

Waite - Heindel Environmental Management

April 17, 2018

Mr. John Gay
New England Waste Services of Vermont, Inc.
220 Avenue B
Williston, VT 05495

Re: NEWSVT Landfills
BRW-1, BRW-2R Monitoring Wells in Black River Wetland
March 2018 Water Quality Sampling for Permit Compliance
Coventry, Vermont

Dear John:

Enclosed please find the results of the March 2018 water sampling of the Monitor Wells BRW-1 and BRW-2R conducted at the NEWSVT Landfill in Coventry, Vermont in accordance with Condition 46 of the *Solid Waste Disposal Facility Certification* ("Solid Waste Cert.", dated June 25, 2015), and NEWSVT Water Quality Monitoring Program dated May 12, 2004. Sampling of BRW-1 and BRW-2R was conducted on March 2, 2018 by Wendy Shellito, Waite-Heindel Environmental Management (WHEM) Project Scientist and Christopher Page, WHEM Staff Scientist, following WHEM's low-flow sampling SOP.

GROUNDWATER RESULTS

On March 2, 2018, samples were collected from MW-BRW-1 and MW-BRW-2R for analysis for Volatile Organic Compounds (EPA Method 8260C), Inorganic Compounds (IOCs) and Metals. Please see a location map, summary sheets, and lab results in the Attachment.

BRW-1: There were no indications of landfill impacts in the March 2018 groundwater samples from BRW-1.

Inorganic Compounds in BRW-1: IOC Concentrations were generally very low; similar to the February 2017 values. Inorganic parameters that are typically evaluated as indicators of potential landfill impacts were as follows:

- COD (83 mg/L) increased since 2017 (36 mg/L), and is in the middle of the historical range. There is no VGES for COD.
- Specific Conductance (456 us/cm) slightly decreased since 2017 (465 us/cm), and was within the middle of the historical range. There is no VGES for Specific Conductance.
- pH (6.32 s.u.) is slightly outside of the Federal Secondary Maximum Contaminant Level (SMCL) range of 6.5-8.5 s.u., but is within the Vermont Maximum Acceptable Change (MAC) of +/-1 s.u.
- Metals: Total chromium (5.7 ug/L) was detected for the fourth time since sampling began in 2005; it remains well below the primary VGES. Total lead (1.6 ug/L) was detected for the third time since sampling began in 2005; it remains well below the primary VGES. Dissolved manganese (1.10 mg/L) decreased to within the middle of its historic range, after being detected at its highest value in 2017; it continues to exceed the primary and secondary VGES, as is typical. Dissolved iron (37.0 mg/L) continues to be detected at its highest value to date; it



continues to exceed the secondary VGESs, as is typical. These elevated manganese and iron values are not surprising, given the peat soils at this well.

- **VOCs in BRW-1:** VOCs were not detected, and no unidentified peaks were reported in MW-BRW-1 in the March 2018 samples, as has been the case since sampling began in 2005. This lack of VOCs is a strong indicator of the lack of landfill impacts on shallow groundwater in the wetlands at this location.

BRW-2R: There were no indications of landfill impacts in the March 2018 groundwater samples from BRW-2R.

- **Inorganic Compounds in BRW-2R:** IOC concentrations were generally very low; similar to the February 2017 values. Inorganic parameters that are typically evaluated as indicators of potential landfill impacts were as follows:
 - COD (<10 mg/L) decreased to non-detected for the second time since sampling began in 2005.
 - Specific Conductance (290 us/cm) slightly decreased since 2017 (305 us/cm), and is in the middle of its historic range. There is no VGES for Specific Conductance.
 - Metals: Total and dissolved manganese remain within the low end of their historic ranges, and continue to be detected below the primary VGES; both exceed the secondary GES's, as is typical. Total and dissolved iron remain within the low end of their historic ranges; both continue to exceed the secondary GES's, as is typical.
- **VOCs in BRW-2:** VOCs were not detected, and no unidentified peaks (UIPs) were reported in MW-BRW-2R in the March 2018 samples, as has been the case since sampling began in 2005. This lack of VOCs is a strong indicator of the lack of landfill impacts on shallow groundwater in the wetlands at this location.

QUALITY ASSURANCE/QUALITY CONTROL

The results of the QA/QC trip blank sample stored in the same cooler as the groundwater samples indicated acceptable sampling and laboratory procedures for the March 2018 sampling round, as results were non-detected for VOCs.

Summary: In the March 2018 sampling event, there are no indicators of landfill impacts on the shallow groundwater in the Black River Wetlands north of the NEWSVT lined and unlined landfills.

