Phase (check one)	Type (Check one)
☐ Initial Site Investigation ☐ Corrective Action Feasibility Investigation ☐ Corrective Action Plan ☐ Corrective Action Summary Report ☒ Operations and Monitoring Report	 □ Work Scope □ Technical Report □ PCF Reimbursement Request □ General Correspondence

2010 ANNUAL MONITORING REPORT FORMER R & D SUNOCO ROUTE 30 & ROUTE 100 RAWSONVILLE, VT 05155 VT DEC SMS #1991-1007

Prepared for:

A.R. SANDRI, INC 400 CHAPMAN STREET GREENFIELD, MA 01301 CONTACT: SHARON ABBOTT

Prepared by:
DB ENVIRONMENTAL CONSULTING
PO BOX 815
BRATTLEBORO, VT 05302-0815
PHONE: (802) 258-0350

David Balk, P.G., R.S.

FILE No. 1019
DOCUMENT: ANNRPT0710
JULY 30, 2010

DB ENVIRONMENTAL CONSULTING PO BOX 815 BRATTLEBORO, VT 05302-0815

> July 30, 2010 Project: 1019

Document: AnnRpt0710

Sharon Abbott A.R. Sandri, Inc. 400 Chapman Street Greenfield, MA 01301

RE: Annual Monitoring Report for Former R & D Sunoco, Route 30 & Route 100, Rawsonville, VT VTDEC Site #1991-1007

Dear Ms. Abbott:

DB Environmental Consulting (DBEC) has prepared this Annual Monitoring Report on behalf of A.R. Sandri, Inc. (Sandri) and at the request of the Vermont Department of Environmental Conservation (VTDEC). A Site Location Map is provided as Figure 1. A summary of relevant site conceptual model and contaminant information is provided below.

Fleming Oil Company of Brattleboro, Vermont presently operates the convenience/gasoline station. The site and surrounding properties slope to the north-northeast in the direction of the Winhall River. The closest presumed downgradient property Detail Sports is located to the northeast of the site. The Bischoff residential property is east of Detail Sports with the Kilburn residence beyond that. The Coleman Carwash is located north of the Detail Sports, Bischoff and Kilburn residences. The Coleman Carwash property abuts to the north by the Winhall River. The main contaminant of concern at the neighboring properties is Methyl tert-butyl ether (MTBE).

Date of Sampling Event and Wells Sampled: May 28, 2010 KIL-INN, DET-INF, DET-EFF, COL-

INF, BIS-INF, BIS-BET, and BIS-EFF.

Groundwater Sampling Method: Purge and collect.

<u>Laboratory Analytical Method</u>: EPA Method 8260 (VT VOC Scan)

Groundwater Flow Direction: Northeasterly, as had been defined by previous

reports.

Groundwater Table Trends: The groundwater table had been noted in previous

reports to be shallow in nature and less than 10

feet below ground surface.

<u>Dissolved VOC Concentrations</u>: No Primary Groundwater Quality Standards (PGQS)

were exceed in any of the samples collected. MTBE was noted in the water supply well samples KIL-INN (5.4 ug/L), KIL-FAUCET (5.4 ug/L) DET-INF (2.2 ug/L), DET-EFF (2.3 ug/L), and COL-INF (7.2). Table 1 provides a summary of analytical results.

CONCLUSIONS

DBEC provides the following conclusions:

A) MTBE concentrations were detected in the samples collected from water supply wells at presumed downgradient properties; No contaminants tested for were detected above PGQS for MTBE of 40 ug/L.

RECOMMENDATIONS

Based on the most recent monitoring event conducted by DBEC and historic information reviewed for the site the following recommendations are presented:

- 1) Continue annual monitoring events to include sampling from DET-EFF, DET-INF, KIL-FAUCET, COL-INF, BIS-INF, BIS-BET, and BIS-EFF. Samples should be analyzed VOCs via EPA Method 8260 (VT VOC Scan). A monitoring report should be prepared to summarize the results of the sampling event and conclusions with recommendations to address MTBE levels noted in the water supply wells.
- 2) The next annual sampling event will be conducted in May 2011 upon approval from the VTDEC and Sandri.

If you have any questions regarding work performed at this site, please call me at 1-802-258-0360.

Sincerely,

DB ENVIRONMENTAL CONSULTING

David Balk, P.G., R.S.

cc: Chuck Schwer, VT DEC Site Manager

Wilbur Rice, Green Mountain Ski and Sport (Detail Sports)

Dan Kilburn Stewart Coleman

Steve Jones, Former Bischoff Residence

Enclosures:

Figure 1

Site Locus Map

Figure 2

Sketch Map

Table 1

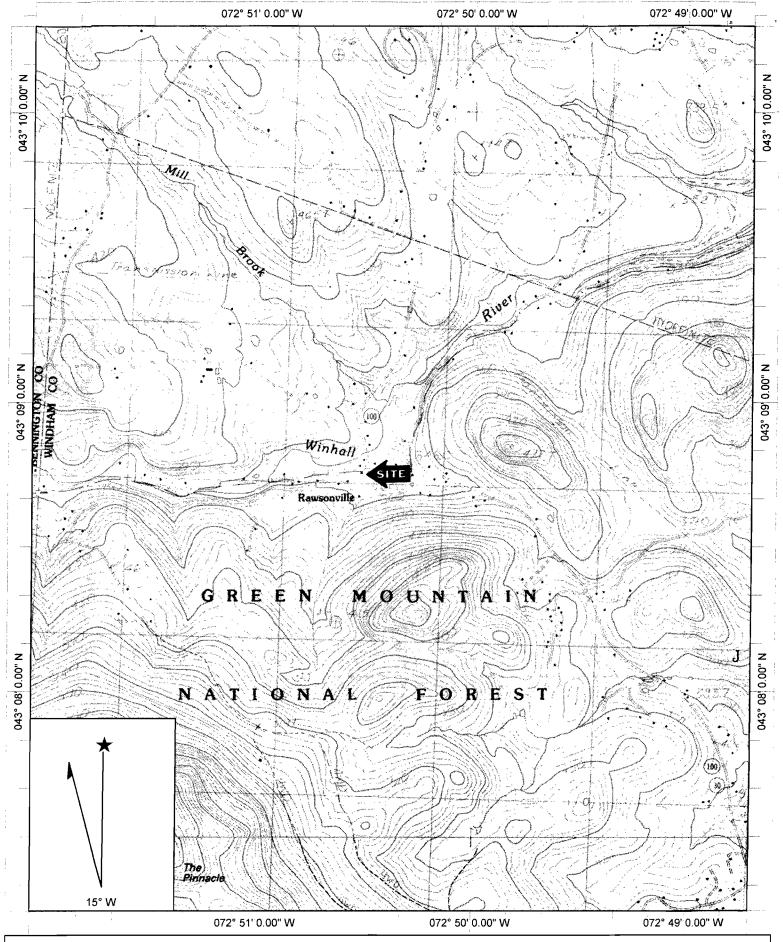
Summary of Groundwater Monitoring Data

Attachment I

Groundwater Sampling Log

Attachment II

Spectrum Analytical Laboratory Report



Name: LONDONDERRY

Date: 9/17/2007

Scale: 1 inch equals 2000 feet

Location: 043° 08' 46.2" N 072° 50' 22.6" W Caption: Former R D Sunoco Route 30 100 Rawsonville, VT 05155

Site Sketch	Former R & D Sunoco Route 30 & Route 100 Rawsonville, VT 05155	Not to Scale
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Former R&D Sunoco	Table 1										
Route 30 & 100 Rawsonville, VT					Summary of G	Groundwater M	onitorina				
VTDEC #1991-1007					•	nic Compound					
WELL ID					TOTAL		1,2,4-	1,3,5-			
Sampling Date	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	Naphthalene	Trimethylbenzene		MTBE		
Bischoff Influent			,	,		·	,	,			
2/12/1998	ND	ND	ND	ND	ND	NT	NT	NT	26		
8/27/1998	ND	ND	ND	ND	ND	NT	NT	NT	26		
2/24/1999	ND	ND	ND	ND	ND	ND	ND	ND	18		
8/17/1999	ND	ND	ND	ND	ND	ND	ND	ND	ND*		
2/16/2000 8/8/2000	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	26 13		
2/14/2001	ND	ND	ND ND	ND	ND	ND	ND ND	ND	27		
8/17/2001	ND	ND	ND	ND	ND	ND	ND	ND	20		
2/13/2002	ND	ND	ND	ND	ND	ND	ND	ND	23		
8/14/2002	ND	ND	ND	ND	ND	ND	ND	ND	24		
4/2/2003	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	20		
10/15/2003	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	18.6		
4/1/2004 10/15/2004	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<2.0 <2.0	ND ND	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	19.2 22.1		
5/20/2005	<1.0	<1.0	<1.0	<2.0	ND ND	<1.0	<1.0	<1.0	9.5		
11/3/2005	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	21.2		
4/18/2006	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	14.4		
8/5/2009	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	18.7		
5/28/2010	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	15.4		
Bischoff Between											
0/40/4000		NB	ND	ND	\ ID		N.T.		110		
2/12/1998 8/27/1998	ND ND	ND ND	ND ND	ND ND	ND ND	NT NT	NT NT	NT NT	ND ND		
2/24/1999	ND	ND	ND ND	ND	ND	ND	ND ND	ND ND	ND ND		
8/17/1999	ND	ND	ND	ND	ND	ND	ND	ND	ND		
2/16/2000	ND	ND	ND	ND	ND	ND	ND	ND	ND		
8/8/2000	ND	ND	ND	ND	ND	ND	ND	ND	ND		
2/14/2001	ND	ND	ND	ND	ND	ND	ND	ND	ND		
8/17/2001	ND	ND	ND	ND	ND	ND	ND	ND	ND		
2/13/2002	ND	ND	ND	ND	ND	ND	ND	ND	ND		
8/14/2002 4/2/2003	ND <1.0	ND <1.0	ND <1.0	ND <2.0	ND ND	ND <1.0	ND <1.0	ND <1.0	ND <1.0		
10/15/2003	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	<1.0		
4/1/2004	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	<1.0		
10/15/2004	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	<1.0		
5/20/2005	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	<1.0		
11/3/2005		<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	<1.0		
4/18/2006		<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	<1.0		
8/5/2009 5/28/2010		<1.0 <1.0	<1.0 <1.0	<2.0 <2.0	ND ND	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0		
3/28/2010	<1.0	<1.0	V1.0	\2.0	ND	<1.0	<1.0	<1.0	<1.0		
Bischoff Effluent											
2/12/1998	ND	ND	ND	ND	ND	NT	NT	NT	ND		
8/27/1998	ND	ND	ND	ND	ND	NT	NT	NT	ND		
2/24/1999	ND	ND	ND	ND	ND	ND	ND	ND	ND 10.01		
8/17/1999	ND	ND	ND ND	ND	ND	ND ND	ND ND	ND ND	18.0*		
2/16/2000 8/8/2000	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND		
2/14/2001	ND	ND	ND ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND		
8/17/2001	ND	ND	ND	ND	ND	ND	ND	ND	ND		
2/13/2002	ND	ND	ND	ND	ND	ND	ND	ND	ND		
8/14/2002	ND	ND	ND	ND	ND	ND	ND	ND	ND		
4/2/2003	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	<1.0		
10/15/2003	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	<1.0		
4/1/2004 10/15/2004		<1.0 <1.0	<1.0 <1.0	<2.0 <2.0	ND ND	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0		
5/20/2005	<1.0	<1.0	<1.0	<2.0	ND ND	<1.0	<1.0	<1.0	<1.0		
11/3/2005	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	<1.0		
4/18/2006		<1.0	1.6	2	3.6	1	6.3	<1.0	<1.0		
8/5/2009		<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	<1.0		
5/28/2010		<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	<1.0		
PGQS	5	1,000	700	10,000	NA	20	35	50	40		

Only compounds reported at concentrations above method detection limits are included in the table.

ND = Not Detected above indicated detection limit NA= Not applicable NT= Not tested NS= Not sampled Bold/Highlighted results indicates concentrations exceeding the VT PGQS for that compound.

