene	260	200	µg/L	100	6/2/2011 8:32:00 PM
Surr: Dibromofluoromethane	98.9	82-122	%REC	100	6/2/2011 8:32:00 PM
Surr: 1,2-Dichloroethane-d4	86.9	73-135	%REC	100	6/2/2011 8:32:00 PM
Surr: Toluene-d8	94.8	82-117	%REC	100	6/2/2011 8:32:00 PM
Surr: 4-Bromofluorobenzene	113	77-119	%REC	100	6/2/2011 8:32:00 PM

**AMRO Environmental Laboratories Corp.****Date:** 13-Jun-11

<b>CLIENT:</b>	Ross Environmental Associates	<b>Lab Order:</b>	1106001
<b>Project:</b>	27013 Derby Bulk		

**Lab ID:** 1106001-05      **Collection Date:** 5/23/2011 3:50:00 PM  
**Collection Time:****Client Sample ID:** MW-7      **Matrix:** AQUEOUS**Analyses**      **Result**      **RL**      **Qual**      **Units**      **DF**      **Date Analyzed****EPA 8260B AROMATIC VOLATILES BY GC/MS      SW8260B**      **Analyst: AL**

Methyl tert-butyl ether	ND	1.0	µg/L	1	6/2/2011 2:34:00 PM
Benzene	35	1.0	µg/L	1	6/2/2011 2:34:00 PM
Toluene	3.2	1.0	µg/L	1	6/2/2011 2:34:00 PM
Ethylbenzene	9.9	1.0	µg/L	1	6/2/2011 2:34:00 PM
m,p-Xylene	17	2.0	µg/L	1	6/2/2011 2:34:00 PM
o-Xylene	2.2	2.0	µg/L	1	6/2/2011 2:34:00 PM
1,3,5-Trimethylbenzene	4.1	1.0	µg/L	1	6/2/2011 2:34:00 PM
1,2,4-Trimethylbenzene	25	1.0	µg/L	1	6/2/2011 2:34:00 PM
Naphthalene	4.2	2.0	µg/L	1	6/2/2011 2:34:00 PM
Surr: Dibromofluoromethane	98.8	82-122	%REC	1	6/2/2011 2:34:00 PM
Surr: 1,2-Dichloroethane-d4	88.6	73-135	%REC	1	6/2/2011 2:34:00 PM
Surr: Toluene-d8	97.7	82-117	%REC	1	6/2/2011 2:34:00 PM
Surr: 4-Bromofluorobenzene	119	77-119	%REC	1	6/2/2011 2:34:00 PM

**Lab ID:** 1106001-06      **Collection Date:** 5/23/2011 3:30:00 PM  
**Collection Time:****Client Sample ID:** MW-9d      **Matrix:** AQUEOUS**Analyses**      **Result**      **RL**      **Qual**      **Units**      **DF**      **Date Analyzed****EPA 8260B AROMATIC VOLATILES BY GC/MS      SW8260B**      **Analyst: AL**

Methyl tert-butyl ether	ND	1.0	µg/L	1	6/2/2011 3:09:00 PM
Benzene	ND	1.0	µg/L	1	6/2/2011 3:09:00 PM
Toluene	ND	1.0	µg/L	1	6/2/2011 3:09:00 PM
Ethylbenzene	ND	1.0	µg/L	1	6/2/2011 3:09:00 PM
m,p-Xylene	ND	2.0	µg/L	1	6/2/2011 3:09:00 PM
o-Xylene	ND	2.0	µg/L	1	6/2/2011 3:09:00 PM
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1	6/2/2011 3:09:00 PM
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1	6/2/2011 3:09:00 PM
Naphthalene	ND	2.0	µg/L	1	6/2/2011 3:09:00 PM
Surr: Dibromofluoromethane	100	82-122	%REC	1	6/2/2011 3:09:00 PM
Surr: 1,2-Dichloroethane-d4	79.4	73-135	%REC	1	6/2/2011 3:09:00 PM
Surr: Toluene-d8	101	82-117	%REC	1	6/2/2011 3:09:00 PM
Surr: 4-Bromofluorobenzene	112	77-119	%REC	1	6/2/2011 3:09:00 PM

**AMRO Environmental Laboratories Corp.****Date:** 13-Jun-11

<b>CLIENT:</b>	Ross Environmental Associates	<b>Lab Order:</b>	1106001
<b>Project:</b>	27013 Derby Bulk		