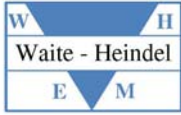
Next sampling: In accordance with the current Water Quality Monitoring Program, BRW-1 and BRW-2R are sampled once a year in mid-winter, so they will next be sampled in February 2019.

Sincerely,

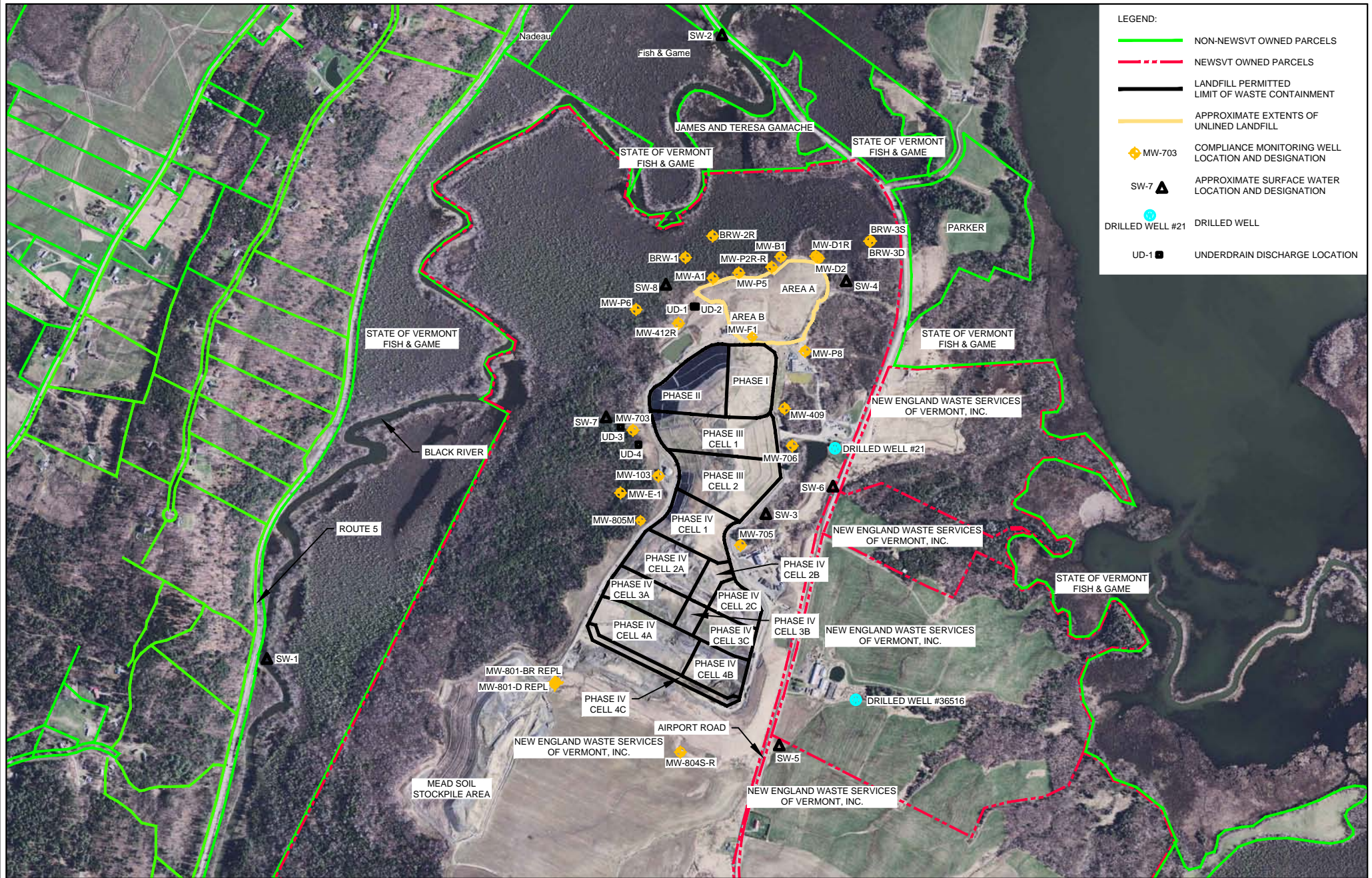
Wendy Shellito
Project Scientist

Attachment

U:\PROJECTS - WHEM\NEWSVT\MW-BRW BLACK RIVER WETLAND WELLS\2018\NEWSVT_MW-BRW1,2R Ltr Mar-2018.docx

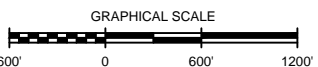


ATTACHMENT



LEGEND:

- NON-NEWSVT OWNED PARCELS
- - - NEWSVT OWNED PARCELS
- LANDFILL PERMITTED LIMIT OF WASTE CONTAINMENT
- APPROXIMATE EXTENTS OF UNLINED LANDFILL
- ◆ MW-703 COMPLIANCE MONITORING WELL LOCATION AND DESIGNATION
- ▲ SW-7 APPROXIMATE SURFACE WATER LOCATION AND DESIGNATION
- DRILLED WELL #21 DRILLED WELL
- UD-1 UNDERDRAIN DISCHARGE LOCATION



DRAWN BY: T. PETIT
 DESIGNED BY: T. PETIT/W. SHELLITO (WHEM)
 REVIEWED BY: B. BEAUDOIN
 PROJECT MGR: T. PETIT
 PIC: B. BEAUDOIN
 DATE: SEPTEMBER 2017

NEW ENGLAND WASTE SERVICES OF VERMONT, INC.
 COVENTRY, VERMONT

WATER QUALITY MONITORING LOCATIONS MAP

PROJECT NUMBER:
1166.08

SHEET NUMBER:

NEWSVT Landfills
Coventry, Vermont
Groundwater Analyses
Indicators and Low-Flow Sampling Parameters



Indicator Parameters [1]																						Low-Flow Sampling Info			
COD (mg/L)		Total Sodium (mg/L)	Temp (°C)			Spec. Cond.[4] (us/cm)			Dissolved Oxygen (mg/L)			pH (s.u.)			Oxidation-Reduction Potential (mV)			Turbidity (NTU)							
Well	Date	Lab			final value	stab?	mins	final value	stab?	mins	final value	stab?	mins	final value	stab?	mins	final value	stab?	mins	final value	stab?	mins	Sampling Method [5]	Flow Rate ml/min [5]	
			VT Enforcement Standard [1]	None	250	None		None			None			None			None			None					
			VT Preventive Action Level [1]	None	125	None		None			None			None			None			None					
			VT Max. Acceptable Change [2]	+25	+10	+10 °F		+100			None			+/-1			None			None					
			VT Health Advisory [3]	None	None	None		None			None			None			None			None					
			Federal MCL [3]	None	250	None		None			None			6.5-8.5			None			None					
			Low-Flow Stabilization [5]	NA	NA	< 3%		< 3%			< 10%			< 0.1 s.u.			< 10 m.v			< 10%					
MW-BRW-1	3/10/2005	Endyne		120	6.76	NA		402						6.59									G		
Downgradient	3/16/2006	Endyne		26	10.7	3.40		479						6.50									G		
	2/6/2007	Endyne		150	9.12	3.57		480						6.62									G		
	2/12/2008	Endyne		< 15		2.1		473						6.78									G		
	2/3/2009	Endyne		120	8.5	1.12		416						6.42									G		
	2/10/2010	Endyne		77	6.6	3.30		366						6.50									G		
	2/8/2011	Endyne		130	8.3	0.11		319						6.36									G		
	2/8/2012	Endyne		130	6.8	4.90		210						6.30									G		
	2/5/2013	Endyne		35	7.8	2.50		658						7.30									G		
	2/24/2014	Endyne		37	8.9	3.62	Y	15	449	Y	6	0.36	Y	15	6.66	Y	6	-69.8	Y	6	57.8	N	18	P	150
	2/10/2015	Endyne		22	10	3.35	N	221	410	Y	18	2.03	Y	18	6.87	Y	15	-59.9	Y	18	23.88	N	21	P	200
	2/4/2016	Endyne		61	7.2	6.46	Y	27	413	Y	6	1.37	Y	18	5.58	Y	27	-52.6	Y	24	41.00	N	30	P	200
	2/14/2017	Endyne		36	8.3	6.60	Y	18	465	Y	9	0.12	Y	15	6.83	Y	9	-51.2	Y	18	5.37	Y	18	P	200
3/2/2018	Endyne		83	8.4	3.35	Y	35	456	Y	24	0.60	Y	35	6.32	Y	35	-89.6	Y	35	107.94	Y	35	P	200	
MW-BRW-2R	3/10/2005	Endyne		32	5.74	NA		307						6.75									G		
Downgradient	3/16/2006	Endyne		< 15	7	2.40		320						6.40									G		
	2/6/2007	Endyne		800	8.47	1.80		295						6.73									G		
	2/21/2008	Endyne		75		-0.26		52						7.74									G		
	2/3/2009	Endyne		34	3.7	1.21		466						6.57									G		
	2/16/2010	Endyne		170	6.6	5.60		288						7.40									G		
	2/8/2011	Endyne		220	6.4	5.16		304						7.57									G		
	2/8/2012	Endyne		570	5.5	4.80		185						6.80									G		
	2/5/2013	Endyne		270	6	3.90		309						7.40									G		
	2/24/2014	Endyne		17	6	4.54	Y	15	298	Y	6	0.47	Y	15	6.91	Y	6	88.9	Y	9	16.3	Y	15	P	200
	2/10/2015	Endyne		17	5.3	4.98	Y	15	261	Y	12	0.74	Y	15	6.96	Y	6	-15.9	Y	9	6.55	N	18	P	200
	2/4/2016	Endyne		13	5	5.50	Y	12	280	Y	12	0.89	Y	18	6.12	Y	18	12.6	Y	18	11.82	Y	21	P	200
	2/14/2017	Endyne		16	5.2	5.60	Y	9	305	Y	24	0.14	Y	27	6.88	Y	18	79.8	Y	27	16.34	Y	27	P	200
3/2/2018	Endyne		< 10	5.4	4.07	N	30	290	Y	6	0.45	Y	27	6.92	Y	9	-7.9	Y	30	9.32	Y	30	P	200	

