Environmental Resources Management

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http://www.erm.com

ERM

29 October 2015 Reference: 0252540

Mr. Michael B. Smith Vermont Department of Environmental Conservation Waste Management Prevention Division One National Life Drive Davis One Montpelier, VT 05620-3704

Re: CAP Report #18

Energizer Battery Manufacturing, Inc.

401 Gage Street

Bennington, Vermont 05201

Dear Michael:

Environmental Resources Management (ERM) is pleased to submit this letter report to the Vermont Department of Environmental Conservation (VT DEC) documenting the Corrective Action Plan (CAP) post-remediation monitoring on behalf of Energizer Battery Manufacturing, Inc. (Energizer) for the Energizer facility at 401 Gage Street, Bennington, Vermont (the "Site"). The VT DEC Sites Management Section has assigned the Site Number 2006-3509.

POST-REMEDIATION MONITORING STATUS

Following discussion with and approval from VT DEC (per e-mail to ERM from Michael Smith, dated 18 September 2012), all Interim Remedial Measure (IRM) and CAP systems were deactivated on 25 September 2012 to enable initiation of post-remediation groundwater monitoring.

In January 2015, VT DEC agreed to a revised monitoring schedule (per email to ERM from Michael Smith, dated 8 January 2015), which includes semi-annual sampling (April and September) of ERM-12 and ERM-16; and annual sampling (September) of ERM-8, ERM-11S and ERM-13.

Post-remediation quarterly monitoring began in December 2012 and continued on a quarterly basis through March 2014. Semi-annual sampling began in September 2014.

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RESULTS AND RECOMMENDATIONS

Groundwater samples were collected using passive diffusion bags (PDBs) from two monitoring wells during the April 2015 semi-annual sampling event and from five monitoring wells during the September 2015 semi-annual sampling event.

The following attachments present groundwater monitoring results:

- Table 1 Groundwater Analytical Results
- Figures 3 and 4 Groundwater Analytical Results and Time-Series Plots
- Appendix A Laboratory Analytical Reports.

Analytical results from groundwater samples collected in April and September 2015 indicate the following:

- PCE concentrations in ERM-8 and ERM-13 remained relatively steady over the reporting period and continue to be below Vermont Groundwater Quality Standards (VT GWQS). PCE concentrations in ERM-13 have been consistently below laboratory detection limits for six of the last seven monitoring events. These two wells are located on the Energizer property hydraulically downgradient of the remediated source area (i.e., former degreaser source area). These data clearly indicate that remediation of the former degreaser source area has resulted in achievement of VT GWQS at the compliance boundary (i.e., the downgradient Energizer property boundary) and that concentration rebound has not occurred, nor is it likely to occur.
- PCE concentrations in ERM-11S and ERM-16 increased slightly over the reporting period and continue to exceed the VT GWQS, but are not in excess of historic highs. These two wells are located hydraulically downgradient of the source areas identified on the adjacent residential properties to the north (*Residential Property Investigation Fall 2011 and Spring 2012*, submitted to VT DEC 7 August 2012). As such, the continued VT GWQS exceedances are attributable to contamination migrating from the residential properties, not from the Energizer property.

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- PCE concentrations in ERM-12 decreased over the reporting period, but continue to exceed the VT GWQS. This well is also located hydraulically downgradient of the source areas identified on the adjacent residential properties to the north (*Residential Property Investigation Fall 2011 and Spring 2012*, submitted to VT DEC 7 August 2012). As such, the continued VT GWQS exceedances are attributable to contamination migrating from the residential properties, not from the Energizer property.
- TCE concentrations in groundwater were below VT GWQS in all monitoring wells sampled during this period.

Based on the data collected during this reporting period, ERM has developed the following recommendations for future activities:

 Discontinue all groundwater monitoring activities, decommission all site monitoring wells (or offer to leave some open for use by the VT DEC to monitor groundwater quality downgradient of the residential property source areas) and petition the VT DEC for a Site Management Activity Completed (SMAC) designation.

Please call either of the undersigned at (617) 646-7800 if you have any questions or require additional information.

Sincerely,

R. Joseph Fiacco, Jr., P.G.

Principal-in-Charge

Ethan C. Gyles, P.E.

Ethan G. Gyln

Project Manager

Cc: Mr. Jeffrey Gipson (Energizer)

Attachments:

 Table 1
 Summary of Groundwater Analytical Results

Figure 1 Site Locus Map

Figure 2 Site Plan

Figure 3 PCE Concentrations in Groundwater Samples

Figure 4 PCE Groundwater Time Series Plots

Appendix A Groundwater Analytical Results

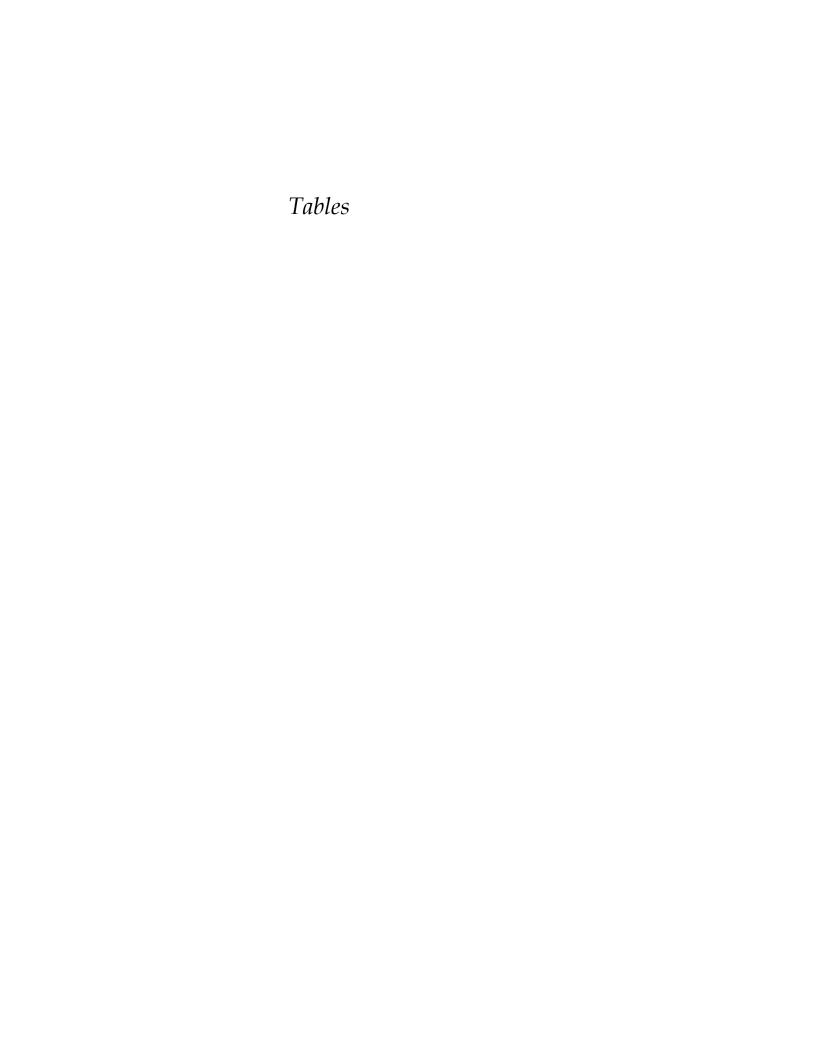


Table 1 Summary of Groundwater Analytical Results Energizer Facility 401 Gage Street, Bennington, VT

Location ID: Sample Date: Laboratory Sample Type:	Primary Groundwater Quality Standards Enforcement Standard	ERM-5S 18-Jul-06 Stone N	ERM-5S 13-Feb-07 Stone N	ERM-5S 15-Sep-10 Alpha PDB	ERM-5S 16-Dec-10 Alpha PDB	ERM-5S 18-Mar-11 Alpha PDB	ERM-5S 28-Jun-11 Alpha PDB	ERM-5S 25-Sep-12 Alpha PDB	ERM-5S 11-Dec-12 Alpha PDB	ERM-5S 19-Mar-13 Alpha PDB	ERM-5S 19-Jun-13 Alpha PDB
Volatile Organics (VOCs) (ug/l)											
Tetrachloroethylene	5	24	12	1.5	1.2	0.80	1.7	0.71	< 0.50	1.2	0.95
Trichloroethylene	5	3	2.3	2.0	< 0.50	< 0.50	0.57	< 0.50	< 0.50	< 0.50	< 0.50
Cis-1,2-Dichloroethene	70	< 2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trans-1,2-Dichloroethene	100	< 2	< 2	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75

ug/l = Micrograms per liter.

< = Compound not detected. Method detection limit shown.</p>

Bold cells indicate concentrations greater than the laboratory detection limits.

Shaded cells indicate exceedances of Primary Groundwater Quality

Standards Enforcement Standard.

Alpha = Alpha Woods Hole Laboratory Westboro, MA.

Stone = Stone Environmental, Inc. Montpelier, VT.

Analyses for VOCs performed by Alpha (EPA Method SW8260) and

Stone (EPA Method SW8260B). See Table for distinction.

FD = Field Duplicate.

N = Normal Sample.

Table 1 Summary of Groundwater Analytical Results Energizer Facility 401 Gage Street, Bennington, VT

Location ID: Sample Date: Laboratory Sample Type:	Primary Groundwater Quality Standards Enforcement Standard	ERM-5S 12-Sep-13 Alpha PDB	ERM-5S 25-Mar-14 Alpha PDB	ERM-5S 16-Sep-14 Alpha PDB
Volatile Organics (VOCs) (ug/l)				
Tetrachloroethylene	5	2.3	0.91	< 0.50
Trichloroethylene	5	1.0	< 0.50	< 0.50
Cis-1,2-Dichloroethene	70	< 0.50	< 0.50	< 0.50
Trans-1,2-Dichloroethene	100	< 0.75	< 0.75	< 0.75

ug/l = Micrograms per liter.

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Table 1 Summary of Groundwater Analytical Results Energizer Facility 401 Gage Street, Bennington, VT

Location ID: Sample Date: Laboratory	Primary Groundwater Quality Standards Enforcement	ERM-8 21-Feb-07 Alpha	ERM-8 17-Jun-10 Alpha	ERM-8 17-Jun-10 Alpha	ERM-8 15-Sep-10 Alpha	ERM-8 16-Dec-10 Alpha	ERM-8 17-Mar-11 Alpha	ERM-8 28-Jun-11 Alpha	ERM-8 28-Jun-11 Alpha	ERM-8 25-Oct-11 Alpha	ERM-8 21-Dec-11 Alpha
Sample Type:		N	N	PDB	PDB	PDB	PDB	PDB	FD	PDB	PDB
Volatile Organics (VOCs) (ug/l)											
Tetrachloroethylene	5	62	7.7	8.9	7.7	2.7	4.4	7.9	7.7	7.0	3.2
Trichloroethylene	5	3.9	0.74	0.83	4.0	1.6	0.95	1.1	1.1	1.5	0.64
Cis-1,2-Dichloroethene	70	0.83	< 0.50	< 0.50	2.1	1.3	1.0	0.98	0.98	2.1	0.81
Trans-1,2-Dichloroethene	100	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75

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Stone (EPA Method SW8260B). See Table for distinction.

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N = Normal Sample.

Table 1 Summary of Groundwater Analytical Results Energizer Facility 401 Gage Street, Bennington, VT

Location ID: Sample Date: Laboratory Sample Type:	Primary Groundwater Quality Standards Enforcement Standard	ERM-8 22-Mar-12 Alpha PDB	ERM-8 22-Mar-12 Alpha FD	ERM-8 26-Jun-12 Alpha PDB	ERM-8 26-Jun-12 Alpha FD	ERM-8 25-Sep-12 Alpha PDB	ERM-8 12-Sep-13 Alpha PDB	ERM-8 12-Sep-13 Alpha FD	ERM-8 16-Sep-14 Alpha PDB	ERM-8 16-Sep-14 Alpha FD	ERM-8 23-Sep-15 Alpha PDB
Volatile Organics (VOCs) (ug/l)											
Tetrachloroethylene	5	1.5	1.5	2.3	2.3	1.5	0.97	0.98	2.0	2.0	1.6
Trichloroethylene	5	< 0.50	< 0.50	< 0.50	< 0.50	0.52	< 0.50	< 0.50	0.87	0.86	0.91
Cis-1,2-Dichloroethene	70	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trans-1,2-Dichloroethene	100	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75

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Stone (EPA Method SW8260B). See Table for distinction.

FD = Field Duplicate.

N = Normal Sample.

Table 1 Summary of Groundwater Analytical Results Energizer Facility 401 Gage Street, Bennington, VT

Location ID: Sample Date: Laboratory Sample Type:	Primary Groundwater Quality Standards Enforcement Standard	ERM-11S 23-Feb-07 Alpha N	ERM-11S 16-Jun-10 Alpha N	ERM-11S 16-Jun-10 Alpha PDB	ERM-11S 15-Sep-10 Alpha PDB	ERM-11S 16-Dec-10 Alpha PDB	ERM-11S 18-Mar-11 Alpha PDB	ERM-11S 28-Jun-11 Alpha PDB	ERM-11S 24-Oct-11 Alpha PDB	ERM-11S 21-Dec-11 Alpha PDB	ERM-11S 22-Mar-12 Alpha PDB
Volatile Organics (VOCs) (ug/l)											
Tetrachloroethylene	5	180	100	78	100	90	100	83	68	100	83
Trichloroethylene	5	< 2.5	< 0.50	< 0.50	5.3	< 1.2	< 1.0	< 1.2	< 1.2	< 0.50	< 0.50
Cis-1,2-Dichloroethene	70	< 2.5	< 0.50	< 0.50	< 1.2	< 1.2	< 1.0	< 1.2	< 1.2	< 0.50	< 0.50
Trans-1,2-Dichloroethene	100	< 3.8	< 0.75	< 0.75	< 1.9	< 1.9	< 1.5	< 1.9	< 1.9	< 0.75	< 0.75

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Stone (EPA Method SW8260B). See Table for distinction.