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Farmer DOD Company	Table 1											
Former R&D Sunoco Route 30 & 100						Table 1						
Rawsonville, VT					Summary of (Groundwater M	onitoring					
VTDEC #1991-1007						anic Compound						
WELL ID					TOTAL	The Compound	1,2,4-	1,3,5-				
Sampling Date	Renzene	Toluene	Ethylhenzene	Xylenes	BTEX	Nanhthalene	, ,	Trimethylbenzene	MTBE			
Detail Influent	Delizerie	Toluene	Littyiberizerie	Ayleries	BILX	Napritrialerie	Trimetryiberizerie	Tillietriyiberizerie	MIIDL			
Detail influent												
2/12/1998	ND	ND	ND	ND	ND	NT	NT	NT	6.0			
8/27/1998	ND	ND	ND ND	ND	ND	NT	NT	NT NT	6.9 7.7			
2/24/1999	ND	ND	ND ND	ND	ND	ND	ND	ND	10			
8/17/1999	ND	ND	ND	ND	ND	ND ND	ND	ND ND	ND*			
2/16/2000	ND	ND	ND	ND	ND	ND	ND	ND ND	ND ND			
8/8/2000	ND	ND	ND	ND	ND	ND	ND	ND ND	6.1			
2/14/2001	ND	ND	ND	ND	ND	ND	ND	ND	5.1			
8/17/2001	ND	ND	ND	ND	ND	ND	ND	ND	4.6			
2/13/2002	ND	ND	ND	ND	ND	ND	ND	ND	5.6			
8/14/2002	ND	ND	ND	ND	ND	ND	ND	ND	4			
4/2/2003	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	4.1			
10/15/2003	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	3.61			
4/1/2004	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	3.6			
10/15/2004	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	3.2			
5/20/2005	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	1.4			
11/3/2005	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	2.8			
4/18/2006 6/22/2007	<1.0	<1.0	<1.0	<2.0 <2.0	ND ND	<1.0	<1.0 <1.0	<1.0	3.4			
6/5/2008	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<2.0	ND ND	<1.0 <1.0	<1.0	<1.0 <1.0	2.2			
5/20/2009	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	2.2			
5/28/2010	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	2.6			
0/20/2010	V1.0	V1.0	V1.0	\Z.0	IND	V1.0	V1.0	V1.0	2.0			
DUP (Detail Influent)												
2/12/1998	ND	ND	ND	ND	ND	NT	NT	NT	31			
8/27/1998	ND	ND	ND	ND	ND	NT	NT	NT	4.9			
2/24/1999	ND	ND	ND	ND	ND	ND	ND	ND	8.7			
8/17/1999	ND	ND	ND	ND	ND	ND	ND	ND	ND*			
2/16/2000	ND	ND	ND	ND	ND	ND	ND	ND	7			
8/8/2000	ND	ND	ND	ND	ND	ND	ND	ND	6.4			
2/14/2001	ND	ND	ND	ND	ND	ND	ND	ND	5.2			
8/17/01 (Coleman)	ND	ND	ND	ND	ND	ND	ND	ND	7.2			
2/13/2002	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	5.6 4			
8/14/2002 4/2/2003	<1.0	<1.0	<1.0	<2.0	ND ND	<1.0	(1.0	<1.0	4.3			
10/15/2003	<1.0	<1.0	<1.0	<2.0	ND ND	<1.0	<1.0	<1.0	3.8			
10/15/2004	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	3.2			
5/20/2005	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	1.3			
11/3/2005	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	2.9			
Detail Between												
2/12/1998	ND	ND	ND	ND	ND	NT	NT	NT	ND			
8/27/1998	ND	ND	ND	ND	ND	NT	NT	NT	ND			
2/24/1999	ND	ND	ND	ND	ND	ND	ND	ND	ND ND			
8/17/1999	ND	ND	ND	ND	ND	ND	ND	ND	ND			
2/16/2000	ND	ND	ND ND	ND	ND	ND	ND ND	ND	ND ND			
8/8/2000 2/14/2001	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND			
8/17/2001	ND	ND	ND ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND			
2/13/2002	ND	ND	ND ND	ND	ND	ND	ND ND	ND ND	ND ND			
8/14/2002	.,,,,		1 ,,0			oved per clien		110	110			
5, 2002					,		. 4					
PGQS	5	1,000	700	10,000	NA	20	35	50	40			

NOTES

Only compounds reported at concentrations above method detection limits are included in the table.

ND = Not Detected above indicated detection limit NA= Not applicable NT= Not tested NS= Not sampled Bold/Highlighted results indicates concentrations exceeding the VT PGQS for that compound.

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Former R&D Sunoco Route 30 & 100						Table 1			
Rawsonville, VT					Summary of (Groundwater M	onitoring		
VTDEC #1991-1007						anic Compound			
WELL ID					TOTAL	The Compound	1,2,4-	1,3,5-	
Sampling Date	Benzene	Toluene	Ethvlbenzene	Xvlenes	BTEX	Naphthalene	, ,	Trimethylbenzene	MTBE
Detail Effluent	201120110	10.00.10	,	71,101100	2.2.	таринатаго	· · · · · · · · · · · · · · · · · · ·		
2/12/1998	ND	ND	ND	ND	ND	NT	NT	NT	ND
8/27/1998	ND	ND	ND	ND	ND	NT	NT	NT	ND
2/24/1999	ND	ND	ND	ND	ND	ND	ND	ND	ND
8/17/1999	ND	ND	ND	ND	ND	ND	ND	ND	7.0*
2/16/2000	ND	ND	ND	ND	ND	ND	ND	ND	ND
8/8/2000	ND	ND	ND	ND	ND	ND	ND	ND	ND
2/14/2001	ND	ND	ND	ND	ND	ND	ND	ND	ND
8/17/2001	ND	ND	ND	ND	ND	ND	ND	ND	ND
2/13/2002	ND	ND	ND	ND	ND	ND	ND	ND	ND
8/14/2002	ND	ND	ND	ND	ND	ND	ND	ND	4.1
4/2/2003	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	4.8
10/15/2003	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	3.61
4/1/2004	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	3.8
10/15/2004	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	3.4
5/20/2005	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	1.4
11/3/2005	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	3.0
4/18/2006 6/22/2007	<1.0	<1.0 <1.0	<1.0 <1.0	<2.0 <2.0	ND ND	<1.0	<1.0 <1.0	<1.0	3.5 3.5
	<1.0				ND ND	<1.0		<1.0	
6/5/2008 5/20/2009	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<2.0 <2.0	ND ND	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	2.2
5/28/2010	<1.0	<1.0	<1.0	<2.0	ND ND	<1.0	<1.0	<1.0	2.7
3/28/2010	V1.0	<1.0	<1.0	\2.0	ND	<1.0	V1.0	V1.0	2.1
Kilburn Influent									
Kilburr Illiaent									
2/12/1998	ND	ND	ND	ND	ND	NT	NT	NT	11
8/27/1998	ND	ND	ND ND	ND	ND	NT	NT	NT	9.4
2/24/1999	ND	ND	ND	ND	ND	ND	ND	ND	12
8/17/1999	ND	ND	ND	ND	ND	ND	ND	ND ND	11
2/16/2000	ND	ND	ND	ND	ND	ND	ND	ND ND	8.3
8/8/2000	NS	NS	NS	NS	NS	NS	NS	NS	NS
2/14/2001	ND	ND	ND	ND	ND	ND	ND	ND	4.4
8/17/2001	ND	ND	ND	ND	ND	ND	ND	ND	5
2/13/2002	ND	ND	ND	ND	ND	ND	ND	ND	9.1
8/14/2002	ND	ND	ND	ND	ND	ND	ND	ND	12
4/2/2003	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	9.3
10/15/2003	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	1.46
4/1/2004	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	3.3
10/15/2004	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	5.9
5/20/2005	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	2.5
11/3/2005	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	2.7
4/18/2006	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	9.8
6/5/2008	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	8.1
5/20/2009	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	5.4
5/28/2010	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	1.6
					1		i e		