Note:
 Shaded values exceed Vermont Groundwater Enforcement Standard, as set by Vermont Groundwater Protection Rule and Strategy (GWPRS); 12/2016 & Interim Standards; 3/2015.
 Bolded values exceed Vermont Preventive Action Level (PAL) as set by GWPRS; 12/2016 & Interim Standards; 3/2015.
 Underlined values exceed VT Max. Acceptable Change, GWPRS; 12/2016 & Interim Standards; 3/2015.
 Italicized values exceed Vermont Health Advisory as set by GWPRS; 12/2016 & Interim Standards; 3/2015.
 [1] VT GES = VT Groundwater Enforcement Standards and Preventive Action Levels from Table 2, Groundwater Protection Rule & Strategy (GWPRS); 12/2016 & Interim Standards; 3/2015.
 [2] VT Maximum Acceptable Change from Table 3, GWPRS; 12/2016 & Interim Standards; 3/2015.
 [3] Vermont Health Advisory Levels and Federal MCLs from October 21, 2015 Vermont Department of Health Drinking Water Guidance.
 [5] Stabilization values are from WHEM's Standard Operating Procedure for low-flow sampling utilizing a peristaltic or submersible pump. Low-flow indicator parameters shown are from stabilized readings or after one half hour, whichever comes first.

**NEWSVT Landfills
Coventry, Vermont
Groundwater Analyses
Inorganics**



	Primary Groundwater Quality Parameters [1]									Secondary Groundwater Quality Parameters [2]						
	Total Arsenic (ug/L)	Total Cadmium (ug/L)	Total Chromium (ug/L)	Total Copper (mg/L)	Total Lead (ug/L)	Total Nickel (ug/L)	Total Manganese**** (mg/L)	Dissolved Manganese*** (mg/L)	Total Mercury (ug/L)	Total Chloride (mg/L)	Total Copper (mg/L)	Total Iron (mg/L)	Dissolved Iron (mg/L)	Total Manganese (mg/L)	Dissolved Manganese (mg/L)	Total Zinc (mg/L)
VT GES**[1]	10.0	5.0	100.0	1.300	15.0	100.0	0.300	0.300	2.0	250	1.0	0.3	0.3	0.05	0.05	5
VT Preventive Action Level* [1]	1.0	2.5	50.0	0.650	1.5	50.0	0.150	0.150	0.5	125	0.5	0.15	0.15	0.025	0.025	2.5
VT Health Advisory [2]	None	None	None	1.300	15	100	0.300	0.300	None	250	1.0	0.3	0.3	0.05	0.05	5
Federal MCL [2]	10	5	100	None	None	None	None	None	2	None	None	None	None	None	None	None