FD = Field Duplicate.

N = Normal Sample.

Table 1 Summary of Groundwater Analytical Results Energizer Facility 401 Gage Street, Bennington, VT

Location ID: Sample Date: Laboratory Sample Type:	Primary Groundwater Quality Standards Enforcement Standard	ERM-11S 26-Jun-12 Alpha PDB	ERM-11S 25-Sep-12 Alpha PDB	ERM-11S 12-Sep-13 Alpha PDB	ERM-11S 19-Dec-13 Alpha PDB	ERM-11S 16-Sep-14 Alpha PDB	ERM-11S 23-Sep-15 Alpha PDB
Volatile Organics (VOCs) (ug/l)							
Tetrachloroethylene	5	92	100	*	80	110	120
Trichloroethylene	5	< 0.50	< 0.50	*	< 0.50	< 0.50	< 0.50
Cis-1,2-Dichloroethene	70	< 0.50	< 0.50	*	< 0.50	< 0.50	< 0.50
Trans-1,2-Dichloroethene	100	< 0.75	< 0.75	*	< 0.75	< 0.75	< 0.75

^{*} No sample taken. No PDB in well.

ug/l = Micrograms per liter.

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N = Normal Sample.

Table 1 Summary of Groundwater Analytical Results Energizer Facility 401 Gage Street, Bennington, VT

Location ID: Sample Date: Laboratory Sample Type:	Primary Groundwater Quality Standards Enforcement Standard	ERM-12 27-Feb-07 Alpha N	ERM-12 5-Sep-07 Stone N	ERM-12 5-Sep-07 Stone FD	ERM-12 18-Dec-07 Alpha N	ERM-12 10-Mar-08 Alpha N	ERM-12 10-Mar-08 Alpha FD	ERM-12 16-Jun-08 Alpha N	ERM-12 26-Sep-08 Alpha N	ERM-12 10-Dec-08 Alpha N	ERM-12 11-Mar-09 Alpha N
Volatile Organics (VOCs) (ug/l)											
Tetrachloroethylene	5	120	210	180	150	72	69	190	84	290	60
Trichloroethylene	5	< 2.0	< 10	< 10	< 2.0	0.50	< 0.50	< 1.0	4.2	40	11
Cis-1,2-Dichloroethene	70	< 2.0	< 10	< 10	< 2.0	< 0.50	< 0.50	< 1.0	< 2.0	24	3.6
Trans-1,2-Dichloroethene	100	< 3.0	< 10	< 10	< 3.0	< 0.75	< 0.75	<1.5	< 3.0	< 3.0	< 1.5

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Table 1 Summary of Groundwater Analytical Results Energizer Facility 401 Gage Street, Bennington, VT

Location ID: Sample Date: Laboratory Sample Type:	Primary Groundwater Quality Standards Enforcement Standard	ERM-12 17-Jun-09 Alpha N	ERM-12 16-Sep-09 Alpha N	ERM-12 8-Dec-09 Alpha N	ERM-12 30-Mar-10 Alpha N	ERM-12 16-Jun-10 Alpha N	ERM-12 16-Jun-10 Alpha PDB	ERM-12 15-Sep-10 Alpha PDB	ERM-12 16-Dec-10 Alpha PDB	ERM-12 18-Mar-11 Alpha PDB	ERM-12 18-Mar-11 Alpha PDB	ERM-12 28-Jun-11 Alpha PDB
Volatile Organics (VOCs) (ug/l)												
Tetrachloroethylene	5	32.8	50	39	58	100	100	120	62	70	70	54
Trichloroethylene	5	6.78	3.5	1.1	< 0.50	< 0.50	< 0.50	5.0	< 1.2	< 1.0	< 1.0	< 1.0
Cis-1,2-Dichloroethene	70	<2.0	< 1.2	< 0.50	< 0.50	< 0.50	< 0.50	< 1.2	< 1.2	< 1.0	< 1.0	< 1.0
Trans-1,2-Dichloroethene	100	<2.0	< 1.9	< 0.75	< 0.75	< 0.75	< 0.75	< 1.9	< 1.9	< 1.5	< 1.5	< 1.5

ug/l = Micrograms per liter.

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Stone (EPA Method SW8260B). See Table for distinction.

FD = Field Duplicate.

N = Normal Sample.

Table 1 Summary of Groundwater Analytical Results Energizer Facility 401 Gage Street, Bennington, VT

Location ID: Sample Date: Laboratory Sample Type:	Primary Groundwater Quality Standards Enforcement Standard	ERM-12 24-Oct-11 Alpha PDB	ERM-12 21-Dec-11 Alpha PDB	ERM-12 21-Mar-12 Alpha PDB	ERM-12 26-Jun-12 Alpha PDB	ERM-12 25-Sep-12 Alpha PDB	ERM-12 25-Sep-12 Alpha FD	ERM-12 11-Dec-12 Alpha PDB	ERM-12 11-Dec-12 Alpha FD	ERM-12 19-Mar-13 Alpha PDB	ERM-12 19-Jun-13 Alpha PDB
Volatile Organics (VOCs) (ug/l)											
Tetrachloroethylene	5	53	80	57	55	76	78	120	120	91	66
Trichloroethylene	5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.2	< 0.50
Cis-1,2-Dichloroethene	70	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.2	< 0.50
Trans-1,2-Dichloroethene	100	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 1.9	< 0.75

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Stone (EPA Method SW8260B). See Table for distinction.

FD = Field Duplicate.

N = Normal Sample.

Table 1 Summary of Groundwater Analytical Results Energizer Facility 401 Gage Street, Bennington, VT

Location ID: Sample Date: Laboratory Sample Type:	Primary Groundwater Quality Standards Enforcement Standard	ERM-12 19-Jun-13 Alpha FD	ERM-12 12-Sep-13 Alpha PDB	ERM-12 19-Dec-13 Alpha PDB	ERM-12 19-Dec-13 Alpha FD	ERM-12 25-Mar-14 Alpha PDB	ERM-12 25-Mar-14 Alpha FD	ERM-12 16-Sep-14 Alpha PDB	ERM-12 23-Apr-15 Alpha PDB	ERM-12 23-Sep-15 Alpha PDB
Volatile Organics (VOCs) (ug/l)										
Tetrachloroethylene	5	63	4.9	93	100	100	100	140	100	72
Trichloroethylene	5	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cis-1,2-Dichloroethene	70	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trans-1,2-Dichloroethene	100	< 0.75	< 0.75	< 1.5	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75

ug/l = Micrograms per liter.

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N = Normal Sample.

Table 1 Summary of Groundwater Analytical Results Energizer Facility 401 Gage Street, Bennington, VT

Location ID: Sample Date: Laboratory Sample Type:	Primary Groundwater Quality Standards Enforcement Standard	ERM-13 27-Feb-07 Alpha N	ERM-13 5-Sep-07 Stone N	ERM-13 10-Mar-08 Alpha N	ERM-13 16-Jun-08 Alpha N	ERM-13 26-Sep-08 Alpha N	ERM-13 10-Dec-08 Alpha N	ERM-13 11-Mar-09 Alpha N	ERM-13 17-Jun-09 Alpha N	ERM-13 16-Sep-09 Alpha N	ERM-13 7-Dec-09 Alpha N
Volatile Organics (VOCs) (ug/l)											
Tetrachloroethylene	5	16	40	15	23	8.4	34	13	4.13	5.4	3.1
Trichloroethylene	5	1.2	< 10	0.71	0.61	1.4	4.0	4.7	4.77	2.8	1.1
Cis-1,2-Dichloroethene	70	< 0.50	< 10	< 0.50	< 0.50	< 0.50	1.5	1.9	< 2.0	< 0.50	< 0.50
Trans-1,2-Dichloroethene	100	< 0.75	< 10	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 2.0	< 0.75	< 0.75

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FD = Field Duplicate.

N = Normal Sample.

Table 1 Summary of Groundwater Analytical Results Energizer Facility 401 Gage Street, Bennington, VT

Location ID: Sample Date: Laboratory Sample Type:	Primary Groundwater Quality Standards Enforcement Standard	ERM-13 30-Mar-10 Alpha N	ERM-13 15-Jun-10 Alpha N	ERM-13 15-Jun-10 Alpha FD	ERM-13 15-Sep-10 Alpha PDB	ERM-13 16-Dec-10 Alpha PDB	ERM-13 25-Sep-12 Alpha PDB	ERM-13 11-Dec-12 Alpha PDB	ERM-13 19-Mar-13 Alpha PDB	ERM-13 19-Mar-13 Alpha FD	ERM-13 19-Jun-13 Alpha PDB
Volatile Organics (VOCs) (ug/l)											
Tetrachloroethylene	5	1.8	1.4	1.2	1.8	1.0	0.96	< 0.50	< 0.50	< 0.50	0.88
Trichloroethylene	5	< 0.50	< 0.50	< 0.50	2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cis-1,2-Dichloroethene	70	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trans-1,2-Dichloroethene	100	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75

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Stone (EPA Method SW8260B). See Table for distinction.

FD = Field Duplicate.

N = Normal Sample.

Table 1 Summary of Groundwater Analytical Results **Energizer Facility** 401 Gage Street, Bennington, VT

Location ID: Sample Date: Laboratory Sample Type:	Primary Groundwater Quality Standards Enforcement Standard	ERM-13 12-Sep-13 Alpha PDB	ERM-13 25-Mar-14 Alpha PDB	ERM-13 24-Sep-14 Alpha PDB	ERM-13 23-Sep-15 Alpha PDB
Volatile Organics (VOCs) (ug/l)					
Tetrachloroethylene	5	< 0.50	< 0.50	< 0.50	< 0.50
Trichloroethylene	5	< 0.50	< 0.50	< 0.50	< 0.50
Cis-1,2-Dichloroethene	70	< 0.50	< 0.50	< 0.50	< 0.50
Trans-1,2-Dichloroethene	100	< 0.75	< 0.75	< 0.75	< 0.75

ug/l = Micrograms per liter.

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N = Normal Sample.

Table 1 Summary of Groundwater Analytical Results Energizer Facility 401 Gage Street, Bennington, VT

Location ID: Sample Date: Laboratory Sample Type:	Primary Groundwater Quality Standards Enforcement Standard	ERM-16 22-May-07 Alpha N	ERM-16 4-Sep-07 Stone N	ERM-16 11-Mar-08 Alpha N	ERM-16 16-Jun-08 Alpha N	ERM-16 26-Sep-08 Alpha N	ERM-16 10-Dec-08 Alpha N	ERM-16 10-Mar-09 Alpha N	ERM-16 18-Jun-09 Alpha N	ERM-16 17-Sep-09 Alpha N	ERM-16 8-Dec-09 Alpha N
Volatile Organics (VOCs) (ug/l)											
Tetrachloroethylene	5	54	38	31	54	49	99	33	15.1	21	23
Trichloroethylene	5	1.5	< 10	< 0.50	< 0.50	2.5	23	6.0	6.43	3.6	2.0
Cis-1,2-Dichloroethene	70	< 0.50	< 10	< 0.50	< 0.50	0.82	11	2.5	< 2.0	< 0.50	< 0.50
Trans-1,2-Dichloroethene	100	< 0.75	< 10	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 2.0	< 0.75	< 0.75

ug/l = Micrograms per liter.

< = Compound not detected. Method detection limit shown.

Bold cells indicate concentrations greater than the laboratory detection limits.

Shaded cells indicate exceedances of Primary Groundwater Quality Standards Enforcement Standard.

Alpha = Alpha Woods Hole Laboratory Westboro, MA.

Stone = Stone Environmental, Inc. Montpelier, VT.

Analyses for VOCs performed by Alpha (EPA Method SW8260) and

Stone (EPA Method SW8260B). See Table for distinction.

FD = Field Duplicate.

N = Normal Sample.

Table 1 Summary of Groundwater Analytical Results Energizer Facility 401 Gage Street, Bennington, VT

Location ID: Sample Date: Laboratory Sample Type:	Primary Groundwater Quality Standards Enforcement Standard	ERM-16 30-Mar-10 Alpha N	ERM-16 15-Jun-10 Alpha N	ERM-16 15-Jun-10 Alpha FD	ERM-16 15-Jun-10 Alpha PDB	ERM-16 15-Sep-10 Alpha PDB	ERM-16 15-Dec-10 Alpha PDB	ERM-16 18-Mar-11 Alpha PDB	ERM-16 28-Jun-11 Alpha PDB	ERM-16 24-Oct-11 Alpha PDB	ERM-16 24-Oct-11 Alpha PDB	ERM-16 24-Oct-11 Alpha FD
Volatile Organics (VOCs) (ug/l)												
Tetrachloroethylene	5	18	24	18	12	3.3	7.7	23	15	6.3	6.3	6.2
Trichloroethylene	5	< 0.50	< 0.50	1.6	0.91	2.5	1.1	< 0.50	0.71	0.74	0.74	0.73
Cis-1,2-Dichloroethene	70	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trans-1,2-Dichloroethene	100	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75

ug/l = Micrograms per liter.