NOTES:

Only compounds reported at concentrations above method detection limits are included in the table.

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ND = Not Detected above indicated detection limit NA= Not applicable NT= Not tested NS= Not sampled Bold/Highlighted results indicates concentrations exceeding the VT PGQS for that compound.

Former R&D Sunoco Route 30 & 100						Table 1			
Rawsonville, VT					Summaru of (Sroundwoter M	anitarina		
VTDEC #1991-1007						Froundwater M			
WELL ID		1	1			nic Compound	_ `	405	
Sampling Date	Benzene	Toluono	Ethylbenzene	Xylenes	TOTAL BTEX	Nanhthalana	1,2,4- Trimethylbenzene	1,3,5-	MTBE
	Delizerie	Toluelle	Littyiberizerie	Ayleries	BILA	парппаспе	Trimetrybenzene	Timethybenzene	WIIDL
Kilburn Faucet									
0/40/4000	NID	NID	ND	ND	ND	NIT	N 1-T	NIT.	44
2/12/1998	ND	ND	ND	ND	ND	NT	NT	NT	11
8/27/1998 2/24/1999	ND ND	ND ND	ND ND	ND ND	ND ND	NT ND	NT ND	NT ND	6.1 12
8/17/1999	ND	ND	ND ND	ND	ND	ND	ND ND	ND ND	12
2/16/2000	ND	ND	ND ND	ND	ND	ND	ND ND	ND ND	8.8
8/8/2000	ND	ND	ND	ND	ND	ND	ND ND	ND ND	5.7
2/14/2001	ND	ND	ND	ND	ND	ND	ND ND	ND ND	5.2
8/17/2001	ND	ND	ND	ND	ND	ND	ND ND	ND ND	5.7
2/13/2002	ND	ND	ND	ND	ND	ND	ND ND	ND ND	9.6
8/14/2002	ND	ND	ND	ND	ND	ND	ND	ND ND	13
4/2/2003	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	9.6
10/15/2003	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	6.32
4/1/2004	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	3.3
10/15/2004	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	6.1
5/20/2005	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	2.8
11/3/2005	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	1.6
4/18/2006	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	7.4
6/22/2007	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	9.9
6/5/2008	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	7.2
5/20/2009	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	5.4
Coleman Influent									
2/12/1998	ND	ND	ND	ND	ND	NT	NT	NT	15
8/27/1998	ND	ND	ND	ND	ND	NT	NT	NT	7.1
2/24/1999	ND	ND	ND	ND	ND	ND	ND	ND	12
8/17/1999	ND	ND	ND	ND	ND	ND	ND	ND	9.9
2/16/2000	ND	ND	ND	ND	ND	ND	ND	ND	10
8/8/2000	ND	ND	ND	ND	ND	ND	ND	ND	8.6
2/14/2001	ND	ND	ND ND	ND	ND	ND	ND ND	ND	9.6
8/17/2001 2/13/2002	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	7.5 8.2
8/14/2002	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	9.7
4/2/2003	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	8.6
10/15/2003	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	8.57
4/1/2004	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	8.4
10/15/2004	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	7.3
5/20/2005	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	2.7
11/3/2005		<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	6.3
4/18/2006	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	6.3
6/22/2007	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	6.1
6/5/2008	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	4.5
5/20/2009	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	7.2
5/28/2010	<1.0	<1.0	<1.0	<2.0	ND	<1.0	<1.0	<1.0	6.4
PGQS	5	1,000	700	10,000	NA	20	3	50	40

NOTES:

Only compounds reported at concentrations above method detection limits are included in the table.

ND = Not Detected above indicated detection limit NA= Not applicable NT= Not tested NS= Not sampled Bold/Highlighted results indicates concentrations exceeding the VT PGQS for that compound.

1019 Former R D Sunoco GWdata

GROUNDWATER MONITORING DATA VTDEC Site # 1991-1007 Project Number: 1019 Client: A.R. Sandri, Inc. Date: 5/28/10Location: Former R & D Sunoco- Rawsonville, VT Sampler: DB Total Depth to Water Standing Point of Well Time D Reference Depth Water Height Volume Odors рΗ Sp. Cond. Temp (°C) ID Sampled (PVC/Rim) (feet) (feet) (feet) (gallons) (Y/N)(in.) (umhos/sec) **BIS-INF** 5:45 NA **BIS-BET** 5:55 NA NA NA NA NA NA NA NA NA **BIS-EFF** 6:00 NA **DET-INF** 5:00 NA DET-EFF 5:15 NA KIL-INF NA 6:15 NA NA NA NA NA NA NA NA NA KIL-FAU NS NA COL-INF 5:30 NA 7:00 NA NA NA NA Trip NA NA NA NA NA NA NOTES:

BIS-INF	
BIS-BET	
BIS-EFF	
DET-INF	
DET-EFF	
KIL-INF	
KIL-FAU	Still in process of building
COL-INF	

DB Environmental Consulting

PO Box 815

Brattleboro, VT 05302 Office: 1-802-258-0360

Sheet 1 of 1

Report Date: 14-Jun-10 14:33



☑ Final Report☐ Re-Issued Report

□ Revised Report

Laboratory Report

DB Environmental Consulting P.O. Box 815

Brattleboro, VT 05302-0815

Attn: David Balk

Project: Former R + D Sunoco - Rawsonville, VT

Project #: 1019

Laboratory ID	Client Sample ID	<u>Matrix</u>	Date Sampled	Date Received
SB13107-01	KIL-INN	Drinking Water	28-May-10 06:15	01-Jun-10 15:15
SB13107-02	DET-INN	Drinking Water	28-May-10 05:00	01-Jun-10 15:15
SB13107-03	DET-EFF	Drinking Water	28-May-10 05:15	01-Jun-10 15:15
SB13107-04	COL-INF	Drinking Water	28-May-10 05:30	01-Jun-10 15:15
SB13107-05	BIS-INF	Drinking Water	28-May-10 05:45	01-Jun-10 15:15
SB13107-06	BIS-BET	Drinking Water	28-May-10 05:55	01-Jun-10 15:15
SB13107-07	BIS-EFF	Drinking Water	28-May-10 06:00	01-Jun-10 15:15
SB13107-08	Trip	Trip	28-May-10 07:00	01-Jun-10 15:15

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.

All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110 Connecticut # PH-0777 Florida # E87600/E87936 Maine # MA138 New Hampshire # 2538 New Jersey # MA011/MA012 New York # 11393/11840 Pennsylvania # 68-04426/68-02924 Rhode Island # 98 USDA # S-51435

Vermont # VT-11393



Authorized by:

DVA

Hanibal C. Tayeh, Ph.D. President/Laboratory Director

Technical Reviewer's Initial:



Spectrum Analytical holds certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes.

Please note that this report contains 13 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

The sample temperature upon receipt by Spectrum Analytical courier was recorded as 6.9 degrees Celsius. The condition of these samples was further noted as refrigerated. The samples were transported on ice to the laboratory facility and the temperature was recorded at 5.2 degrees Celsius upon receipt at the laboratory. Please refer to the Chain of Custody for details specific to sample receipt times.

An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 8260B

Samples:

S005148-CCV1

Analyte percent difference is outside individual acceptance criteria, but within overall method allowances.

```
o-Xylene (21.0%)
```

Analyte percent drift is outside individual acceptance criteria, but within overall method allowances.

```
Naphthalene (-23.2%)
```

This affected the following samples:

1012178-BLK1 1012178-BS1

1012178-BSD1

COL-INF

DET-EFF

DET-INN

KIL-INN

S005179-CCV1

Analyte percent drift is outside individual acceptance criteria, but within overall method allowances.

```
Naphthalene (-22.3%)
```

This affected the following samples:

1012257-BLK1

1012257-BS1

1012257-BSD1

BIS-BET

BIS-EFF

BIS-INF

Trip

KIL-INN	B13107-01			Client Project # 1019		<u>Matrix</u> Drinking W	Collection Date/Time ater 28-May-10 06:15		Received 01-Jun-10			
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile O	rganic Compounds											
	rganic Compounds by 8260B by method SW846 5030 Wate	r MS										
71-43-2	Benzene	BRL		μg/l	1.0	1	SW846 8260B	09-Jun-10	10-Jun-10	JRO	1012178	į.
106-93-4	1,2-Dibromoethane (EDB)	BRL		μg/l	0.5	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL		μg/l	1.0	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL		μg/l	1.0	1	"	"		•		
1634-04-4	Methyl tert-butyl ether	1.6		μg/l	1.0	1	"	"	"	•	"	
91-20-3	Naphthalene	BRL		μg/l	1.0	1		"	·	"	"	
108-88-3	Toluene	BRL		μg/l	1.0	1		"	·	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL		μg/l	1.0	1	"	u u	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL		μg/l	1.0	1		"	"	"	"	
179601-23-1	m,p-Xylene	BRL		μg/l	2.0	1		"	·	"	"	
95-47-6	o-Xylene	BRL		μg/l	1.0	1	"	"	"	"	"	
Surrogate i	recoveries:											
460-00-4	4-Bromofluorobenzene	95		:	70-130 %		"	"	"	"	"	
2037-26-5	Toluene-d8	100		:	70-130 %		"	u u	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	105		;	70-130 %		"	"	"	"	"	

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1868-53-7

Dibromofluoromethane

DET-INN	B13107-02		·	Client Project # 1019		<u>Matrix</u> Orinking W	Collection Date/Time 28-May-10 05:00			Received 01-Jun-10		
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Or	ganic Compounds											
	rganic Compounds by 8260B by method SW846 5030 Wate	er MS										
71-43-2	Benzene	BRL		μg/l	1.0	1	SW846 8260B	09-Jun-10	10-Jun-10	JRO	1012178	
106-93-4	1,2-Dibromoethane (EDB)	BRL		μg/l	0.5	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL		μg/l	1.0	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL		μg/l	1.0	1		"	u	"	"	
1634-04-4	Methyl tert-butyl ether	2.6		μg/l	1.0	1		"	"	"	"	
91-20-3	Naphthalene	BRL		μg/l	1.0	1		"	"	"	"	
108-88-3	Toluene	BRL		μg/l	1.0	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL		μg/l	1.0	1	"	u u	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL		μg/l	1.0	1	"	"	"	"	"	
179601-23-1	m,p-Xylene	BRL		μg/l	2.0	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL		μg/l	1.0	1	"	"	"	"	"	
Surrogate re	ecoveries:											-
460-00-4	4-Bromofluorobenzene	95		:	70-130 %		"	u u	"	"	"	
2037-26-5	Toluene-d8	99		;	70-130 %		"	n n	"	"	u.	