Well	Date	Lab	Remarks
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MW-BRW-1	3/10/2005^	Endyne	see note [a]	4	< 3	< 10	< 0.010	< 2	46	1.04	0.962	< 1	< 2.50	< 0.010	26.2	0.046	1.04	0.962	< 0.020
	3/16/2006^	Endyne	see note [c]	< 2	< 2	< 10	< 0.010	< 1	< 20	1.25	1.14	< 1	< 2.50	< 0.010	38.9	3.47	1.25	1.14	< 0.020
	2/6/2007^	Endyne	see note [e]	< 2	< 2	22	< 0.020	< 1	< 20	1.16	1.18	< 1	< 2.50	< 0.020	36.3	33.40	1.16	1.18	< 0.020
	2/12/2008^	Endyne	see note [g]	< 2	< 2	< 20	0.029	< 1	< 20	1.20	1.10	< 1	< 5.0	0.029	44.0	26.00	1.20	1.10	< 0.020
	2/3/2009^	Endyne	see note [i]	3	< 2	< 20	< 0.020	< 1	< 20	1.10	1.10	< 1	< 2.5	< 0.020	38.0	30.00	1.10	1.10	< 0.020
	2/10/2010^	Endyne	see note [k]	2	< 2	< 5	< 0.020	< 1	8	0.80	0.86	< 0.2	2.7	< 0.020	25.0	22.00	0.80	0.86	0.011
	2/8/2011^	Endyne	see note [m]	11	< 2	68	0.360	3	55	1.30	1.00	< 0.2	< 2.5	< 0.360	62.0	32.0	1.30	1.00	0.024
	2/8/2012^	Endyne	see note [o]	4	< 2	< 25	< 0.020	3	14	0.92	0.89	< 0.2	< 2.5	< 0.020	34.0	23.0	0.92	0.89	0.024
	2/5/2013^	Endyne	see note [q]	< 1	< 2	< 5	< 0.020	< 1	< 5	0.92	0.94	< 0.2	3.4	< 0.020	31.0	27.0	0.92	0.94	0.020
	2/24/2014	Endyne	see note [s]	3	< 2	< 5	< 0.020	< 1	6	1.20	1.10	< 0.2	< 2.5	< 0.020	38.0	35.0	1.20	1.10	< 0.020
	2/10/2015	Endyne	see note [u]	2	< 2	< 5	< 0.020	< 1	< 5	0.57	0.42	< 0.2	13	< 0.020	20.0	13.0	0.57	0.42	< 0.020
	2/4/2016	Endyne	see note [v]	2	4.7	9.3	< 0.020	< 1	< 5	0.98	1.00	< 0.2	< 2.5	< 0.020	36.0	35.0	0.98	1.00	< 0.020
	2/15/2017	Endyne	see note [w]	2	< 2	< 5	< 0.020	< 1	< 5	1.20	1.20	< 0.2	< 2.5	< 0.020	37.0	37.0	1.20	1.20	< 0.020
	3/2/2018	Endyne	see note [x]	2.6	< 1	5.7	< 0.020	1.6	6.8	1.10	1.10	< 0.2	< 10.0	< 0.020	41.0	37.0	1.10	1.10	< 0.020

See notes [3] and [4] below.																			
Normal Distribution?	Yes		Yes		No Ln	Yes	Yes	Yes					Yes	Yes	Yes	Yes			
Transformation Closest to Normal																			
Does Transformation Produce Normality?																			
Mean of Transformed Data					0.24														
Mean of Untransformed Data	3.04		15.36			16.84	1.05	1.00					36.24	25.28	1.05	1.00			
Std. Dev. of Transformed Data					0.42														
Std. Dev. of Untransformed Data	2.44		16.81			15.72	0.20	0.20					9.94	12.02	0.20	0.20			
n	14		14		14	14	14	14					14	14	14	14			
Student's t-value (one-tailed)	1.75		1.75		1.75	1.75	1.75	1.75					1.75	1.75	1.75	1.75			
Upper 95% Confidence Value	4.184		23.235		1.549	24.207	1.146	1.092					40.899	30.913	1.146	1.092			
Lower 95% Confidence Value	1.902		7.479		1.043	9.479	0.959	0.907					31.587	19.647	0.959	0.907			

[1] VT GES = VT Groundwater Enforcement Standards and Preventive Action Levels from Table 1, Groundwater Protection Rule & Strategy (GWPRS); 12/2016 & Interim Standards; 3/2015.

[2] Vermont Health Advisory Levels and Federal MCLs from October 21, 2015 Vermont Department of Health Drinking Water Guidance.

* Bold values exceed Vermont GES Preventive Action Levels, as set by Vermont GWPRS; 12/2016 & Interim Standards; 3/2015.

** Shaded values exceed Vermont GES, as set by Vermont GWPRS; 12/2016 & Interim Standards; 3/2015.

*** As of 2/26/2007, the Primary Vermont GES for Manganese was changed from 0.840 mg/L to 0.300 mg/L, and is set forth in the GWPRS 12/2016 & Interim Standards; 3/2015.

The < values listed here are the reported detection limit.

[a...]: See last page of inorganic data for footnotes of additional notes.

[3] Statistical analyses are conducted only on data since 5/15/1998, when requirement changed to TOTAL metals instead of dissolved metals, except for Mn & Fe (see note below).

Archived data has not been included in statistical analyses since 5/15/1998.

[4] For Fe and Mn only, requirement since 5/15/1998 is to analyze for both total and dissolved forms. The dissolved archived data are not included in the statistical analyses to give consistency between dissolved and total Mn & Fe as prior to 5/98, samples were not analyzed for total and dissolved metals on the same date. This gives consistency of comparisons between dissolved and total Fe and Mn.