**Lab ID:** 1106001-07      **Collection Date:** 5/23/2011 3:05:00 PM  
**Collection Time:****Client Sample ID:** MW-14      **Matrix:** AQUEOUS

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
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**EPA 8260B AROMATIC VOLATILES BY GC/MS      SW8260B**      **Analyst:** AL

Methyl tert-butyl ether	2.4	1.0	µg/L	1	6/2/2011 3:44:00 PM
Benzene	31	1.0	µg/L	1	6/2/2011 3:44:00 PM
Toluene	ND	1.0	µg/L	1	6/2/2011 3:44:00 PM
Ethylbenzene	ND	1.0	µg/L	1	6/2/2011 3:44:00 PM
m,p-Xylene	ND	2.0	µg/L	1	6/2/2011 3:44:00 PM
o-Xylene	ND	2.0	µg/L	1	6/2/2011 3:44:00 PM
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1	6/2/2011 3:44:00 PM
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1	6/2/2011 3:44:00 PM
Naphthalene	ND	2.0	µg/L	1	6/2/2011 3:44:00 PM
Surr: Dibromofluoromethane	92.7	82-122	%REC	1	6/2/2011 3:44:00 PM
Surr: 1,2-Dichloroethane-d4	77.3	73-135	%REC	1	6/2/2011 3:44:00 PM
Surr: Toluene-d8	93.1	82-117	%REC	1	6/2/2011 3:44:00 PM
Surr: 4-Bromofluorobenzene	115	77-119	%REC	1	6/2/2011 3:44:00 PM

**Lab ID:** 1106001-08      **Collection Date:** 5/24/2011 11:00:00 AM  
**Collection Time:****Client Sample ID:** MW-15      **Matrix:** AQUEOUS

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
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**EPA 8260B AROMATIC VOLATILES BY GC/MS      SW8260B**      **Analyst:** AL

Methyl tert-butyl ether	ND	1.0	µg/L	1	6/2/2011 4:18:00 PM
Benzene	ND	1.0	µg/L	1	6/2/2011 4:18:00 PM
Toluene	ND	1.0	µg/L	1	6/2/2011 4:18:00 PM
Ethylbenzene	2.6	1.0	µg/L	1	6/2/2011 4:18:00 PM
m,p-Xylene	5.9	2.0	µg/L	1	6/2/2011 4:18:00 PM
o-Xylene	ND	2.0	µg/L	1	6/2/2011 4:18:00 PM
1,3,5-Trimethylbenzene	1.2	1.0	µg/L	1	6/2/2011 4:18:00 PM
1,2,4-Trimethylbenzene	6.3	1.0	µg/L	1	6/2/2011 4:18:00 PM
Naphthalene	ND	2.0	µg/L	1	6/2/2011 4:18:00 PM
Surr: Dibromofluoromethane	96.1	82-122	%REC	1	6/2/2011 4:18:00 PM
Surr: 1,2-Dichloroethane-d4	83.5	73-135	%REC	1	6/2/2011 4:18:00 PM
Surr: Toluene-d8	94.2	82-117	%REC	1	6/2/2011 4:18:00 PM
Surr: 4-Bromofluorobenzene	116	77-119	%REC	1	6/2/2011 4:18:00 PM

**AMRO Environmental Laboratories Corp.****Date:** 13-Jun-11

<b>CLIENT:</b>	Ross Environmental Associates	<b>Lab Order:</b>	1106001
<b>Project:</b>	27013 Derby Bulk		

**Lab ID:** 1106001-09      **Collection Date:** 5/24/2011 10:20:00 AM  
**Collection Time:**

**Client Sample ID:** MW-17      **Matrix:** AQUEOUS

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
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**EPA 8260B AROMATIC VOLATILES BY GC/MS      SW8260B**      **Analyst:** AL