< = Compound not detected. Method detection limit shown.

Bold cells indicate concentrations greater than the laboratory detection limits.

Shaded cells indicate exceedances of Primary Groundwater Quality Standards Enforcement Standard.

Alpha = Alpha Woods Hole Laboratory Westboro, MA.

Stone = Stone Environmental, Inc. Montpelier, VT.

Analyses for VOCs performed by Alpha (EPA Method SW8260) and

Stone (EPA Method SW8260B). See Table for distinction.

FD = Field Duplicate.

N = Normal Sample.

Table 1 Summary of Groundwater Analytical Results Energizer Facility 401 Gage Street, Bennington, VT

Location ID: Sample Date: Laboratory Sample Type:	Primary Groundwater Quality Standards Enforcement Standard	ERM-16 21-Dec-11 Alpha PDB	ERM-16 21-Dec-11 Alpha FD	ERM-16 22-Mar-12 Alpha PDB	ERM-16 26-Jun-12 Alpha PDB	ERM-16 25-Sep-12 Alpha PDB	ERM-16 11-Dec-12 Alpha PDB	ERM-16 19-Mar-13 Alpha PDB	ERM-16 19-Jun-13 Alpha PDB	ERM-16 12-Sep-13 Alpha PDB	ERM-16 19-Dec-13 Alpha PDB
Volatile Organics (VOCs) (ug/l)											
Tetrachloroethylene	5	3.7	3.5	6.1	< 0.50	4.9	4.7	18	9.0	4.9	17
Trichloroethylene	5	0.56	0.54	0.63	< 0.50	0.94	0.55	< 0.50	< 0.50	< 0.50	< 0.50
Cis-1,2-Dichloroethene	70	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trans-1,2-Dichloroethene	100	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75

ug/l = Micrograms per liter.

< = Compound not detected. Method detection limit shown.

Bold cells indicate concentrations greater than the laboratory detection limits.

Shaded cells indicate exceedances of Primary Groundwater Quality Standards Enforcement Standard.

Alpha = Alpha Woods Hole Laboratory Westboro, MA.

Stone = Stone Environmental, Inc. Montpelier, VT.

Analyses for VOCs performed by Alpha (EPA Method SW8260) and

Stone (EPA Method SW8260B). See Table for distinction.

FD = Field Duplicate.

N = Normal Sample.

Table 1 Summary of Groundwater Analytical Results Energizer Facility 401 Gage Street, Bennington, VT

Location ID: Sample Date: Laboratory Sample Type:	Primary Groundwater Quality Standards Enforcement Standard	ERM-16 25-Mar-14 Alpha PDB	ERM-16 16-Sep-14 Alpha PDB	ERM-16 23-Apr-15 Alpha PDB	ERM-16 23-Apr-15 Alpha FD	ERM-16 23-Sep-15 Alpha PDB	ERM-16 23-Sep-15 Alpha FD
Volatile Organics (VOCs) (ug/l)							
Tetrachloroethylene	5	14	13	9.5	9.5	12	11
Trichloroethylene	5	< 0.50	0.58	0.68	0.64	< 0.50	< 0.50
Cis-1,2-Dichloroethene	70	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trans-1,2-Dichloroethene	100	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75

ug/l = Micrograms per liter.

< = Compound not detected. Method detection limit shown.

Bold cells indicate concentrations greater than the laboratory detection limits.

Shaded cells indicate exceedances of Primary Groundwater Quality

 $Standards\ Enforcement\ Standard.$

Alpha = Alpha Woods Hole Laboratory Westboro, MA.

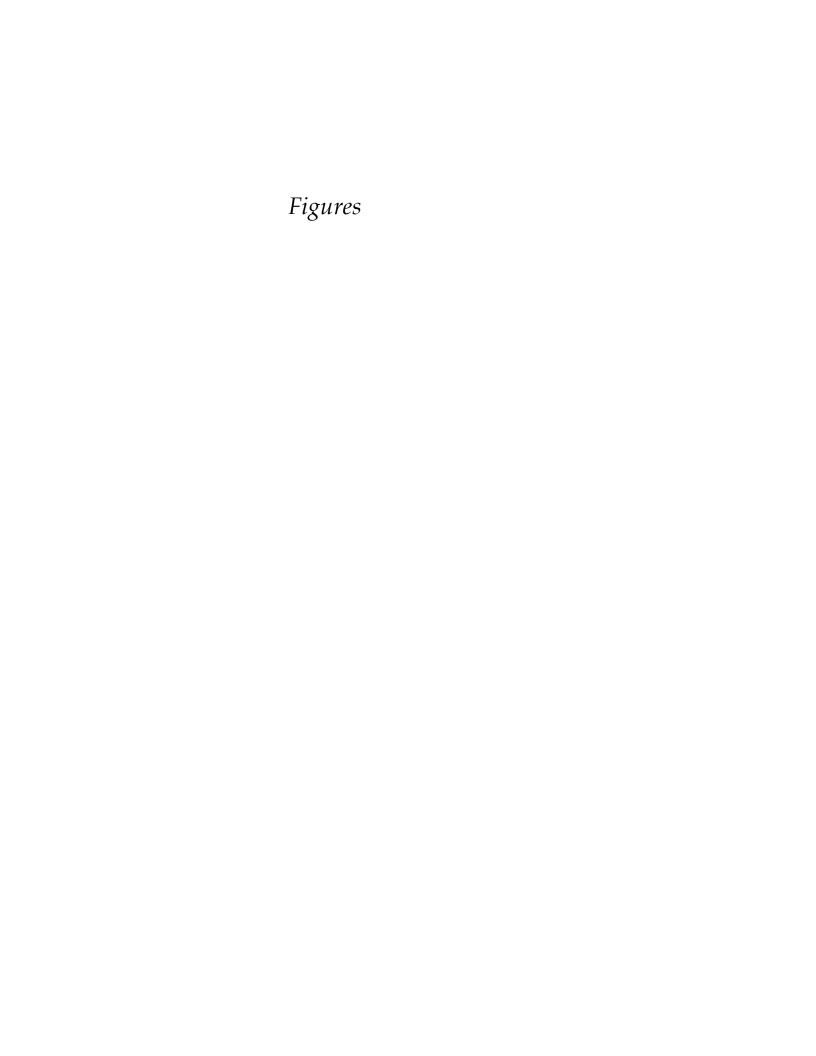
Stone = Stone Environmental, Inc. Montpelier, VT.

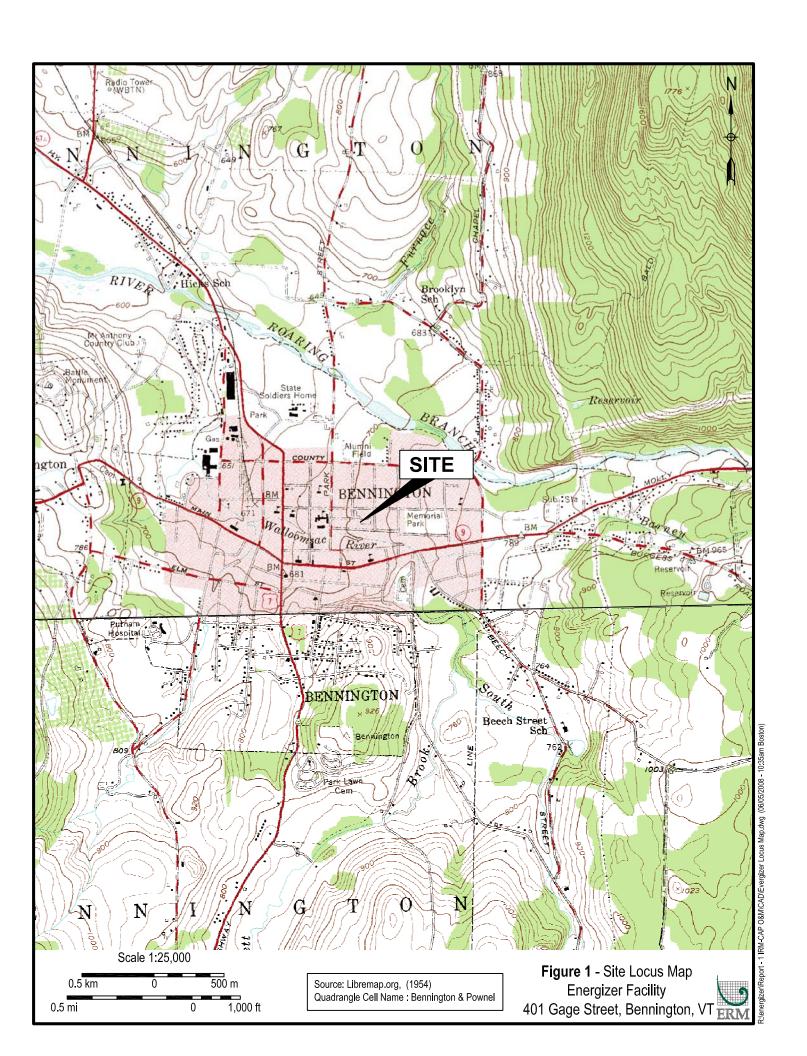
Analyses for VOCs performed by Alpha (EPA Method SW8260) and

Stone (EPA Method SW8260B). See Table for distinction.

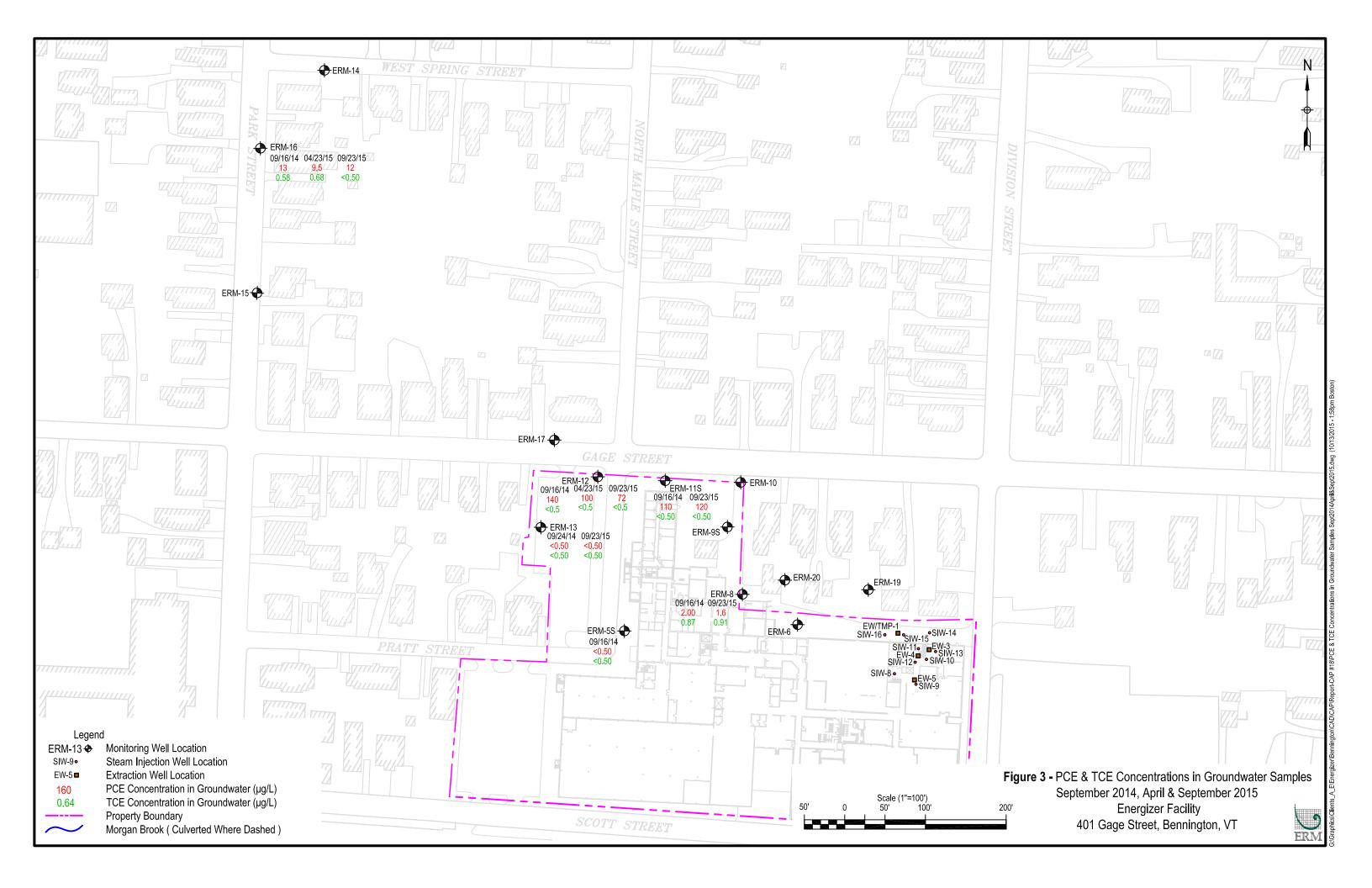
FD = Field Duplicate.

N = Normal Sample.