Beginning in Feb. 2014, samples collected via low-flow technology. Indicator parameters shown are from stabilized readings.

^ grab sample, with Indicator parameters taken from grab, because low-flow samplign was not instituted until Feb. 2014.

**NEWSVT Landfills
Coventry, Vermont
Groundwater Analyses
Inorganics**



Well	Date	Lab	Remarks	Primary Groundwater Quality Parameters [1]						Secondary Groundwater Quality Parameters [2]									
				Total Arsenic (ug/L)	Total Cadmium (ug/L)	Total Chromium (ug/L)	Total Copper (ug/L)	Total Lead (ug/L)	Total Nickel (ug/L)	Total Manganese*** (mg/L)	Dissolved Manganese*** (mg/L)	Total Mercury (ug/L)	Total Chloride (mg/L)	Total Copper (mg/L)	Total Iron (mg/L)	Dissolved Iron (mg/L)	Total Manganese (mg/L)	Dissolved Manganese (mg/L)	Total Zinc (mg/L)
	VT GES**[1]			10.0	5.0	100.0	1.300	15.0	100.0	0.300	0.300	2.0	250	1.0	0.3	0.3	0.05	0.05	5
	VT Preventive Action Level* [1]			1.0	2.5	50.0	0.650	1.5	50.0	0.150	0.150	0.5	125	0.5	0.15	0.15	0.025	0.025	2.5
	VT Health Advisory [2]			None	None	None	1.300	15	100	0.300	0.300	None	250	1.0	0.3	0.3	0.05	0.05	5
	Federal MCL [2]			10	5	100	None	None	None	None	None	2	None	None	None	None	None	None	None

MW-BRW-2	3/10/2005^	Endyne	see note [b]	< 2	< 3	< 10	< 0.010	< 2	< 20	0.444	0.445	< 1	2.94	< 0.010	2.80	0.559	0.444	0.445	< 0.020
	3/16/2006^	Endyne	see note [d]	< 2	< 2	< 10	< 0.010	< 1	< 20	0.157	0.154	< 1	< 2.50	< 0.010	2.24	0.728	0.157	0.154	< 0.020
	2/6/2007^	Endyne	see note [f]	22	< 2	66	0.069	37	98	2.30	0.408	< 1	4.76	< 0.069	52	0.386	2.300	0.408	< 0.199
	2/21/2008^	Endyne	see note [h]	< 2	< 2	< 20	< 0.020	< 1	< 20	0.30	0.180	< 1	3.40	< 0.020	4.7	0.830	0.300	0.180	< 0.020
	2/3/2009^	Endyne	see note [j]	< 2	< 2	< 20	< 0.020	< 1	< 20	0.065	0.057	< 1	3.20	< 0.020	1.7	0.029	0.065	0.057	0.035
MW-BRW-2R**	2/16/2010^	Endyne	see note [i]	2	< 2	< 5	< 0.020	< 1	< 5	0.380	0.380	< 0.2	5.60	< 0.020	2.6	1.10	0.380	0.380	< 0.005
	2/8/2011^	Endyne	see note [n]	2	< 2	8	< 0.020	3	8	0.240	0.180	< 0.2	< 2.50	< 0.020	4.6	0.63	0.240	0.180	< 0.020
	2/8/2012^	Endyne	see note [p]	< 1	< 2	< 5	< 0.020	< 1	< 5	0.150	0.150	< 0.2	< 2.50	< 0.020	2.1	0.89	0.150	0.150	< 0.020
	2/5/2013^	Endyne	see note [r]	2	< 2	11	< 0.020	4	10	0.170	0.140	< 0.2	< 2.50	< 0.020	5.8	1.30	0.170	0.140	< 0.020
	2/24/2014	Endyne	see note [t]	2	< 2	< 5	< 0.020	< 1	6	0.130	0.120	< 0.2	< 2.50	< 0.020	2.3	1.40	0.130	0.120	< 0.020
	2/10/2015	Endyne	see note [t]	< 1	< 2	< 5	< 0.020	< 1	< 5	0.100	0.110	< 0.2	< 2.50	< 0.020	2.0	1.60	0.100	0.110	< 0.020
	2/4/2016	Endyne	see note [t]	< 1	< 2	< 5	< 0.020	< 1	< 5	0.100	0.100	< 0.2	< 2.50	< 0.020	1.8	1.30	0.100	0.100	< 0.020
	2/15/2017	Endyne	see note [t]	< 1	< 2	< 5	< 0.020	< 1	< 5	0.110	0.120	< 0.2	< 2.50	< 0.020	2.0	1.20	0.110	0.120	< 0.020
	3/2/2018	Endyne	see note [y]	< 1	< 1	< 5	< 0.020	< 1	< 5	0.098	0.100	< 0.2	< 10.00	< 0.020	1.6	1.20	0.098	0.100	< 0.020