Methyl tert-butyl ether	ND	1.0	µg/L	1	6/2/2011 4:52:00 PM
Benzene	ND	1.0	µg/L	1	6/2/2011 4:52:00 PM
Toluene	ND	1.0	µg/L	1	6/2/2011 4:52:00 PM
Ethylbenzene	ND	1.0	µg/L	1	6/2/2011 4:52:00 PM
m,p-Xylene	ND	2.0	µg/L	1	6/2/2011 4:52:00 PM
o-Xylene	ND	2.0	µg/L	1	6/2/2011 4:52:00 PM
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1	6/2/2011 4:52:00 PM
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1	6/2/2011 4:52:00 PM
Naphthalene	ND	2.0	µg/L	1	6/2/2011 4:52:00 PM
Surr: Dibromofluoromethane	91.2	82-122	%REC	1	6/2/2011 4:52:00 PM
Surr: 1,2-Dichloroethane-d4	76.5	73-135	%REC	1	6/2/2011 4:52:00 PM
Surr: Toluene-d8	91.0	82-117	%REC	1	6/2/2011 4:52:00 PM
Surr: 4-Bromofluorobenzene	116	77-119	%REC	1	6/2/2011 4:52:00 PM

**Lab ID:** 1106001-10      **Collection Date:** 5/24/2011 10:15:00 AM  
**Collection Time:**

**Client Sample ID:** MW-19      **Matrix:** AQUEOUS

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
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**EPA 8260B AROMATIC VOLATILES BY GC/MS      SW8260B**      **Analyst:** AL

Methyl tert-butyl ether	ND	1.0	µg/L	1	6/2/2011 5:27:00 PM
Benzene	ND	1.0	µg/L	1	6/2/2011 5:27:00 PM
Toluene	ND	1.0	µg/L	1	6/2/2011 5:27:00 PM
Ethylbenzene	2.7	1.0	µg/L	1	6/2/2011 5:27:00 PM
m,p-Xylene	3.5	2.0	µg/L	1	6/2/2011 5:27:00 PM
o-Xylene	ND	2.0	µg/L	1	6/2/2011 5:27:00 PM
1,3,5-Trimethylbenzene	7.2	1.0	µg/L	1	6/2/2011 5:27:00 PM
1,2,4-Trimethylbenzene	44	1.0	µg/L	1	6/2/2011 5:27:00 PM
Naphthalene	ND	2.0	µg/L	1	6/2/2011 5:27:00 PM
Surr: Dibromofluoromethane	93.6	82-122	%REC	1	6/2/2011 5:27:00 PM
Surr: 1,2-Dichloroethane-d4	80.2	73-135	%REC	1	6/2/2011 5:27:00 PM
Surr: Toluene-d8	96.4	82-117	%REC	1	6/2/2011 5:27:00 PM
Surr: 4-Bromofluorobenzene	115	77-119	%REC	1	6/2/2011 5:27:00 PM

**AMRO Environmental Laboratories Corp.****Date:** 13-Jun-11

<b>CLIENT:</b>	Ross Environmental Associates	<b>Lab Order:</b>	1106001
<b>Project:</b>	27013 Derby Bulk		

**Lab ID:** 1106001-11      **Collection Date:** 5/24/2011 9:00:00 AM  
**Collection Time:**

**Client Sample ID:** MW-21      **Matrix:** AQUEOUS

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
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**EPA 8260B AROMATIC VOLATILES BY GC/MS      SW8260B**      **Analyst:** AL

Methyl tert-butyl ether	ND	1.0	µg/L	1	6/2/2011 6:01:00 PM
Benzene	ND	1.0	µg/L	1	6/2/2011 6:01:00 PM
Toluene	ND	1.0	µg/L	1	6/2/2011 6:01:00 PM
Ethylbenzene	ND	1.0	µg/L	1	6/2/2011 6:01:00 PM
m,p-Xylene	ND	2.0	µg/L	1	6/2/2011 6:01:00 PM
o-Xylene	ND	2.0	µg/L	1	6/2/2011 6:01:00 PM
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1	6/2/2011 6:01:00 PM
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1	6/2/2011 6:01:00 PM
Naphthalene	ND	2.0	µg/L	1	6/2/2011 6:01:00 PM
Surr: Dibromofluoromethane	93.1	82-122	%REC	1	6/2/2011 6:01:00 PM
Surr: 1,2-Dichloroethane-d4	88.7	73-135	%REC	1	6/2/2011 6:01:00 PM
Surr: Toluene-d8	101	82-117	%REC	1	6/2/2011 6:01:00 PM
Surr: 4-Bromofluorobenzene	112	77-119	%REC	1	6/2/2011 6:01:00 PM