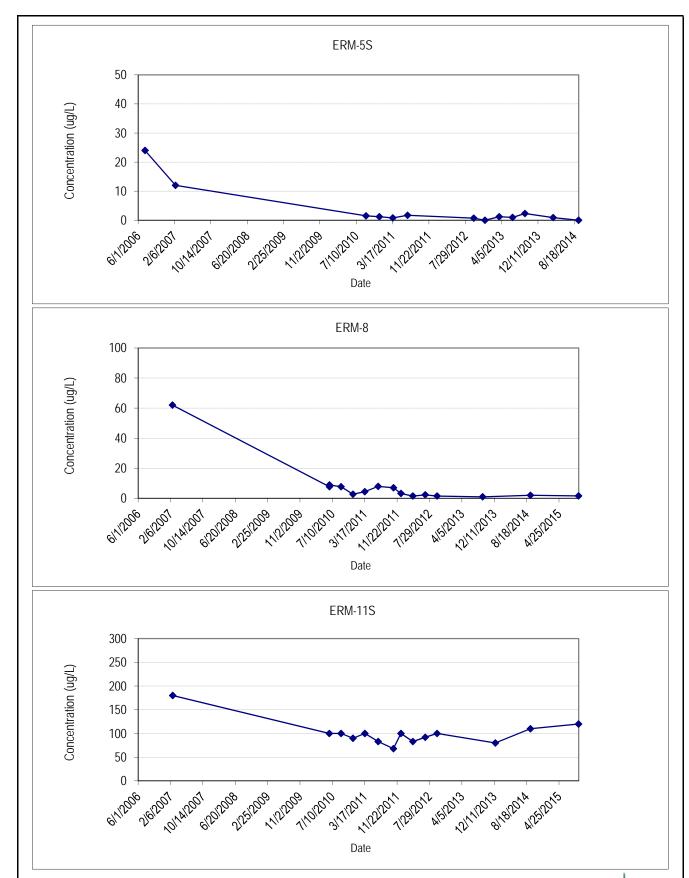
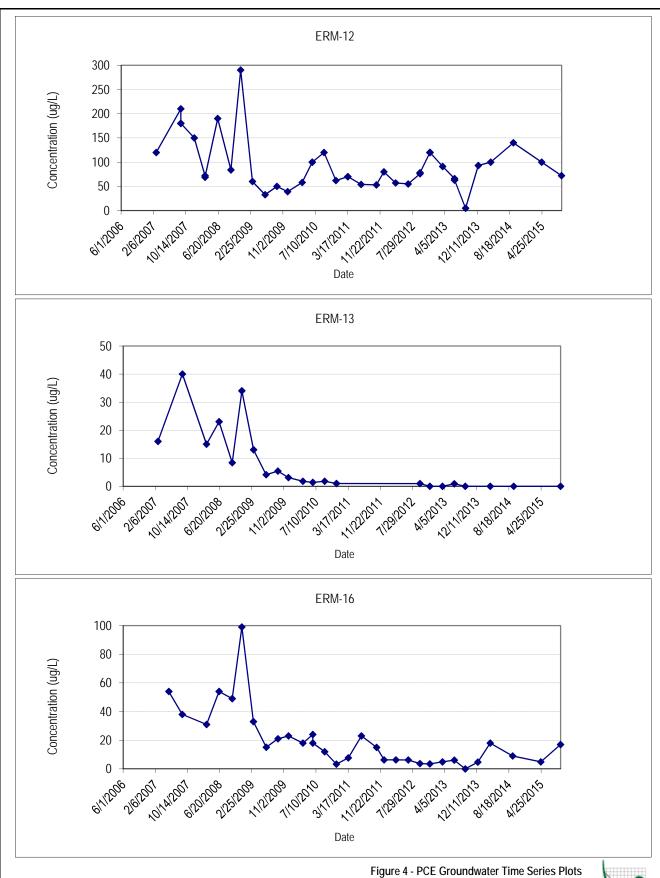
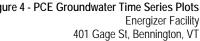


Figure 4 - PCE Groundwater Time Series Plots Energizer Facility 401 Gage St, Bennington, VT









Appendix A – Groundwater Analytical Results



ANALYTICAL REPORT

Lab Number: L1508559

Client: ERM, Inc.

15 Park Row West

Suite 104

Providence, RI 02903

ATTN: Ethan Gyles
Phone: (401) 415-9606
Project Name: ENERGIZER

Project Number: 0252540 Report Date: 05/05/15

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Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: ENERGIZER **Project Number:** 0252540

Lab Number: L1508559 **Report Date:** 05/05/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1508559-01	ERM-16-20150423-01	WATER	BENNINGTON, VT	04/23/15 10:45	04/24/15
L1508559-02	ERM-12-20150423-01	WATER	BENNINGTON, VT	04/23/15 12:00	04/24/15
L1508559-03	DUP-001-20150423-01	WATER	BENNINGTON, VT	04/23/15 11:11	04/24/15
L1508559-04	TB-001-20150423-01	WATER	BENNINGTON, VT	04/23/15 11:11	04/24/15



Serial No:05051514:39

Project Name:ENERGIZERLab Number:L1508559Project Number:0252540Report Date:05/05/15

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Michelle M. Morris

Authorized Signature:

Title: Technical Director/Representative

Date: 05/05/15



ORGANICS



VOLATILES



Serial_No:05051514:39

Project Name: ENERGIZER

Project Number: 0252540

SAMPLE RESULTS

Lab Number: L1508559

Report Date: 05/05/15

Lab ID: L1508559-01

Client ID: ERM-16-20150423-01 Sample Location: BENNINGTON, VT

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/02/15 21:22

Analyst: PD

Date Collected: 04/23/15 10:45

Date Received: 04/24/15 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - Westbe	orough Lab						
Methylene chloride	ND		ug/l	3.0		1	
1,1-Dichloroethane	ND		ug/l	0.75		1	
Chloroform	ND		ug/l	0.75		1	
Carbon tetrachloride	ND		ug/l	0.50		1	
1,2-Dichloropropane	ND		ug/l	1.8		1	
Dibromochloromethane	ND		ug/l	0.50		1	
1,1,2-Trichloroethane	ND		ug/l	0.75		1	
Tetrachloroethene	9.5		ug/l	0.50		1	
Chlorobenzene	ND		ug/l	0.50		1	
1,2-Dichloroethane	ND		ug/l	0.50		1	
1,1,1-Trichloroethane	ND		ug/l	0.50		1	
Bromodichloromethane	ND		ug/l	0.50		1	
trans-1,3-Dichloropropene	ND		ug/l	0.50		1	
cis-1,3-Dichloropropene	ND		ug/l	0.50		1	
1,3-Dichloropropene, Total	ND		ug/l	0.50		1	
Bromoform	ND		ug/l	2.0		1	
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50		1	
Chloromethane	ND		ug/l	2.5		1	
Vinyl chloride	ND		ug/l	1.0		1	
Chloroethane	ND		ug/l	1.0		1	
1,1-Dichloroethene	ND		ug/l	0.50		1	
trans-1,2-Dichloroethene	ND		ug/l	0.75		1	
1,2-Dichloroethene, Total	ND		ug/l	0.50		1	
Trichloroethene	0.68		ug/l	0.50		1	
1,2-Dichlorobenzene	ND		ug/l	2.5		1	
1,3-Dichlorobenzene	ND		ug/l	2.5		1	
1,4-Dichlorobenzene	ND		ug/l	2.5		1	
cis-1,2-Dichloroethene	ND		ug/l	0.50		1	
Dichlorodifluoromethane	ND		ug/l	5.0		1	
1,2-Dibromoethane	ND		ug/l	2.0		1	



Serial_No:05051514:39

04/23/15 10:45

Date Collected:

Project Name: ENERGIZER Lab Number: L1508559

Project Number: 0252540 **Report Date:** 05/05/15

SAMPLE RESULTS

Lab ID: L1508559-01

Client ID: ERM-16-20150423-01 Date Received: 04/24/15 Sample Location: BENNINGTON, VT Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - Westboroug	gh Lab						
1,3-Dichloropropane	ND		ug/l	2.5		1	
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50		1	
o-Chlorotoluene	ND		ug/l	2.5		1	
p-Chlorotoluene	ND		ug/l	2.5		1	
Hexachlorobutadiene	ND		ug/l	0.50		1	
1,2,4-Trichlorobenzene	ND		ug/l	2.5		1	

			Acceptance	
Surrogate	% Recovery	Qualifier	Criteria	
1,2-Dichloroethane-d4	89		70-130	
Toluene-d8	103		70-130	
4-Bromofluorobenzene	87		70-130	
Dibromofluoromethane	95		70-130	



Serial_No:05051514:39

Project Name: ENERGIZER

Project Number: 0252540

SAMPLE RESULTS

L1508559

Lab Number:

Report Date: 05/05/15

Lab ID: L1508559-02

Client ID: ERM-12-20150423-01 Sample Location: BENNINGTON, VT

Matrix: Water Analytical Method: 1,8260C Analytical Date: 05/02/15 21:57

Analyst: PD Date Collected: 04/23/15 12:00

Date Received: 04/24/15 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - We	estborough Lab						
Methylene chloride	ND		ug/l	3.0		1	
1,1-Dichloroethane	ND		ug/l	0.75		1	
Chloroform	ND		ug/l	0.75		1	
Carbon tetrachloride	ND		ug/l	0.50		1	
1,2-Dichloropropane	ND		ug/l	1.8		1	
Dibromochloromethane	ND		ug/l	0.50		1	
1,1,2-Trichloroethane	ND		ug/l	0.75		1	
Tetrachloroethene	100		ug/l	0.50		1	
Chlorobenzene	ND		ug/l	0.50		1	
1,2-Dichloroethane	ND		ug/l	0.50		1	
1,1,1-Trichloroethane	ND		ug/l	0.50		1	
Bromodichloromethane	ND		ug/l	0.50		1	
trans-1,3-Dichloropropene	ND		ug/l	0.50		1	
cis-1,3-Dichloropropene	ND		ug/l	0.50		1	
1,3-Dichloropropene, Total	ND		ug/l	0.50		1	
Bromoform	ND		ug/l	2.0		1	
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50		1	
Chloromethane	ND		ug/l	2.5		1	
Vinyl chloride	ND		ug/l	1.0		1	
Chloroethane	ND		ug/l	1.0		1	
1,1-Dichloroethene	ND		ug/l	0.50		1	
trans-1,2-Dichloroethene	ND		ug/l	0.75		1	
1,2-Dichloroethene, Total	ND		ug/l	0.50		1	
Trichloroethene	ND		ug/l	0.50		1	
1,2-Dichlorobenzene	ND		ug/l	2.5		1	
1,3-Dichlorobenzene	ND		ug/l	2.5		1	
1,4-Dichlorobenzene	ND		ug/l	2.5		1	
cis-1,2-Dichloroethene	ND		ug/l	0.50		1	
Dichlorodifluoromethane	ND		ug/l	5.0		1	
1,2-Dibromoethane	ND		ug/l	2.0		1	



Project Name: ENERGIZER Lab Number: L1508559

Project Number: 0252540 **Report Date:** 05/05/15

SAMPLE RESULTS

Lab ID: L1508559-02 Date Collected: 04/23/15 12:00

Client ID: ERM-12-20150423-01 Date Received: 04/24/15 Sample Location: BENNINGTON, VT Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - We	stborough Lab						
1,3-Dichloropropane	ND		ug/l	2.5		1	
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50		1	
o-Chlorotoluene	ND		ug/l	2.5		1	
p-Chlorotoluene	ND		ug/l	2.5		1	
Hexachlorobutadiene	ND		ug/l	0.50		1	
1,2,4-Trichlorobenzene	ND		ug/l	2.5		1	

			Acceptance	
Surrogate	% Recovery	Qualifier	Criteria	
1,2-Dichloroethane-d4	90		70-130	
Toluene-d8	101		70-130	
4-Bromofluorobenzene	88		70-130	
Dibromofluoromethane	94		70-130	



Project Name: ENERGIZER

Project Number: 0252540

SAMPLE RESULTS

Lab Number: L1508559

Report Date: 05/05/15

Lab ID: L1508559-03

Client ID: DUP-001-20150423-01 Sample Location: BENNINGTON, VT

Matrix: Water Analytical Method: 1,8260C Analytical Date: 05/02/15 22:32

Analyst: PD

Date Collected:	04/23/15 11:11
Date Received:	04/24/15
Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westb	orough Lab					
Methylene chloride	ND		ug/l	3.0		1
1,1-Dichloroethane	ND		ug/l	0.75		1
Chloroform	ND		ug/l	0.75		1
Carbon tetrachloride	ND		ug/l	0.50		1
1,2-Dichloropropane	ND		ug/l	1.8		1
Dibromochloromethane	ND		ug/l	0.50		1
1,1,2-Trichloroethane	ND		ug/l	0.75		1
Tetrachloroethene	9.5		ug/l	0.50		1
Chlorobenzene	ND		ug/l	0.50		1
1,2-Dichloroethane	ND		ug/l	0.50		1
1,1,1-Trichloroethane	ND		ug/l	0.50		1
Bromodichloromethane	ND		ug/l	0.50		1
trans-1,3-Dichloropropene	ND		ug/l	0.50		1
cis-1,3-Dichloropropene	ND		ug/l	0.50		1
1,3-Dichloropropene, Total	ND		ug/l	0.50		1
Bromoform	ND		ug/l	2.0		1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50		1
Chloromethane	ND		ug/l	2.5		1
Vinyl chloride	ND		ug/l	1.0		1
Chloroethane	ND		ug/l	1.0		1
1,1-Dichloroethene	ND		ug/l	0.50		1
trans-1,2-Dichloroethene	ND		ug/l	0.75		1
1,2-Dichloroethene, Total	ND		ug/l	0.50		1
Trichloroethene	0.64		ug/l	0.50		1
1,2-Dichlorobenzene	ND		ug/l	2.5		1
1,3-Dichlorobenzene	ND		ug/l	2.5		1
1,4-Dichlorobenzene	ND		ug/l	2.5		1
cis-1,2-Dichloroethene	ND		ug/l	0.50		1
Dichlorodifluoromethane	ND		ug/l	5.0		1
1,2-Dibromoethane	ND		ug/l	2.0		1