See notes [3] and [4] below.																			
Normal Distribution?	No		Yes	No	No	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Transformation Closest to Normal	Ln			Ln	Ln	Ln		Ln		Ln		Ln		Ln		Ln		Ln	
Does Transformation Produce Normality?	No			Yes	Yes	Yes		Yes		Yes		Yes		Yes		Yes		Yes	
Mean of Transformed Data	0.62			0.53	2.32	-1.64						1.1521			-1.6429				
Mean of Untransformed Data			12.86				0.19					0.94						0.19	
Std. Dev. of Transformed Data	0.79			1.01	0.89	0.90						0.90			0.90				
Std. Dev. of Untransformed Data			16.18				0.13					0.44			0.44			0.13	
n	14		14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Student's t-value (one-tailed)	1.75		1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
Upper 95% Confidence Value	2.675		20.436	2.732	15.370	0.295	0.248	4.825	1.145	0.295	0.248	4.825	1.145	0.295	0.248	4.825	1.145	0.295	0.248
Lower 95% Confidence Value	1.279		5.278	1.065	6.670	0.127	0.130	0.0002	0.735	0.127	0.130	0.0002	0.735	0.127	0.130	0.0002	0.735	0.127	0.130

[1] VT GES = VT Groundwater Enforcement Standards and Preventive Action Levels from Table 1, Groundwater Protection Rule & Strategy (GWPRS); 12/2016 & Interim Standards; 3/2015.

[2] Vermont Health Advisory Levels and Federal MCLs from October 21, 2015 Vermont Department of Health Drinking Water Guidance.

* Bold values exceed Vermont GES Vermont Preventive Action Levels, as set by Vermont GWPRS; 12/2016 & Interim Standards; 3/2015

** Shaded values exceed Vermont GES, as set by Vermont GWPRS; 12/2016 & Interim Standards; 3/2015.

*** As of 2/26/2007, the Primary Vermont GES for Manganese was changed from 0.840 mg/L, and is set forth in the GWPRS 12/2016 & Interim Standards; 3/2015.

The < values listed here are the reported detection limit.

[b....]: See last page of inorganic data for footnotes of additional data

[3] Statistical analyses are conducted only on data since 5/15/1998, when requirement changed to TOTAL metals instead of dissolved metals, except for Mn & Fe (see note below).

Archived data has not been included in statistical analyses since 5/15/1998.

[4] For Fe and Mn only, requirement since 5/15/1998 is to analyze for both total and dissolved forms. The dissolved archived data is not included in the statistical analyses to give consistency between dissolved and total Mn & Fe as prior to 5/98, samples were not analyzed for total and dissolved metals on the same date. This gives consistency of comparisons between dissolved and total Fe and Mn.

**^ BRW-2 was destroyed in February 2010 and replaced to the same depth; with BRW-2R approx. 2-feet west of BRW-2.

Beginning in Feb. 2014, samples collected via low-flow technology. Indicator parameters shown are from stabilized readings.

^ grab sample, with Indicator parameters taken from grab, because low-flow samplign was not instituted until Feb. 2014.

NEWSVT Landfills
 Coventry, Vermont
 Footnotes to BRW-1 and BRW-2R Inorganic Groundwater Summary Tables



Footnote	Total Antimony	Total Barium	Total Beryllium	Total Cobalt	Total Selenium	Total Silver	Total Thallium	Total Vanadium
[a] Analysis also included	< 2	37	< 2	< 10	< 5	< 10		<20
[b] Analysis also included	< 2	23	< 2	< 10	< 5	< 10		<20
[c] Analysis also included	< 2	46	4	< 10	< 5	< 10	< 1	<10
[d] Analysis also included	< 2	< 20	4	< 10	< 5	< 10	< 1	<10
[e] Analysis also included	< 2	46	< 2	<20	<2	<20	<1	<20
[f] Analysis also included	< 2	81.8	< 2	<20	<2	<20	<1	37
[g] Analysis also included	< 2		< 1	<20	<2	<2	<1	<20
[h] Analysis also included	< 2		< 1	<20	<2	<20	<1	<20
[i] Analysis also included	< 2	56	< 2	<20	<2	<20	<1	<20
[j] Analysis also included	< 2	22	< 2	<20	<2	<20	<1	<20
[k] Analysis also included	< 2	41	< 1	<20	<2	<20	<1	<20
[l] Analysis also included	< 2	66	< 1	<20	<2		<1	<20
[m] Analysis also included	2	76	< 1	<20	<2	<20	<1	<20
[n] Analysis also included	< 2	42	< 1	<20	<2	<20	<1	<20
[o] Analysis also included	< 2	59	6	<20	<2	<20	<1	<20
[p] Analysis also included	< 2	25	8		<2	<20	<1	<20
[q] Analysis also included	< 2	45	< 1	<20	<2	<20	<1	<20
[r] Analysis also included	< 2	39	< 1	<20	<2	<20	<1	<20
[s] Analysis also included	< 2	56	< 1	<20	<2	<20	<1	<20
[t] Analysis also included	< 2	<20	< 1	<20	<2	<20	<1	<20
[u] Analysis also included	< 2	37	< 1	<20	<2	<20	<1	<20
[v] Analysis also included	< 2	51	< 1	<20	<2	<20	<1	<20
[w] Analysis also included	< 2	49	< 1	<20	<2	<20	<1	<20
[x] Analysis also included	< 2	67	< 1	<20	<2	<10	<1	<20
[y] Analysis also included	< 2	<20	< 1	<20	<2	<10	<1	<20