**Lab ID:** 1106001-12      **Collection Date:** 5/23/2011 1:40:00 PM

**Collection Time:**

**Client Sample ID:** RW-1      **Matrix:** AQUEOUS

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
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**EPA 8260B AROMATIC VOLATILES BY GC/MS      SW8260B**      **Analyst:** AL

Methyl tert-butyl ether	ND	1.0	µg/L	1	6/3/2011 7:59:00 PM
Benzene	ND	1.0	µg/L	1	6/3/2011 7:59:00 PM
Toluene	2.5	1.0	µg/L	1	6/3/2011 7:59:00 PM
Ethylbenzene	7.4	1.0	µg/L	1	6/3/2011 7:59:00 PM
m,p-Xylene	34	2.0	µg/L	1	6/3/2011 7:59:00 PM
o-Xylene	19	2.0	µg/L	1	6/3/2011 7:59:00 PM
1,3,5-Trimethylbenzene	7.4	1.0	µg/L	1	6/3/2011 7:59:00 PM
1,2,4-Trimethylbenzene	8.9	1.0	µg/L	1	6/3/2011 7:59:00 PM
Naphthalene	3.3	2.0	µg/L	1	6/3/2011 7:59:00 PM
Surr: Dibromofluoromethane	109	82-122	%REC	1	6/3/2011 7:59:00 PM
Surr: 1,2-Dichloroethane-d4	80.6	73-135	%REC	1	6/3/2011 7:59:00 PM
Surr: Toluene-d8	103	82-117	%REC	1	6/3/2011 7:59:00 PM
Surr: 4-Bromofluorobenzene	117	77-119	%REC	1	6/3/2011 7:59:00 PM

**AMRO Environmental Laboratories Corp.****Date:** 13-Jun-11

<b>CLIENT:</b>	Ross Environmental Associates	<b>Lab Order:</b>	1106001
<b>Project:</b>	27013 Derby Bulk		

**Lab ID:** 1106001-13      **Collection Date:** 5/24/2011 8:40:00 AM  
**Collection Time:**

**Client Sample ID:** RW-2      **Matrix:** AQUEOUS

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
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**EPA 8260B AROMATIC VOLATILES BY GC/MS      SW8260B**      **Analyst:** AL

Methyl tert-butyl ether	ND	1.0	µg/L	1	6/2/2011 6:49:00 PM
Benzene	74	1.0	µg/L	1	6/2/2011 6:49:00 PM
Toluene	200	1.0	µg/L	1	6/2/2011 6:49:00 PM
Ethylbenzene	47	1.0	µg/L	1	6/2/2011 6:49:00 PM
m,p-Xylene	260	2.0	µg/L	1	6/2/2011 6:49:00 PM
o-Xylene	340	2.0	µg/L	1	6/2/2011 6:49:00 PM
1,3,5-Trimethylbenzene	19	1.0	µg/L	1	6/2/2011 6:49:00 PM
1,2,4-Trimethylbenzene	43	1.0	µg/L	1	6/2/2011 6:49:00 PM
Naphthalene	13	2.0	µg/L	1	6/2/2011 6:49:00 PM
Surr: Dibromofluoromethane	89.1	82-122	%REC	1	6/2/2011 6:49:00 PM
Surr: 1,2-Dichloroethane-d4	78.1	73-135	%REC	1	6/2/2011 6:49:00 PM
Surr: Toluene-d8	86.4	82-117	%REC	1	6/2/2011 6:49:00 PM
Surr: 4-Bromofluorobenzene	108	77-119	%REC	1	6/2/2011 6:49:00 PM

**Lab ID:** 1106001-14      **Collection Date:** 5/23/2011 1:50:00 PM

**Collection Time:**

**Client Sample ID:** RW-3      **Matrix:** AQUEOUS

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>
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**EPA 8260B AROMATIC VOLATILES BY GC/MS      SW8260B**      **Analyst:** AL