Project Name: ENERGIZER Lab Number: L1508559

Project Number: 0252540 **Report Date:** 05/05/15

SAMPLE RESULTS

Lab ID: L1508559-03 Date Collected: 04/23/15 11:11

Client ID: DUP-001-20150423-01 Date Received: 04/24/15 Sample Location: BENNINGTON, VT Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - Westborou	ıgh Lab						
1,3-Dichloropropane	ND		ug/l	2.5		1	
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50		1	
o-Chlorotoluene	ND		ug/l	2.5		1	
p-Chlorotoluene	ND		ug/l	2.5		1	
Hexachlorobutadiene	ND		ug/l	0.50		1	
1,2,4-Trichlorobenzene	ND		ug/l	2.5		1	

			Acceptance	
Surrogate	% Recovery	Qualifier	Criteria	
1,2-Dichloroethane-d4	90		70-130	
Toluene-d8	102		70-130	
4-Bromofluorobenzene	90		70-130	
Dibromofluoromethane	94		70-130	



Project Name: ENERGIZER

Project Number: 0252540

SAMPLE RESULTS

Lab Number: L1508559

Report Date: 05/05/15

Lab ID: L1508559-04

Client ID: TB-001-20150423-01 Sample Location: BENNINGTON, VT

Matrix: Water Analytical Method: 1,8260C Analytical Date: 05/02/15 23:07

Analyst: PD Date Collected: 04/23/15 11:11 Date Received: 04/24/15

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - We	stborough Lab					
Methylene chloride	ND		ug/l	3.0		1
1,1-Dichloroethane	ND		ug/l	0.75		1
Chloroform	ND		ug/l	0.75		1
Carbon tetrachloride	ND		ug/l	0.50		1
1,2-Dichloropropane	ND		ug/l	1.8		1
Dibromochloromethane	ND		ug/l	0.50		1
1,1,2-Trichloroethane	ND		ug/l	0.75		1
Tetrachloroethene	ND		ug/l	0.50		1
Chlorobenzene	ND		ug/l	0.50		1
1,2-Dichloroethane	ND		ug/l	0.50		1
1,1,1-Trichloroethane	ND		ug/l	0.50		1
Bromodichloromethane	ND		ug/l	0.50		1
trans-1,3-Dichloropropene	ND		ug/l	0.50		1
cis-1,3-Dichloropropene	ND		ug/l	0.50		1
1,3-Dichloropropene, Total	ND		ug/l	0.50		1
Bromoform	ND		ug/l	2.0		1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50		1
Chloromethane	ND		ug/l	2.5		1
Vinyl chloride	ND		ug/l	1.0		1
Chloroethane	ND		ug/l	1.0		1
1,1-Dichloroethene	ND		ug/l	0.50		1
trans-1,2-Dichloroethene	ND		ug/l	0.75		1
1,2-Dichloroethene, Total	ND		ug/l	0.50		1
Trichloroethene	ND		ug/l	0.50		1
1,2-Dichlorobenzene	ND		ug/l	2.5		1
1,3-Dichlorobenzene	ND		ug/l	2.5		1
1,4-Dichlorobenzene	ND		ug/l	2.5		1
cis-1,2-Dichloroethene	ND		ug/l	0.50		1
Dichlorodifluoromethane	ND		ug/l	5.0		1
1,2-Dibromoethane	ND		ug/l	2.0		1



Project Name: ENERGIZER Lab Number: L1508559

Project Number: 0252540 **Report Date:** 05/05/15

SAMPLE RESULTS

Lab ID: Date Collected: 04/23/15 11:11

Client ID: TB-001-20150423-01 Date Received: 04/24/15 Sample Location: BENNINGTON, VT Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - Westboroug	gh Lab						
1,3-Dichloropropane	ND		ug/l	2.5		1	
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50		1	
o-Chlorotoluene	ND		ug/l	2.5		1	
p-Chlorotoluene	ND		ug/l	2.5		1	
Hexachlorobutadiene	ND		ug/l	0.50		1	
1,2,4-Trichlorobenzene	ND		ug/l	2.5		1	

			Acceptance	
Surrogate	% Recovery	Qualifier	Criteria	
1,2-Dichloroethane-d4	89		70-130	
Toluene-d8	102		70-130	
4-Bromofluorobenzene	88		70-130	
Dibromofluoromethane	93		70-130	



Project Name:ENERGIZERLab Number:L1508559Project Number:0252540Report Date:05/05/15

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C Analytical Date: 05/02/15 18:59

Analyst: PD

Parameter	Result	Qualifier Units	RL	MDL
Volatile Organics by GC/MS	- Westborough Lab	for sample(s): 01-04	Batch:	WG781496-3
Methylene chloride	ND	ug/l	3.0	
1,1-Dichloroethane	ND	ug/l	0.75	
Chloroform	ND	ug/l	0.75	
Carbon tetrachloride	ND	ug/l	0.50	
1,2-Dichloropropane	ND	ug/l	1.8	
Dibromochloromethane	ND	ug/l	0.50	
1,1,2-Trichloroethane	ND	ug/l	0.75	
Tetrachloroethene	ND	ug/l	0.50	
Chlorobenzene	ND	ug/l	0.50	
1,2-Dichloroethane	ND	ug/l	0.50	
1,1,1-Trichloroethane	ND	ug/l	0.50	
Bromodichloromethane	ND	ug/l	0.50	
trans-1,3-Dichloropropene	ND	ug/l	0.50	
cis-1,3-Dichloropropene	ND	ug/l	0.50	
1,3-Dichloropropene, Total	ND	ug/l	0.50	
Bromoform	ND	ug/l	2.0	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	
Chloromethane	ND	ug/l	2.5	
Vinyl chloride	ND	ug/l	1.0	
Chloroethane	ND	ug/l	1.0	
1,1-Dichloroethene	ND	ug/l	0.50	
trans-1,2-Dichloroethene	ND	ug/l	0.75	
1,2-Dichloroethene, Total	ND	ug/l	0.50	
Trichloroethene	ND	ug/l	0.50	
1,2-Dichlorobenzene	ND	ug/l	2.5	
1,3-Dichlorobenzene	ND	ug/l	2.5	
1,4-Dichlorobenzene	ND	ug/l	2.5	
cis-1,2-Dichloroethene	ND	ug/l	0.50	
Dichlorodifluoromethane	ND	ug/l	5.0	



Project Name:ENERGIZERLab Number:L1508559

Project Number: 0252540 **Report Date:** 05/05/15

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C Analytical Date: 05/02/15 18:59

Analyst: PD

Parameter	Result	Qualifier (Jnits	RL	MDL
Volatile Organics by GC/MS - Westl	oorough Lat	o for sample(s): 01-04	Batch:	WG781496-3
1,2-Dibromoethane	ND		ug/l	2.0	
1,3-Dichloropropane	ND		ug/l	2.5	
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	
o-Chlorotoluene	ND		ug/l	2.5	
p-Chlorotoluene	ND		ug/l	2.5	
Hexachlorobutadiene	ND		ug/l	0.50	
1,2,4-Trichlorobenzene	ND		ug/l	2.5	

		1	Acceptance	
Surrogate	%Recovery	Qualifier	Criteria	
1,2-Dichloroethane-d4	90		70-130	
Toluene-d8	103		70-130	
4-Bromofluorobenzene	88		70-130	
Dibromofluoromethane	94		70-130	



Lab Control Sample Analysis Batch Quality Control

Project Name: ENERGIZER

Project Number: 0252540

Lab Number: L1508559

Report Date: 05/05/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	RPD Qual Limits	
Volatile Organics by GC/MS - Westborough	Lab Associated	sample(s):	01-04 Batch:	WG781496-1	WG781496-2			
Methylene chloride	95		85		70-130	11	20	
1,1-Dichloroethane	91		84		70-130	8	20	
Chloroform	94		84		70-130	11	20	
Carbon tetrachloride	90		82		63-132	9	20	
1,2-Dichloropropane	96		84		70-130	13	20	
Dibromochloromethane	106		97		63-130	9	20	
1,1,2-Trichloroethane	110		101		70-130	9	20	
Tetrachloroethene	112		104		70-130	7	20	
Chlorobenzene	104		95		75-130	9	25	
1,2-Dichloroethane	89		81		70-130	9	20	
1,1,1-Trichloroethane	89		80		67-130	11	20	
Bromodichloromethane	93		82		67-130	13	20	
trans-1,3-Dichloropropene	100		91		70-130	9	20	
cis-1,3-Dichloropropene	93		82		70-130	13	20	
Bromoform	114		105		54-136	8	20	
1,1,2,2-Tetrachloroethane	103		94		67-130	9	20	
Chloromethane	76		64		64-130	17	20	
Vinyl chloride	79		71		55-140	11	20	
Chloroethane	101		90		55-138	12	20	
1,1-Dichloroethene	94		89		61-145	5	25	
trans-1,2-Dichloroethene	103		92		70-130	11	20	



Lab Control Sample Analysis Batch Quality Control

Project Name: ENERGIZER

Project Number: 0252540

Lab Number: L1508559

Report Date: 05/05/15

arameter	LCS %Recovery	Qual	LCSD %Recove		%Recovery Limits	RPD	Qual	RPD Limits
olatile Organics by GC/MS - Westborough La	ab Associated	sample(s):	01-04 Batc	h: WG781496-1	WG781496-2			
Trichloroethene	96		85		70-130	12		25
1,2-Dichlorobenzene	106		95		70-130	11		20
1,3-Dichlorobenzene	107		93		70-130	14		20
1,4-Dichlorobenzene	106		94		70-130	12		20
cis-1,2-Dichloroethene	103		92		70-130	11		20
Dichlorodifluoromethane	120		106		36-147	12		20
1,2-Dibromoethane	107		98		70-130	9		20
1,3-Dichloropropane	104		97		70-130	7		20
1,1,1,2-Tetrachloroethane	110		100		64-130	10		20
o-Chlorotoluene	96		85		70-130	12		20
p-Chlorotoluene	102		88		70-130	15		20
Hexachlorobutadiene	98		87		63-130	12		20
1,2,4-Trichlorobenzene	101		89		70-130	13		20

	LCS		LCSD		Acceptance	
Surrogate	%Recovery	%Recovery Qual		Qual	Criteria	
1,2-Dichloroethane-d4	90		89		70-130	
Toluene-d8	102		103		70-130	
4-Bromofluorobenzene	89		90		70-130	
Dibromofluoromethane	95		96		70-130	



Project Name:ENERGIZERLab Number: L1508559Project Number:0252540Report Date: 05/05/15

Sample Receipt and Container Information

Were project specific reporting limits specified?

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

A Absent

Container Information								
	Container ID	Container Type	Cooler	рН	Temp deg C	Pres	Seal	Analysis(*)
	L1508559-01A	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	8260-CHLR(14)
	L1508559-01B	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	8260-CHLR(14)
	L1508559-01C	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	8260-CHLR(14)
	L1508559-02A	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	8260-CHLR(14)
	L1508559-02B	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	8260-CHLR(14)
	L1508559-02C	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	8260-CHLR(14)
	L1508559-03A	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	8260-CHLR(14)
	L1508559-03B	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	8260-CHLR(14)
	L1508559-03C	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	8260-CHLR(14)
	L1508559-04A	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	8260-CHLR(14)
	L1508559-04B	Vial HCl preserved	Α	N/A	3.9	Υ	Absent	8260-CHLR(14)
	L1508559-04C	Vial HCI preserved	Α	N/A	3.9	Υ	Absent	8260-CHLR(14)

Project Name:ENERGIZERLab Number:L1508559Project Number:0252540Report Date:05/05/15

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes
or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

SRM

- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A Spectra identified as "Aldol Condensation Product".
- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations
 of the analyte.
- E Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

Report Format: Data Usability Report



Project Name:ENERGIZERLab Number:L1508559Project Number:0252540Report Date:05/05/15

Data Qualifiers

- G The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
- H The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I The lower value for the two columns has been reported due to obvious interference.
- M Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P The RPD between the results for the two columns exceeds the method-specified criteria.
- Q The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- **R** Analytical results are from sample re-analysis.
- **RE** Analytical results are from sample re-extraction.
- S Analytical results are from modified screening analysis.
- J Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- **ND** Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report



Project Name:ENERGIZERLab Number:L1508559Project Number:0252540Report Date:05/05/15

REFERENCES

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

Last revised December 16, 2014

The following analytes are not included in our NELAP Scope of Accreditation:

Westborough Facility

EPA 524.2: Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.

EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, lodomethane (methyl iodide), Methyl methacrylate,

Azobenzene

EPA 8270D: 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

EPA 625: 4-Chloroaniline, 4-Methylphenol.

SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.