70-130 %

17060-07-0

1868-53-7

1,2-Dichloroethane-d4

Dibromofluoromethane

106

DET-EF	Sample Identification DET-EFF SB13107-03 CAS No. Analyte(s) Result			Client Project # 1019		<u>Matrix</u> Drinking Water		Collection Date/Time r 28-May-10 05:15			Received 01-Jun-10		
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.	
Volatile O	Organic Compounds												
	Organic Compounds by 8260B												
<u>Prepared</u>	by method SW846 5030 Water	er MS											
71-43-2	Benzene	BRL		μg/l	1.0	1	SW846 8260B	09-Jun-10	10-Jun-10	JRO	1012178		
106-93-4	1,2-Dibromoethane (EDB)	BRL		μg/l	0.5	1	"	"	"	"	"		
107-06-2	1,2-Dichloroethane	BRL		μg/l	1.0	1		"	"	"	"		
100-41-4	Ethylbenzene	BRL		μg/l	1.0	1	"	"	"	"	"		
1634-04-4	Methyl tert-butyl ether	2.7		μg/l	1.0	1	"	"	"	"	"		
91-20-3	Naphthalene	BRL		μg/l	1.0	1	"	"	"	"	"		
108-88-3	Toluene	BRL		μg/l	1.0	1	"	"	"	"	"		
95-63-6	1,2,4-Trimethylbenzene	BRL		μg/l	1.0	1	"	"	"	"	"		
108-67-8	1,3,5-Trimethylbenzene	BRL		μg/l	1.0	1	"	"	"	"			
179601-23-	1 m,p-Xylene	BRL		μg/l	2.0	1	"	"	"	"	"		
95-47-6	o-Xylene	BRL		μg/l	1.0	1	II .	"	"	"	"		
Surrogate	recoveries:												
460-00-4	4-Bromofluorobenzene	96		7	70-130 %		"	"	"	"	"		
2037-26-5	Toluene-d8	98		7	70-130 %		"	"	"	"	"		

70-130 %

104

115

17060-07-0

1868-53-7

1,2-Dichloroethane-d4

Dibromofluoromethane

COL-INF	B13107-04			Client Project # 1019		<u>Matrix</u> Orinking W	Collection Date/Time ater 28-May-10 05:30			Received 01-Jun-10		
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile O	rganic Compounds											
	rganic Compounds by 8260B by method SW846 5030 Wat											
71-43-2	Benzene	BRL		μg/l	1.0	1	SW846 8260B	09-Jun-10	10-Jun-10	JRO	1012178	
106-93-4	1,2-Dibromoethane (EDB)	BRL		μg/l	0.5	1	"	II .	"	"	"	
107-06-2	1,2-Dichloroethane	BRL		μg/l	1.0	1	"	n n	"	"	"	
100-41-4	Ethylbenzene	BRL		μg/l	1.0	1	"	"		•	"	
1634-04-4	Methyl tert-butyl ether	6.4		μg/l	1.0	1	"	"		•	"	
91-20-3	Naphthalene	BRL		μg/l	1.0	1	"	"		•	"	
108-88-3	Toluene	BRL		μg/l	1.0	1	"	"		•	"	
95-63-6	1,2,4-Trimethylbenzene	BRL		μg/l	1.0	1	"	"	·	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL		μg/l	1.0	1	"	"	·	"	"	
179601-23-1	m,p-Xylene	BRL		μg/l	2.0	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL		μg/l	1.0	1	"	"	"	"	"	
Surrogate r	ecoveries:											
460-00-4	4-Bromofluorobenzene	94			70-130 %		"	u u	"	"	"	
2037-26-5	Toluene-d8	99			70-130 %		"	"	"	"	"	

70-130 %

17060-07-0

1868-53-7

1,2-Dichloroethane-d4

Dibromofluoromethane

105

Sample Id BIS-INF SB13107-	dentification			<u>Project #</u> 1019	I	<u>Matrix</u> Orinking W		ection Date -May-10 05			ceived Jun-10	
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile O	rganic Compounds											
	organic Compounds by 8260B by method SW846 5030 Wate											
71-43-2	Benzene	BRL		μg/l	1.0	1	SW846 8260B	09-Jun-10	10-Jun-10	JLG	1012257	
106-93-4	1,2-Dibromoethane (EDB)	BRL		μg/l	0.5	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL		μg/l	1.0	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL		μg/l	1.0	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	15.4		μg/l	1.0	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL		μg/l	1.0	1	"	"	"	"	"	
108-88-3	Toluene	BRL		μg/l	1.0	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL		μg/l	1.0	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL		μg/l	1.0	1	"	"	"	"	"	
179601-23-1	m,p-Xylene	BRL		μg/l	2.0	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL		μg/l	1.0	1	"	"	II .	"	"	
Surrogate	recoveries:											
460-00-4	4-Bromofluorobenzene	93		7	70-130 %		"	"	"	"	"	
2037-26-5	Toluene-d8	97		7	70-130 %		"	"	"	"	"	

70-130 %

17060-07-0 1,2-Dichloroethane-d4

Dibromofluoromethane

1868-53-7

103

Sample Id BIS-BET SB13107-	entification 06		·	Project # 019	I	<u>Matrix</u> Orinking W		ection Date -May-10 05			<u>ceived</u> Jun-10	
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile O	rganic Compounds											
	rganic Compounds by 8260B by method SW846 5030 Wate	er MS										
71-43-2	Benzene	BRL		μg/l	1.0	1	SW846 8260B	09-Jun-10	10-Jun-10	JLG	1012257	
106-93-4	1,2-Dibromoethane (EDB)	BRL		μg/l	0.5	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL		μg/l	1.0	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL		μg/l	1.0	1	"	"	"	"		
1634-04-4	Methyl tert-butyl ether	BRL		μg/l	1.0	1	"	"	"	"		
91-20-3	Naphthalene	BRL		μg/l	1.0	1	"	"	"	"		
108-88-3	Toluene	BRL		μg/l	1.0	1	"	"	"	"		
95-63-6	1,2,4-Trimethylbenzene	BRL		μg/l	1.0	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL		μg/l	1.0	1	"	"	"	"	"	
179601-23-1	m,p-Xylene	BRL		μg/l	2.0	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL		μg/l	1.0	1	"	"	"	"	"	
Surrogate r	recoveries:											
460-00-4	4-Bromofluorobenzene	95			70-130 %		"	u u	"	"	"	
2037-26-5	Toluene-d8	96			70-130 %		"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	102			70-130 %		"	"	"	"	"	