Methyl tert-butyl ether	ND	100	µg/L	100	6/3/2011 6:15:00 PM
Benzene	200	100	µg/L	100	6/3/2011 6:15:00 PM
Toluene	6,800	100	µg/L	100	6/3/2011 6:15:00 PM
Ethylbenzene	970	100	µg/L	100	6/3/2011 6:15:00 PM
m,p-Xylene	5,200	200	µg/L	100	6/3/2011 6:15:00 PM
o-Xylene	2,800	200	µg/L	100	6/3/2011 6:15:00 PM
1,3,5-Trimethylbenzene	120	100	µg/L	100	6/3/2011 6:15:00 PM
1,2,4-Trimethylbenzene	460	100	µg/L	100	6/3/2011 6:15:00 PM
Naphthalene	ND	200	µg/L	100	6/3/2011 6:15:00 PM
Surr: Dibromofluoromethane	98.2	82-122	%REC	100	6/3/2011 6:15:00 PM
Surr: 1,2-Dichloroethane-d4	86.1	73-135	%REC	100	6/3/2011 6:15:00 PM
Surr: Toluene-d8	91.4	82-117	%REC	100	6/3/2011 6:15:00 PM
Surr: 4-Bromofluorobenzene	119	77-119	%REC	100	6/3/2011 6:15:00 PM

**AMRO Environmental Laboratories Corp.****Date:** 13-Jun-11

<b>CLIENT:</b>	Ross Environmental Associates	<b>Lab Order:</b>	1106001
<b>Project:</b>	27013 Derby Bulk		

**Lab ID:** 1106001-15      **Collection Date:** 5/24/2011 1:35:00 PM  
**Collection Time:****Client Sample ID:** TB      **Matrix:** AQUEOUS**Analyses**      **Result**      **RL**      **Qual**      **Units**      **DF**      **Date Analyzed****EPA 8260B AROMATIC VOLATILES BY GC/MS      SW8260B**      **Analyst: AL**

Methyl tert-butyl ether	ND	1.0	µg/L	1	6/2/2011 1:25:00 PM
Benzene	ND	1.0	µg/L	1	6/2/2011 1:25:00 PM
Toluene	ND	1.0	µg/L	1	6/2/2011 1:25:00 PM
Ethylbenzene	ND	1.0	µg/L	1	6/2/2011 1:25:00 PM
m,p-Xylene	ND	2.0	µg/L	1	6/2/2011 1:25:00 PM
o-Xylene	ND	2.0	µg/L	1	6/2/2011 1:25:00 PM
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1	6/2/2011 1:25:00 PM
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1	6/2/2011 1:25:00 PM
Naphthalene	ND	2.0	µg/L	1	6/2/2011 1:25:00 PM
Surr: Dibromofluoromethane	98.8	82-122	%REC	1	6/2/2011 1:25:00 PM
Surr: 1,2-Dichloroethane-d4	87.4	73-135	%REC	1	6/2/2011 1:25:00 PM
Surr: Toluene-d8	98.5	82-117	%REC	1	6/2/2011 1:25:00 PM
Surr: 4-Bromofluorobenzene	117	77-119	%REC	1	6/2/2011 1:25:00 PM

**Lab ID:** 1106001-16      **Collection Date:** 5/24/2011 8:40:00 AM  
**Collection Time:****Client Sample ID:** DUP      **Matrix:** AQUEOUS**Analyses**      **Result**      **RL**      **Qual**      **Units**      **DF**      **Date Analyzed****EPA 8260B AROMATIC VOLATILES BY GC/MS      SW8260B**      **Analyst: AL**

Methyl tert-butyl ether	ND	10	µg/L	10	6/3/2011 7:25:00 PM	
Benzene	72	10	µg/L	10	6/3/2011 7:25:00 PM	
Toluene	210	10	µg/L	10	6/3/2011 7:25:00 PM	
Ethylbenzene	40	10	µg/L	10	6/3/2011 7:25:00 PM	
m,p-Xylene	230	20	µg/L	10	6/3/2011 7:25:00 PM	
o-Xylene	300	20	µg/L	10	6/3/2011 7:25:00 PM	
1,3,5-Trimethylbenzene	18	10	µg/L	10	6/3/2011 7:25:00 PM	
1,2,4-Trimethylbenzene	35	10	µg/L	10	6/3/2011 7:25:00 PM	
Naphthalene	ND	20	µg/L	10	6/3/2011 7:25:00 PM	
Surr: Dibromofluoromethane	100	82-122	%REC	10	6/3/2011 7:25:00 PM	
Surr: 1,2-Dichloroethane-d4	86.2	73-135	%REC	10	6/3/2011 7:25:00 PM	
Surr: Toluene-d8	93.0	82-117	%REC	10	6/3/2011 7:25:00 PM	
Surr: 4-Bromofluorobenzene	125	77-119	S	%REC	10	6/3/2011 7:25:00 PM