EPA 9071: Total Petroleum Hydrocarbons, Oil & Grease.

Mansfield Facility

EPA 8270D: Biphenyl. EPA 2540D: TSS

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water

EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1**: Mercury;

EPA 300.0: Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C,

SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B

EPA 332: Perchlorate.

Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.

Non-Potable Water

EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;

EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;

EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC,

SM426C, SM4500NH3-BH, EPA 350.1: Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, SM4500NO3-F,

EPA 353.2: Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4,

SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

EPA 624: Volatile Halocarbons & Aromatics,

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endeauten L. Endeauten author and a policy and a pol

Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625: SVOC (Acid/Base/Neutral Extractables), EPA 600/4-81-045: PCB-Oil.

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

					Serial_No:05051514:39
ДІРНА	CHAIN OF	CUSTODY	PAGE/ OF	Date Rec'd in Lab: 4/24/15	ALPHA Job #: <i>US</i> 08559
WESTBORO, MA	MANSFIELD, MA	Project Information		Report Information - Data Deliverable	Billing Information
TEL: 508-898-9220	TEL: 508-822-9300	Project Name: Energiza	0.5	□ FAX 🎉 EMAIL	Same as Client info PO#:
FAX: 508-898-9193 Client Information	FAX: 508-822-3288	Project Location: 2	1 /	☐ ADEx ☐ Add'l Deliverables	
	<u> </u>	Project Location: Benning	HON VI	Regulatory Requirements/Report Limit	ts .
Client: ERM	·	Project #: 625254		State /Fed Program Criteria	· · · · · · · · · · · · · · · · · · ·
Address: 15 R	rk Row West	Project Manager: Ethan	Gyles _		
Providence	RI 02903	ALPHA Quote #:			
Phone: 401	415 9600	Turn-Around Time			
Fax:	•	1	:		
Email: Tthan	1. Gyles@ERM. Low		ly confirmed if pre-approved!)		0
	ave been previously analyzed by Alpha	Date Due: 5/5/15	Time:	AWALYSIS DCJC	/ / / / SAMPLE HANDLING
	Specific Requirements/Comr			1 3/2/ / / / / /	/
				SON AND SOLVER	/ / / / L Not needed
				(Charles)	D Lab to do Preservation
			·	1/8/ + 1/1	☐ Lab to do (Please specify below)
ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date Time	Sample Sampler's Matrix Initials		Sample Specific Comments
	ERM-16-20150423-	سسيط ور سراء والا		X	3
			1 1	X	3
■ 3数 (4) 整 (5) 等。	ERM-12 - 20150423		++++		3
-03	DUP-061-20150423.	-61 1111		X	
-04	TB-001-20150423-	61 - 1111	4 1	X	3 Trip Blank
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$					
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		- 			
		-/ - \	+	+	
				 	
					12 Total #
			Container Type	V	Please print clearly, legibly and com-
			Preservative	В	pletely. Samples can not be logged in and turnaround time clock will not
	- AI	Relinquished By:	Date/Time	Received By:	Date/Time start until any ambiguities are resolved
		-1 1	4/24/15 405	Marge there 1305 4/2	All samples submitted are subject to Alpha's Terms and Conditions.
FORM NO: 01-01 (rev. 14-0	OCT-07)	Smiller 1645 4	BYPIS AU	Sal Churchang - 4/24	See reverse side.
Page 23 of 23	/	1 7			



ANALYTICAL REPORT

Lab Number: L1523798

Client: ERM, Inc.

15 Park Row West

Suite 104

Providence, RI 02903

ATTN: Ethan Gyles
Phone: (401) 415-9606
Project Name: ENERGIZER

Project Number: 0252540

Report Date: 10/05/15

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

Eight Walkup Drive, Westborough, MA 01581-1019 508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: ENERGIZER **Project Number:** 0252540

Lab Number: L1
Report Date: 10

L1523798 10/05/15

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1523798-01	DUP-001-20150923-01	WATER	BENNINGTON, VT	09/23/15 11:11	09/24/15
L1523798-02	TB-001-20150923-01	WATER	BENNINGTON, VT	09/16/15 11:11	09/24/15
L1523798-03	ERM-8-20150923-001	WATER	BENNINGTON, VT	09/23/15 12:10	09/24/15
L1523798-04	ERM-11S-20150923-001	WATER	BENNINGTON, VT	09/23/15 12:30	09/24/15
L1523798-05	ERM-12-20150923-001	WATER	BENNINGTON, VT	09/23/15 11:55	09/24/15
L1523798-06	ERM-13-20150923-001	WATER	BENNINGTON, VT	09/23/15 11:40	09/24/15
L1523798-07	ERM-16-20150923-001	WATER	BENNINGTON, VT	09/23/15 10:40	09/24/15



Project Name:ENERGIZERLab Number:L1523798Project Number:0252540Report Date:10/05/15

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Then film t Kara Lindquist

Authorized Signature:

Title: Technical Director/Representative

ANALYTICA

Date: 10/05/15

ORGANICS



VOLATILES



Project Name: ENERGIZER

Project Number: 0252540

SAMPLE RESULTS

Lab Number: L1523798

Report Date: 10/05/15

Lab ID: L1523798-01

Client ID: DUP-001-20150923-01 Sample Location: BENNINGTON, VT

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/04/15 14:09

Analyst: PD

Date Collected: 09/23/15 11:11

Date Received: 09/24/15 Field Prep: Not Specified

ND ND 1.9 ND ND ND ND ND ND		ug/l ug/l ug/l ug/l	3.0 0.75 0.75	 	1
ND 1.9 ND ND		ug/l ug/l	0.75		
1.9 ND ND		ug/l			1
ND ND			0.75		
ND					1
			0.50		1
ND		ug/l	1.8		1
		ug/l	0.50		1
ND		ug/l	0.75		1
11		ug/l	0.50		1
ND		ug/l	0.50		1
ND		ug/l	0.50		1
ND		ug/l	0.50		1
ND		ug/l	0.50		1
ND		ug/l	0.50		1
ND		ug/l	0.50		1
ND		ug/l	0.50		1
ND		ug/l	2.0		1
ND		ug/l	0.50		1
ND		ug/l	2.5		1
ND		ug/l	1.0		1
ND		ug/l	1.0		1
ND		ug/l	0.50		1
ND		ug/l	0.75		1
ND		ug/l	0.50		1
ND		ug/l	0.50		1
ND		ug/l	2.5		1
ND		ug/l	2.5		1
ND		ug/l	2.5		1
ND		ug/l	0.50		1
ND		ug/l	5.0		1
ND		ug/l	2.0		1
	11 ND	11 ND ND ND ND ND ND ND ND ND	11	11 ug/l 0.50 ND ug/l 2.0 ND ug/l 2.5 ND ug/l 1.0 ND ug/l 1.0 ND ug/l 1.0 ND ug/l 0.50 ND ug/l 0.50 ND ug/l 0.50 ND ug/l 2.5 ND ug/l 0.50 ND ug/l 5.0	11 ug/l 0.50 ND ug/l 1.0 ND ug/l 1.0 ND ug/l 0.50 ND ug/l 0.50 ND ug/l 0.50 ND ug/l 0.50 ND ug/l 2.5 ND ug/l



Project Name: ENERGIZER Lab Number: L1523798

Project Number: 0252540 **Report Date:** 10/05/15

SAMPLE RESULTS

Lab ID: L1523798-01 Date Collected: 09/23/15 11:11

Client ID: DUP-001-20150923-01 Date Received: 09/24/15 Sample Location: BENNINGTON, VT Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - Westborou	ıgh Lab						
1,3-Dichloropropane	ND		ug/l	2.5		1	
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50		1	
o-Chlorotoluene	ND		ug/l	2.5		1	
p-Chlorotoluene	ND		ug/l	2.5		1	
Hexachlorobutadiene	ND		ug/l	0.50		1	
1,2,4-Trichlorobenzene	ND		ug/l	2.5		1	

			Acceptance	
Surrogate	% Recovery	Qualifier	Criteria	
1,2-Dichloroethane-d4	100		70-130	
Toluene-d8	104		70-130	
4-Bromofluorobenzene	106		70-130	
Dibromofluoromethane	99		70-130	



L1523798

Project Name: ENERGIZER

Project Number: 0252540

SAMPLE RESULTS

Lab Number:

Report Date: 10/05/15

Lab ID: L1523798-02

Client ID: TB-001-20150923-01 Sample Location: BENNINGTON, VT

Matrix: Water Analytical Method: 1,8260C Analytical Date: 10/04/15 13:41

Analyst: PD Date Collected: 09/16/15 11:11

Date Received: 09/24/15 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough	Lab					
Methylene chloride	ND		ug/l	3.0		1
1,1-Dichloroethane	ND		ug/l	0.75		1
Chloroform	ND		ug/l	0.75		1
Carbon tetrachloride	ND		ug/l	0.50		1
1,2-Dichloropropane	ND		ug/l	1.8		1
Dibromochloromethane	ND		ug/l	0.50		1
1,1,2-Trichloroethane	ND		ug/l	0.75		1
Tetrachloroethene	ND		ug/l	0.50		1
Chlorobenzene	ND		ug/l	0.50		1
1,2-Dichloroethane	ND		ug/l	0.50		1
1,1,1-Trichloroethane	ND		ug/l	0.50		1
Bromodichloromethane	ND		ug/l	0.50		1
trans-1,3-Dichloropropene	ND		ug/l	0.50		1
cis-1,3-Dichloropropene	ND		ug/l	0.50		1
1,3-Dichloropropene, Total	ND		ug/l	0.50		1
Bromoform	ND		ug/l	2.0		1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50		1
Chloromethane	ND		ug/l	2.5		1
Vinyl chloride	ND		ug/l	1.0		1
Chloroethane	ND		ug/l	1.0		1
1,1-Dichloroethene	ND		ug/l	0.50		1
trans-1,2-Dichloroethene	ND		ug/l	0.75		1
1,2-Dichloroethene, Total	ND		ug/l	0.50		1
Trichloroethene	ND		ug/l	0.50		1
1,2-Dichlorobenzene	ND		ug/l	2.5		1
1,3-Dichlorobenzene	ND		ug/l	2.5		1
1,4-Dichlorobenzene	ND		ug/l	2.5		1
cis-1,2-Dichloroethene	ND		ug/l	0.50		1
Dichlorodifluoromethane	ND		ug/l	5.0		1
1,2-Dibromoethane	ND		ug/l	2.0		1



Project Name: ENERGIZER Lab Number: L1523798

Project Number: 0252540 **Report Date:** 10/05/15

SAMPLE RESULTS

Lab ID: L1523798-02

Client ID: TB-001-20150923-01 Sample Location: BENNINGTON, VT Date Collected: 09/16/15 11:11

Date Received: 09/24/15 Field Prep: Not Specified

Parameter Result Qualifier Units RLMDL **Dilution Factor** Volatile Organics by GC/MS - Westborough Lab ND 2.5 1,3-Dichloropropane 1 ug/l ND 1 1,1,1,2-Tetrachloroethane ug/l 0.50 ND 1 o-Chlorotoluene ug/l 2.5 -p-Chlorotoluene ND 2.5 1 ug/l ND Hexachlorobutadiene ug/l 0.50 1 1,2,4-Trichlorobenzene ND 2.5 1 ug/l --

			Acceptance	
Surrogate	% Recovery	Qualifier	Criteria	
1,2-Dichloroethane-d4	99		70-130	
Toluene-d8	104		70-130	
4-Bromofluorobenzene	105		70-130	
Dibromofluoromethane	99		70-130	



Project Name: ENERGIZER

Project Number: 0252540

SAMPLE RESULTS

L1523798

Lab Number:

Report Date: 10/05/15

Lab ID: L1523798-03

Client ID: ERM-8-20150923-001 Sample Location: BENNINGTON, VT

Matrix: Water Analytical Method: 1,8260C

Analytical Date: 10/04/15 14:36

PDAnalyst:

Date Collected:	09/23/15 12:10
Date Received:	09/24/15
Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - We	stborough Lab					
Methylene chloride	ND		ug/l	3.0		1
1,1-Dichloroethane	ND		ug/l	0.75		1
Chloroform	ND		ug/l	0.75		1
Carbon tetrachloride	ND		ug/l	0.50		1
1,2-Dichloropropane	ND		ug/l	1.8		1
Dibromochloromethane	ND		ug/l	0.50		1
1,1,2-Trichloroethane	ND		ug/l	0.75		1
Tetrachloroethene	1.6		ug/l	0.50		1
Chlorobenzene	ND		ug/l	0.50		1
1,2-Dichloroethane	ND		ug/l	0.50		1
1,1,1-Trichloroethane	ND		ug/l	0.50		1
Bromodichloromethane	ND		ug/l	0.50		1
trans-1,3-Dichloropropene	ND		ug/l	0.50		1
cis-1,3-Dichloropropene	ND		ug/l	0.50		1
1,3-Dichloropropene, Total	ND		ug/l	0.50		1
Bromoform	ND		ug/l	2.0		1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50		1
Chloromethane	ND		ug/l	2.5		1
Vinyl chloride	ND		ug/l	1.0		1
Chloroethane	ND		ug/l	1.0		1
1,1-Dichloroethene	ND		ug/l	0.50		1
trans-1,2-Dichloroethene	ND		ug/l	0.75		1
1,2-Dichloroethene, Total	ND		ug/l	0.50		1
Trichloroethene	0.91		ug/l	0.50		1
1,2-Dichlorobenzene	ND		ug/l	2.5		1
1,3-Dichlorobenzene	ND		ug/l	2.5		1
1,4-Dichlorobenzene	ND		ug/l	2.5		1
cis-1,2-Dichloroethene	ND		ug/l	0.50		1
Dichlorodifluoromethane	ND		ug/l	5.0		1
1,2-Dibromoethane	ND		ug/l	2.0		1