1868-53-7

Dibromofluoromethane

Sample Id BIS-EFF SB13107-	entification 07			<u>Project #</u> 1019	I	<u>Matrix</u> Drinking W		ection Date -May-10 06			<u>ceived</u> Jun-10	
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Or	ganic Compounds											
	rganic Compounds by 8260B by method SW846 5030 Wate											
71-43-2	Benzene	BRL		μg/l	1.0	1	SW846 8260B	09-Jun-10	10-Jun-10	JLG	1012257	
106-93-4	1,2-Dibromoethane (EDB)	BRL		μg/l	0.5	1	"	n n	"	"	"	
107-06-2	1,2-Dichloroethane	BRL		μg/l	1.0	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL		μg/l	1.0	1		"	"	"	"	
1634-04-4	Methyl tert-butyl ether	BRL		μg/l	1.0	1		"	"	"	"	
91-20-3	Naphthalene	BRL		μg/l	1.0	1		"	"	"	"	
108-88-3	Toluene	BRL		μg/l	1.0	1		"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL		μg/l	1.0	1	"	u u	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL		μg/l	1.0	1	"	u u	"	"	"	
179601-23-1	m,p-Xylene	BRL		μg/l	2.0	1	"	"	"	"	"	
95-47-6	o-Xylene	BRL		μg/l	1.0	1	"	"	"	"	"	
Surrogate r	ecoveries:											
460-00-4	4-Bromofluorobenzene	97		:	70-130 %		"	u u	"	"	"	
2037-26-5	Toluene-d8	96		:	70-130 %		"	"	"	"	"	

70-130 %

17060-07-0

1868-53-7

1,2-Dichloroethane-d4

Dibromofluoromethane

103

Sample Id Trip SB13107-	lentification -08			Project # 1019		<u>Matrix</u> Trip		ection Date -May-10 07	_		cceived -Jun-10	
CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile O	rganic Compounds											
	rganic Compounds by 8260B by method SW846 5030 Wate	r MS										
71-43-2	Benzene	BRL		μg/l	1.0	1	SW846 8260B	09-Jun-10	10-Jun-10	JLG	1012257	
106-93-4	1,2-Dibromoethane (EDB)	BRL		μg/l	0.5	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL		μg/l	1.0	1	"	"	"	"	"	
100-41-4	Ethylbenzene	BRL		μg/l	1.0	1	"	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	BRL		μg/l	1.0	1	"	"	u	"	"	
91-20-3	Naphthalene	BRL		μg/l	1.0	1	"	"	u u	"	"	
108-88-3	Toluene	BRL		μg/l	1.0	1	"	"	u	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL		μg/l	1.0	1	"	"	u u	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL		μg/l	1.0	1	"	"	u u	"	"	
179601-23-1	m,p-Xylene	BRL		μg/l	2.0	1	"	"	u u	"	"	
95-47-6	o-Xylene	BRL		μg/l	1.0	1	"	"	"	"	"	
Surrogate i	recoveries:											
460-00-4	4-Bromofluorobenzene	95			70-130 %		"	"	"	"	"	
2037-26-5	Toluene-d8	97			70-130 %		"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	103			70-130 %		"	"	"	"	"	

103

1868-53-7

Dibromofluoromethane

Volatile Organic Compounds - Quality Control

nalyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPE Limi
atch 1012178 - SW846 5030 Water MS										
Blank (1012178-BLK1)					Pre	epared & Ar	nalyzed: 09-	Jun-10		
Benzene	BRL		μg/l	1.0						
Chlorobenzene	BRL		μg/l	1.0						
1,2-Dibromoethane (EDB)	BRL		μg/l	0.5						
1,2-Dichloroethane	BRL		μg/l	1.0						
1,1-Dichloroethene	BRL		μg/l	1.0						
Ethylbenzene	BRL		μg/l	1.0						
Methyl tert-butyl ether	BRL		μg/l	1.0						
Naphthalene	BRL		μg/l	1.0						
Toluene	BRL		μg/l	1.0						
Trichloroethene	BRL		μg/l	1.0						
1,2,4-Trimethylbenzene	BRL			1.0						
1,3,5-Trimethylbenzene	BRL		μg/l	1.0						
•	BRL		μg/l							
m,p-Xylene	BRL		μg/l	2.0						
o-Xylene	BKL		μg/l	1.0						
Surrogate: 4-Bromofluorobenzene	47.3		μg/l		50.0		95	70-130		
Surrogate: Toluene-d8	48.7		μg/l		50.0		97	70-130		
Surrogate: 1,2-Dichloroethane-d4	52.0		μg/l		50.0		104	70-130		
Surrogate: Dibromofluoromethane	52.0		μg/l		50.0		104	70-130		
LCS (1012178-BS1)					Pre	epared & Ar	nalyzed: 09-	Jun-10		
Benzene	20.8		μg/l		20.0		104	70-130		
1,2-Dibromoethane (EDB)	20.7		μg/l		20.0		103	70-130		
1,2-Dichloroethane	19.8		μg/l		20.0		99	70-130		
Ethylbenzene	23.5		μg/l		20.0		117	70-130		
Methyl tert-butyl ether	20.2		μg/l		20.0		101	70-130		
Naphthalene	16.4		μg/l		20.0		82	70-130		
Toluene	21.2		μg/l		20.0		106	70-130		
1,2,4-Trimethylbenzene	24.0		μg/l		20.0		120	70-130		
1,3,5-Trimethylbenzene	24.1		μg/l		20.0		120	70-130		
m,p-Xylene	47.7		μg/l		40.0		119	70-130		
o-Xylene	24.4		μg/l		20.0		122	70-130		
			μул		20.0			70-130		
Surrogate: 4-Bromofluorobenzene	52.2		μg/l		50.0		104	70-130		
Surrogate: Toluene-d8	49.2		μg/l		50.0		98	70-130		
Surrogate: 1,2-Dichloroethane-d4	49.4		μg/l		50.0		99	70-130		
Surrogate: Dibromofluoromethane	54.4		μg/l		50.0		109	70-130		
LCS Dup (1012178-BSD1)					Pre	epared & Ar	nalyzed: 09-	Jun-10		
Benzene	20.4		μg/l		20.0		102	70-130	2	30
1,2-Dibromoethane (EDB)	20.6		μg/l		20.0		103	70-130	0.5	25
1,2-Dichloroethane	19.5		μg/l		20.0		97	70-130	2	25
Ethylbenzene	22.8		μg/l		20.0		114	70-130	3	30
Methyl tert-butyl ether	19.8		μg/l		20.0		99	70-130	2	30
Naphthalene	16.3		μg/l		20.0		81	70-130	0.6	30
Toluene	20.6		μg/l		20.0		103	70-130	3	30
1,2,4-Trimethylbenzene	23.8		μg/l		20.0		119	70-130	0.8	30
1,3,5-Trimethylbenzene	23.1		μg/l		20.0		116	70-130	4	30
m,p-Xylene	46.6		μg/l		40.0		117	70-130	2	30
o-Xylene	23.4		μg/l		20.0		117	70-130	4	30
Surrogate: 4-Bromofluorobenzene	51.8		μg/l		50.0		104	70-130		
Surrogate: 7-Biomondorobenzene Surrogate: Toluene-d8	48.4		μg/l μg/l		50.0		97	70-130 70-130		
=								70-130 70-130		
Surrogate: 1,2-Dichloroethane-d4 Surrogate: Dibromofluoromethane	48.8 54.7		μg/l μg/l		50.0 50.0		98 109	70-130 70-130		