09/23/15 12:10

Project Name: ENERGIZER Lab Number: L1523798

Project Number: 0252540 **Report Date:** 10/05/15

SAMPLE RESULTS

Lab ID: L1523798-03 Date Collected:

Client ID: ERM-8-20150923-001 Date Received: 09/24/15 Sample Location: BENNINGTON, VT Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - Westboroug	gh Lab						
1,3-Dichloropropane	ND		ug/l	2.5		1	
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50		1	
o-Chlorotoluene	ND		ug/l	2.5		1	
p-Chlorotoluene	ND		ug/l	2.5		1	
Hexachlorobutadiene	ND		ug/l	0.50		1	
1,2,4-Trichlorobenzene	ND		ug/l	2.5		1	

			Acceptance	
Surrogate	% Recovery	Qualifier	Criteria	
1,2-Dichloroethane-d4	102		70-130	
Toluene-d8	105		70-130	
4-Bromofluorobenzene	105		70-130	
Dibromofluoromethane	99		70-130	



L1523798

Project Name: ENERGIZER

Project Number: 0252540

SAMPLE RESULTS

Report Date:

Lab Number:

10/05/15

Lab ID: L1523798-04

Client ID: ERM-11S-20150923-001 Sample Location: BENNINGTON, VT

Matrix: Water Analytical Method: 1,8260C Analytical Date: 10/04/15 15:04

Analyst: PD Date Collected: 09/23/15 12:30

Date Received: 09/24/15 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Wes	stborough Lab					
Methylene chloride	ND		ug/l	3.0		1
1,1-Dichloroethane	ND		ug/l	0.75		1
Chloroform	ND		ug/l	0.75		1
Carbon tetrachloride	ND		ug/l	0.50		1
1,2-Dichloropropane	ND		ug/l	1.8		1
Dibromochloromethane	ND		ug/l	0.50		1
1,1,2-Trichloroethane	ND		ug/l	0.75		1
Tetrachloroethene	120		ug/l	0.50		1
Chlorobenzene	ND		ug/l	0.50		1
1,2-Dichloroethane	ND		ug/l	0.50		1
1,1,1-Trichloroethane	ND		ug/l	0.50		1
Bromodichloromethane	ND		ug/l	0.50		1
trans-1,3-Dichloropropene	ND		ug/l	0.50		1
cis-1,3-Dichloropropene	ND		ug/l	0.50		1
1,3-Dichloropropene, Total	ND		ug/l	0.50		1
Bromoform	ND		ug/l	2.0		1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50		1
Chloromethane	ND		ug/l	2.5		1
Vinyl chloride	ND		ug/l	1.0		1
Chloroethane	ND		ug/l	1.0		1
1,1-Dichloroethene	ND		ug/l	0.50		1
trans-1,2-Dichloroethene	ND		ug/l	0.75		1
1,2-Dichloroethene, Total	ND		ug/l	0.50		1
Trichloroethene	ND		ug/l	0.50		1
1,2-Dichlorobenzene	ND		ug/l	2.5		1
1,3-Dichlorobenzene	ND		ug/l	2.5		1
1,4-Dichlorobenzene	ND		ug/l	2.5		1
cis-1,2-Dichloroethene	ND		ug/l	0.50		1
Dichlorodifluoromethane	ND		ug/l	5.0		1
1,2-Dibromoethane	ND		ug/l	2.0		1

Project Name: ENERGIZER Lab Number: L1523798

Project Number: 0252540 **Report Date:** 10/05/15

SAMPLE RESULTS

Lab ID: L1523798-04 Date Collected: 09/23/15 12:30

Client ID: ERM-11S-20150923-001 Date Received: 09/24/15 Sample Location: BENNINGTON, VT Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough L	.ab					
1,3-Dichloropropane	ND		ug/l	2.5		1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50		1
o-Chlorotoluene	ND		ug/l	2.5		1
p-Chlorotoluene	ND		ug/l	2.5		1
Hexachlorobutadiene	ND		ug/l	0.50		1
1,2,4-Trichlorobenzene	ND		ug/l	2.5		1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
	70 NCCC VCI y	Quanto	Officia	
1,2-Dichloroethane-d4	99		70-130	
Toluene-d8	104		70-130	
4-Bromofluorobenzene	105		70-130	
Dibromofluoromethane	99		70-130	



L1523798

Project Name: ENERGIZER

Project Number: 0252540

SAMPLE RESULTS

Lab Number:

Report Date: 10/05/15

Lab ID: L1523798-05

Client ID: ERM-12-20150923-001 Sample Location: BENNINGTON, VT

Matrix: Water Analytical Method: 1,8260C Analytical Date: 10/04/15 15:31

Analyst: PD Date Collected: 09/23/15 11:55

Date Received: 09/24/15 Field Prep: Not Specified

Volatile Organics by GC/MS - Westborou Methylene chloride 1,1-Dichloroethane	gh Lab ND ND			
<u> </u>		_		
1,1-Dichloroethane	ND	ug/l	3.0	 1
	ND	ug/l	0.75	 1
Chloroform	ND	ug/l	0.75	 1
Carbon tetrachloride	ND	ug/l	0.50	 1
1,2-Dichloropropane	ND	ug/l	1.8	 1
Dibromochloromethane	ND	ug/l	0.50	 1
1,1,2-Trichloroethane	ND	ug/l	0.75	 1
Tetrachloroethene	72	ug/l	0.50	 1
Chlorobenzene	ND	ug/l	0.50	 1
1,2-Dichloroethane	ND	ug/l	0.50	 1
1,1,1-Trichloroethane	ND	ug/l	0.50	 1
Bromodichloromethane	ND	ug/l	0.50	 1
trans-1,3-Dichloropropene	ND	ug/l	0.50	 1
cis-1,3-Dichloropropene	ND	ug/l	0.50	 1
1,3-Dichloropropene, Total	ND	ug/l	0.50	 1
Bromoform	ND	ug/l	2.0	 1
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	 1
Chloromethane	ND	ug/l	2.5	 1
Vinyl chloride	ND	ug/l	1.0	 1
Chloroethane	ND	ug/l	1.0	 1
1,1-Dichloroethene	ND	ug/l	0.50	 1
trans-1,2-Dichloroethene	ND	ug/l	0.75	 1
1,2-Dichloroethene, Total	ND	ug/l	0.50	 1
Trichloroethene	ND	ug/l	0.50	 1
1,2-Dichlorobenzene	ND	ug/l	2.5	 1
1,3-Dichlorobenzene	ND	ug/l	2.5	 1
1,4-Dichlorobenzene	ND	ug/l	2.5	 1
cis-1,2-Dichloroethene	ND	ug/l	0.50	 1
Dichlorodifluoromethane	ND	ug/l	5.0	 1
1,2-Dibromoethane	ND	ug/l	2.0	 1

09/23/15 11:55

Project Name: ENERGIZER Lab Number: L1523798

Project Number: 0252540 **Report Date:** 10/05/15

SAMPLE RESULTS

Lab ID: L1523798-05

Client ID: ERM-12-20150923-001 Sample Location: BENNINGTON, VT

Date Received: 09/24/15
Field Prep: Not Specified

Date Collected:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - Westboro	ugh Lab						
1,3-Dichloropropane	ND		ug/l	2.5		1	
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50		1	
o-Chlorotoluene	ND		ug/l	2.5		1	
p-Chlorotoluene	ND		ug/l	2.5		1	
Hexachlorobutadiene	ND		ug/l	0.50		1	
1,2,4-Trichlorobenzene	ND		ug/l	2.5		1	

Surrogate	% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4	100		70-130	
Toluene-d8	103		70-130	
4-Bromofluorobenzene	105		70-130	
Dibromofluoromethane	100		70-130	



Project Name: ENERGIZER

Project Number: 0252540

SAMPLE RESULTS

L1523798

Lab Number:

Report Date: 10/05/15

Client ID: ERM-13-20150923-001 Sample Location: BENNINGTON, VT

L1523798-06

Matrix: Water Analytical Method: 1,8260C

Analytical Date: 10/04/15 15:59

Analyst: PD

Lab ID:

Date Collected: 09/23/15 11:40 Date Received: 09/24/15 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Wes	stborough Lab					
Methylene chloride	ND		ug/l	3.0		1
1,1-Dichloroethane	ND		ug/l	0.75		1
Chloroform	0.85		ug/l	0.75		1
Carbon tetrachloride	ND		ug/l	0.50		1
1,2-Dichloropropane	ND		ug/l	1.8		1
Dibromochloromethane	ND		ug/l	0.50		1
1,1,2-Trichloroethane	ND		ug/l	0.75		1
Tetrachloroethene	ND		ug/l	0.50		1
Chlorobenzene	ND		ug/l	0.50		1
1,2-Dichloroethane	ND		ug/l	0.50		1
1,1,1-Trichloroethane	ND		ug/l	0.50		1
Bromodichloromethane	ND		ug/l	0.50		1
trans-1,3-Dichloropropene	ND		ug/l	0.50		1
cis-1,3-Dichloropropene	ND		ug/l	0.50		1
1,3-Dichloropropene, Total	ND		ug/l	0.50		1
Bromoform	ND		ug/l	2.0		1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50		1
Chloromethane	ND		ug/l	2.5		1
Vinyl chloride	ND		ug/l	1.0		1
Chloroethane	ND		ug/l	1.0		1
1,1-Dichloroethene	ND		ug/l	0.50		1
trans-1,2-Dichloroethene	ND		ug/l	0.75		1
1,2-Dichloroethene, Total	ND		ug/l	0.50		1
Trichloroethene	ND		ug/l	0.50		1
1,2-Dichlorobenzene	ND		ug/l	2.5		1
1,3-Dichlorobenzene	ND		ug/l	2.5		1
1,4-Dichlorobenzene	ND		ug/l	2.5		1
cis-1,2-Dichloroethene	ND		ug/l	0.50		1
Dichlorodifluoromethane	ND		ug/l	5.0		1
1,2-Dibromoethane	ND		ug/l	2.0		1



Project Name: ENERGIZER Lab Number: L1523798

Project Number: 0252540 **Report Date:** 10/05/15

SAMPLE RESULTS

Lab ID: L1523798-06 Date Collected: 09/23/15 11:40

Client ID: ERM-13-20150923-001 Date Received: 09/24/15 Sample Location: BENNINGTON, VT Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	
Volatile Organics by GC/MS - Westboroug	gh Lab						
1,3-Dichloropropane	ND		ug/l	2.5		1	
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50		1	
o-Chlorotoluene	ND		ug/l	2.5		1	
p-Chlorotoluene	ND		ug/l	2.5		1	
Hexachlorobutadiene	ND		ug/l	0.50		1	
1,2,4-Trichlorobenzene	ND		ug/l	2.5		1	

			Acceptance	
Surrogate	% Recovery	Qualifier	Criteria	
1,2-Dichloroethane-d4	103		70-130	
Toluene-d8	105		70-130	
4-Bromofluorobenzene	104		70-130	
Dibromofluoromethane	100		70-130	



L1523798

Project Name: ENERGIZER

Project Number: 0252540

SAMPLE RESULTS

Report Date: 10/05/15

Lab Number:

Lab ID: L1523798-07

Client ID: ERM-16-20150923-001 Sample Location: BENNINGTON, VT

Matrix: Water Analytical Method: 1,8260C Analytical Date: 10/04/15 16:27

PDAnalyst:

Date Collected: 09/23/15 10:40

Date Received: 09/24/15 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Wes	tborough Lab					
Methylene chloride	ND		ug/l	3.0		1
1,1-Dichloroethane	ND		ug/l	0.75		1
Chloroform	2.0		ug/l	0.75		1
Carbon tetrachloride	ND		ug/l	0.50		1
1,2-Dichloropropane	ND		ug/l	1.8		1
Dibromochloromethane	ND		ug/l	0.50		1
1,1,2-Trichloroethane	ND		ug/l	0.75		1
Tetrachloroethene	12		ug/l	0.50		1
Chlorobenzene	ND		ug/l	0.50		1
1,2-Dichloroethane	ND		ug/l	0.50		1
1,1,1-Trichloroethane	ND		ug/l	0.50		1
Bromodichloromethane	ND		ug/l	0.50		1
trans-1,3-Dichloropropene	ND		ug/l	0.50		1
cis-1,3-Dichloropropene	ND		ug/l	0.50		1
1,3-Dichloropropene, Total	ND		ug/l	0.50		1
Bromoform	ND		ug/l	2.0		1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50		1
Chloromethane	ND		ug/l	2.5		1
Vinyl chloride	ND		ug/l	1.0		1
Chloroethane	ND		ug/l	1.0		1
1,1-Dichloroethene	ND		ug/l	0.50		1
trans-1,2-Dichloroethene	ND		ug/l	0.75		1
1,2-Dichloroethene, Total	ND		ug/l	0.50		1
Trichloroethene	ND		ug/l	0.50		1
1,2-Dichlorobenzene	ND		ug/l	2.5		1
1,3-Dichlorobenzene	ND		ug/l	2.5		1
1,4-Dichlorobenzene	ND		ug/l	2.5		1
cis-1,2-Dichloroethene	ND		ug/l	0.50		1
Dichlorodifluoromethane	ND		ug/l	5.0		1
1,2-Dibromoethane	ND		ug/l	2.0		1