Volatile Organic Compounds - Quality Control

nalyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limi
atch 1012257 - SW846 5030 Water MS										
Blank (1012257-BLK1)					Pre	epared & Ar	nalyzed: 10-	Jun-10		
Benzene	BRL		μg/l	1.0						
Chlorobenzene	BRL		μg/l	1.0						
1,2-Dibromoethane (EDB)	BRL		μg/l	0.5						
1,2-Dichloroethane	BRL		μg/l	1.0						
1,1-Dichloroethene	BRL		μg/l	1.0						
Ethylbenzene	BRL		μg/l	1.0						
Methyl tert-butyl ether	BRL		μg/l	1.0						
Naphthalene	BRL		μg/l	1.0						
Toluene	BRL		μg/l	1.0						
Trichloroethene	BRL		μg/l	1.0						
1,2,4-Trimethylbenzene	BRL		μg/l	1.0						
1,3,5-Trimethylbenzene	BRL		μg/l	1.0						
m,p-Xylene	BRL		μg/l	2.0						
o-Xylene	BRL			2.0 1.0						
			μg/l	1.0						
Surrogate: 4-Bromofluorobenzene	48.2		μg/l		50.0		96	70-130		
Surrogate: Toluene-d8	50.2		μg/l		50.0		100	70-130		
Surrogate: 1,2-Dichloroethane-d4	53.2		μg/l		50.0		106	70-130		
Surrogate: Dibromofluoromethane	53.5		μg/l		50.0		107	70-130		
LCS (1012257-BS1)					Pre	epared & Ar	nalyzed: 10-	Jun-10		
Benzene	21.7		μg/l		20.0		108	70-130		
1,2-Dibromoethane (EDB)	21.9		μg/l		20.0		110	70-130		
1,2-Dichloroethane	20.5		μg/l		20.0		102	70-130		
Ethylbenzene	23.5		μg/l		20.0		117	70-130		
Methyl tert-butyl ether	20.6		μg/l		20.0		103	70-130		
Naphthalene	17.0		μg/l		20.0		85	70-130		
Toluene	22.0		μg/l		20.0		110	70-130		
1,2,4-Trimethylbenzene	24.7		μg/l		20.0		123	70-130		
1,3,5-Trimethylbenzene	24.6		μg/l		20.0		123	70-130		
m,p-Xylene	48.5		μg/l		40.0		121	70-130		
o-Xylene	24.5		μg/l		20.0		122	70-130		
Surrogate: 4-Bromofluorobenzene	52.5		μg/l		50.0		105	70-130		
Surrogate: Toluene-d8	49.6		μg/l		50.0		99	70-130		
Surrogate: 1,2-Dichloroethane-d4	49.2		μg/l		50.0		98	70-130		
Surrogate: Dibromofluoromethane	53.6		μg/l		50.0		107	70-130		
LCS Dup (1012257-BSD1)					Pre	epared & Ar	nalyzed: 10-	<u>Jun-10</u>		
Benzene	20.6		μg/l		20.0		103	70-130	5	30
1,2-Dibromoethane (EDB)	20.9		μg/l		20.0		104	70-130	5	25
1,2-Dichloroethane	20.3		μg/l		20.0		101	70-130	0.9	25
Ethylbenzene	22.7		μg/l		20.0		114	70-130	3	30
Methyl tert-butyl ether	20.3		μg/l		20.0		102	70-130	1	30
Naphthalene	16.4		μg/l		20.0		82	70-130	4	30
Toluene	21.4		μg/l		20.0		107	70-130	3	30
1,2,4-Trimethylbenzene	23.9		μg/l		20.0		120	70-130	3	30
1,3,5-Trimethylbenzene	23.4		μg/l		20.0		117	70-130	5	30
m,p-Xylene	46.9		μg/l		40.0		117	70-130	3	30
o-Xylene	23.2		μg/l		20.0		116	70-130	5	30
Surrogate: 4-Bromofluorobenzene	52.0		μg/l		50.0		104	70-130		
Surrogate: Toluene-d8	49.8		μg/l		50.0		100	70-130 70-130		
Surrogate: 1,2-Dichloroethane-d4	49.0				50.0		98	70-130 70-130		
Surrogate: 1,2-Dicfiloroethane-u4 Surrogate: Dibromofluoromethane	49.2 54.5		μg/l μg/l		50.0		96 109	70-130 70-130		

Notes and Definitions

BRL Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit

dry Sample results reported on a dry weight basis

NR Not Reported

RPD Relative Percent Difference

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

<u>Laboratory Control Sample (LCS)</u>: A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

<u>Matrix Spike</u>: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

<u>Method Blank</u>: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

<u>Surrogate</u>: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic

Validated by: Hanibal C. Tayeh, Ph.D. Kimberly Wisk



CHAIN OF CUSTODY RECORD

Special Handling:

Standard TAT - 7 to 10 business days

Rush TAT - Date Needed:

All TATs subject to laboratory approval.

			_
otherwise instructed.	Samples disposed of after 60 days unless	Min. 24-hour notification needed for rushes.	can arrange character to teachers affect on the

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