Project Name: ENERGIZER Lab Number: L1523798

Project Number: 0252540 **Report Date:** 10/05/15

SAMPLE RESULTS

Lab ID: L1523798-07 Date Collected: 09/23/15 10:40

Client ID: ERM-16-20150923-001 Date Received: 09/24/15 Sample Location: BENNINGTON, VT Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor						
Volatile Organics by GC/MS - Westborough Lab												
1,3-Dichloropropane	ND		ug/l	2.5		1						
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50		1						
o-Chlorotoluene	ND		ug/l	2.5		1						
p-Chlorotoluene	ND		ug/l	2.5		1						
Hexachlorobutadiene	ND		ug/l	0.50		1						
1,2,4-Trichlorobenzene	ND		ug/l	2.5		1						

			Acceptance	
Surrogate	% Recovery	Qualifier	Criteria	
1,2-Dichloroethane-d4	101		70-130	
Toluene-d8	105		70-130	
4-Bromofluorobenzene	105		70-130	
Dibromofluoromethane	100		70-130	



Project Name:ENERGIZERLab Number:L1523798Project Number:0252540Report Date:10/05/15

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C Analytical Date: 1,8260C 10/04/15 10:28

Analyst: PD

Parameter	Result	Qualifier Units	RL	MDL
Volatile Organics by GC/MS	· Westborough Lab	for sample(s): 01-0	7 Batch:	WG827735-3
Methylene chloride	ND	ug/l	3.0	
1,1-Dichloroethane	ND	ug/l	0.75	
Chloroform	ND	ug/l	0.75	
Carbon tetrachloride	ND	ug/l	0.50	
1,2-Dichloropropane	ND	ug/l	1.8	
Dibromochloromethane	ND	ug/l	0.50	
1,1,2-Trichloroethane	ND	ug/l	0.75	
Tetrachloroethene	ND	ug/l	0.50	
Chlorobenzene	ND	ug/l	0.50	
1,2-Dichloroethane	ND	ug/l	0.50	
1,1,1-Trichloroethane	ND	ug/l	0.50	
Bromodichloromethane	ND	ug/l	0.50	
trans-1,3-Dichloropropene	ND	ug/l	0.50	
cis-1,3-Dichloropropene	ND	ug/l	0.50	
1,3-Dichloropropene, Total	ND	ug/l	0.50	
Bromoform	ND	ug/l	2.0	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	
Chloromethane	ND	ug/l	2.5	
Vinyl chloride	ND	ug/l	1.0	
Chloroethane	ND	ug/l	1.0	
1,1-Dichloroethene	ND	ug/l	0.50	
trans-1,2-Dichloroethene	ND	ug/l	0.75	
1,2-Dichloroethene, Total	ND	ug/l	0.50	
Trichloroethene	ND	ug/l	0.50	
1,2-Dichlorobenzene	ND	ug/l	2.5	
1,3-Dichlorobenzene	ND	ug/l	2.5	
1,4-Dichlorobenzene	ND	ug/l	2.5	
cis-1,2-Dichloroethene	ND	ug/l	0.50	
Dichlorodifluoromethane	ND	ug/l	5.0	



Project Name:ENERGIZERLab Number:L1523798

Project Number: 0252540 **Report Date:** 10/05/15

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C Analytical Date: 1,8260C 10/04/15 10:28

Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westb	orough Lab	for sample	(s): 01-07	Batch:	WG827735-3
1,2-Dibromoethane	ND		ug/l	2.0	
1,3-Dichloropropane	ND		ug/l	2.5	
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	
o-Chlorotoluene	ND		ug/l	2.5	
p-Chlorotoluene	ND		ug/l	2.5	
Hexachlorobutadiene	ND		ug/l	0.50	
1,2,4-Trichlorobenzene	ND		ug/l	2.5	

		Acc								
Surrogate	%Recovery	Qualifier	Criteria							
1,2-Dichloroethane-d4	99		70-130							
Toluene-d8	106		70-130							
4-Bromofluorobenzene	106		70-130							
Dibromofluoromethane	97		70-130							



Lab Control Sample Analysis Batch Quality Control

Project Name: ENERGIZER

Project Number: 0252540

Lab Number: L1523798

Report Date: 10/05/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	RPD Qual Limits	
Volatile Organics by GC/MS - Westborough	Lab Associated	sample(s):	01-07 Batch: 1	WG827735-1	WG827735-2			
Methylene chloride	103		95		70-130	8	20	
1,1-Dichloroethane	105		97		70-130	8	20	
Chloroform	100		93		70-130	7	20	
Carbon tetrachloride	87		82		63-132	6	20	
1,2-Dichloropropane	104		98		70-130	6	20	
Dibromochloromethane	95		88		63-130	8	20	
1,1,2-Trichloroethane	105		96		70-130	9	20	
Tetrachloroethene	102		91		70-130	11	20	
Chlorobenzene	103		96		75-130	7	25	
1,2-Dichloroethane	97		89		70-130	9	20	
1,1,1-Trichloroethane	96		90		67-130	6	20	
Bromodichloromethane	96		89		67-130	8	20	
trans-1,3-Dichloropropene	80		75		70-130	6	20	
cis-1,3-Dichloropropene	83		78		70-130	6	20	
Bromoform	82		75		54-136	9	20	
1,1,2,2-Tetrachloroethane	103		95		67-130	8	20	
Chloromethane	114		96		64-130	17	20	
Vinyl chloride	98		88		55-140	11	20	
Chloroethane	108		93		55-138	15	20	
1,1-Dichloroethene	97		91		61-145	6	25	
trans-1,2-Dichloroethene	99		92		70-130	7	20	



Lab Control Sample Analysis Batch Quality Control

Project Name: ENERGIZER

Project Number: 0252540

Lab Number:

L1523798

Report Date:

10/05/15

arameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
olatile Organics by GC/MS - Westborough	Lab Associated	sample(s):	01-07 Batch:	WG827735-1	WG827735-2			
Trichloroethene	98		90		70-130	9		25
1,2-Dichlorobenzene	104		96		70-130	8		20
1,3-Dichlorobenzene	105		98		70-130	7		20
1,4-Dichlorobenzene	103		96		70-130	7		20
cis-1,2-Dichloroethene	99		94		70-130	5		20
Dichlorodifluoromethane	92		86		36-147	7		20
1,2-Dibromoethane	101		92		70-130	9		20
1,3-Dichloropropane	107		98		70-130	9		20
1,1,1,2-Tetrachloroethane	98		91		64-130	7		20
o-Chlorotoluene	109		102		70-130	7		20
p-Chlorotoluene	109		102		70-130	7		20
Hexachlorobutadiene	103		96		63-130	7		20
1,2,4-Trichlorobenzene	93		88		70-130	6		20

	LCS		LCSD		Acceptance
Surrogate	%Recovery	%Recovery Qual		Qual	Criteria
1,2-Dichloroethane-d4	97		94		70-130
Toluene-d8	105		106		70-130
4-Bromofluorobenzene	103		104		70-130
Dibromofluoromethane	98		97		70-130



Project Name:ENERGIZERLab Number: L1523798Project Number:0252540Report Date: 10/05/15

Sample Receipt and Container Information

Were project specific reporting limits specified?

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

A Absent

Container Info	rmation		Temp				
Container ID	Container Type	Cooler	рН	deg C	Pres	Seal	Analysis(*)
L1523798-01A	Vial HCI preserved	Α	N/A	2.9	Υ	Absent	8260-CHLR(14)
L1523798-01B	Vial HCl preserved	Α	N/A	2.9	Υ	Absent	8260-CHLR(14)
L1523798-01C	Vial HCl preserved	Α	N/A	2.9	Υ	Absent	8260-CHLR(14)
L1523798-02A	Vial HCl preserved	Α	N/A	2.9	Υ	Absent	8260-CHLR(14)
L1523798-02B	Vial HCl preserved	Α	N/A	2.9	Υ	Absent	8260-CHLR(14)
L1523798-03A	Vial HCl preserved	Α	N/A	2.9	Υ	Absent	8260-CHLR(14)
L1523798-03B	Vial HCl preserved	Α	N/A	2.9	Υ	Absent	8260-CHLR(14)
L1523798-03C	Vial HCl preserved	Α	N/A	2.9	Υ	Absent	8260-CHLR(14)
L1523798-04A	Vial HCl preserved	Α	N/A	2.9	Υ	Absent	8260-CHLR(14)
L1523798-04B	Vial HCl preserved	Α	N/A	2.9	Υ	Absent	8260-CHLR(14)
L1523798-04C	Vial HCl preserved	Α	N/A	2.9	Υ	Absent	8260-CHLR(14)
L1523798-05A	Vial HCl preserved	Α	N/A	2.9	Υ	Absent	8260-CHLR(14)
L1523798-05B	Vial HCl preserved	Α	N/A	2.9	Υ	Absent	8260-CHLR(14)
L1523798-05C	Vial HCl preserved	Α	N/A	2.9	Υ	Absent	8260-CHLR(14)
L1523798-06A	Vial HCl preserved	Α	N/A	2.9	Υ	Absent	8260-CHLR(14)
L1523798-06B	Vial HCl preserved	Α	N/A	2.9	Υ	Absent	8260-CHLR(14)
L1523798-06C	Vial HCl preserved	Α	N/A	2.9	Υ	Absent	8260-CHLR(14)
L1523798-07A	Vial HCl preserved	Α	N/A	2.9	Υ	Absent	8260-CHLR(14)
L1523798-07B	Vial HCI preserved	Α	N/A	2.9	Υ	Absent	8260-CHLR(14)
L1523798-07C	Vial HCl preserved	Α	N/A	2.9	Υ	Absent	8260-CHLR(14)



Project Name:ENERGIZERLab Number:L1523798Project Number:0252540Report Date:10/05/15

GLOSSARY

Acronyms

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes
or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

 The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A Spectra identified as "Aldol Condensation Product".
- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

Report Format: Data Usability Report



Project Name:ENERGIZERLab Number:L1523798Project Number:0252540Report Date:10/05/15

Data Qualifiers

- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations
 of the analyte.
- E Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
- H The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I The lower value for the two columns has been reported due to obvious interference.
- M Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P The RPD between the results for the two columns exceeds the method-specified criteria.
- Q The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R Analytical results are from sample re-analysis.
- **RE** Analytical results are from sample re-extraction.
- S Analytical results are from modified screening analysis.
- J Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND Not detected at the reporting limit (RL) for the sample.

Report Format: Data Usability Report



Project Name:ENERGIZERLab Number:L1523798Project Number:0252540Report Date:10/05/15

REFERENCES

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.

Facility: Company-wide

Department: Quality Assurance

Title: Certificate/Approval Program Summary

Serial_No:10051517:39

ID No.:17873 Revision 2

Published Date: 9/28/2015 10:34:24 AM

Page 1 of 1

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 8260C: 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide) (soil), Methyl methacrylate (soil),

Azobenzene.

EPA 8270D: Dimethylnaphthalene, 1, 4-Diphenylhydrazine.

EPA 625: 4-Chloroaniline, 4-Methylphenol.

SM4500: Soil: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility

EPA 8270D: Biphenyl. **EPA 2540D:** TSS

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene,

Benzothiophene, 1-Methylnaphthalene.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water

EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1**: Mercury;

EPA 300.0: Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C,

SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B

EPA 332: Perchlorate.

Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.

Non-Potable Water

EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;

EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;

EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC,

SM426C, SM4500NH3-BH, EPA 350.1: Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, SM4500NO3-F,

EPA 353.2: Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4,

SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

EPA 624: Volatile Halocarbons & Aromatics,

EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT,

Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625: SVOC (Acid/Base/Neutral Extractables), EPA 600/4-81-045: PCB-Oil.

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Pre-Qualtrax Document ID: 08-113 Document Type: Form

ALPHA Lab ID Sample ID Collection Sample Sample Sample Sample Collection Cate Time Sample Cate	ALPHA	CHAIN O	F CU	STO)Y	AGE	OF _	Date Red	c'd in Lab	9/20	115	•	ALPHA	Job #:	152376	18
Manual Color Manual	8 Wolkup Drive	220 Earbon Blud	Projec	t Informati	on			Report	Informa	tion - Data	Deliver	ables	Billing Ir	formation		
Client ELM Project Location: People Container Project Information Project In	Westboro, MA	01581 Mansfield, MA 02048	Project I	Name: End	ergizi	er		□ ADEx EMAIL Same as Client info PO #:					PO #:			
Client ERM Address: 15 Pank Row West Project Manager: Ethan Gyles Project Manager: Ethan Gyle	Client Information	on	Project I	ocation:	ະ ດຸດ ໂທ	ston	VT	Regulatory Requirements & Project Information Requirements								
Additional Project Information: ALPHA Lab ID (Lab to do Program) Collection Sample Sampl	Client: FR	$ \sqrt{} $	Project :	Project #: 1												
Reservative Property Preservative Preservat						Lules	5	☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)								
Email: EHALO, by lesso ERP. (Com. Additional Project Information: Additional Project Information: Additional Project Information: Alpha Lab ID (Standard Date Due: Additional Project Information: Sample ID Collection Time Matrix Mat					17007	07.0		3 to 1 to								
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