NEWSVT Landfills
Coventry, Vermont
Groundwater Analyses
Volatile Organics -- NON-DETECTED



				Unidentified Peaks
VT GES [1]				
VT Preventive Action Level [1]				
VT Health Advisory [2]				
Federal MCL [2]				
Date	Lab	Method	Non-detect	
BRW-1				
3/10/2005	En	8260	ND	0
3/16/2006	En	8260	ND	0
2/6/2007	En	8260	ND	0
2/21/2008	En	8260	ND	0
2/3/2009	En	8260	ND	0
2/16/2010	En	8260	ND	0
2/8/2011	En	8260	ND	0
2/28/2012^	En	8260	ND	0
2/5/2013^	En	8260C	ND	0
2/24/2014	En	8260C	ND	0
2/10/2015	En	8260C	ND	0
2/4/2016	En	8260C	ND	0
2/15/2017	En	8260C	ND	0
3/2/2018	En	8260C	ND	0

				Unidentified Peaks
VT GES [1]				
VT Preventive Action Level [1]				
VT Health Advisory [2]				
Federal MCL [2]				
Date	Lab	Method	Non-detect	
MW-BRW-2				
3/10/2005	En	8260	ND	0
3/16/2006	En	8260	ND	0
2/6/2007	En	8260	ND	0
2/21/2008	En	8260	ND	0
2/3/2009	En	8260	ND	0
MW-BRW-2R				
2/16/2010	En	8260	ND	0
2/8/2011	En	8260	ND	0
2/28/2012^	En	8260C	ND	0
2/5/2013^	En	8260C	ND	0
2/24/2014	En	8260C	ND	0
2/10/2015	En	8260C	ND	0
2/4/2016	En	8260C	ND	0
2/15/2017	En	8260C	ND	0
3/2/2018	En	8260C	ND	0

				Unidentified Peaks
VT GES [1]				
VT Preventive Action Level [1]				
VT Health Advisory [2]				
Federal MCL [2]				
Date	Lab	Method	Non-detect	
BRW-1 & BRW-2 Trip Blank				
3/10/2005	En	8260	ND	0
3/16/2006	En	8260	ND	0
2/6/2007	En	8260	ND	0
2/21/2008	En	8260	ND	0
2/3/2009	En	8260	ND	0
2/10/2010	En	8260	ND	0
2/16/2010	En	8260	ND	0
2/7/2011	En	8260	ND	0
2/8/2012	En	8260C	ND	0
2/4/2013	En	8260C	ND	0
2/24/2014	En	8260C	ND	0
2/2/2015	En	8260C	ND	0
1/28/2016	En	8260C	ND	0
2/3/2017	En	8260C	ND	0
2/26/2018	En	8260C	ND	0

[1] Vermont GES = VT Groundwater Enforcement Standards and Preventive Action Levels from Table 1,

[2] Vermont Health Advisory Levels and Federal MCLs from October 21, 2015 Vermont Department of Health Drinking Water Guidance.

En = Endyne Inc., Williston, VT.

ND = Non-detected for all parameters tested.

NS = No Sample

+MW sampling utilized low-flow technology at the request of the State when sufficient water was available from October 2011 to the present, unless otherwise noted.

^ Insufficient water to low-flow well, grab sample obtained

Last revised: 4/12/18;

Page 1 of 1;

U:\PROJECTS - WHEM\NEWSVT\data_semi\GW organics\gwoc.xlsx;

Tab = "ND" VOL. ORGANICS (A).

NEWSVT Landfills - Water Level Measurements

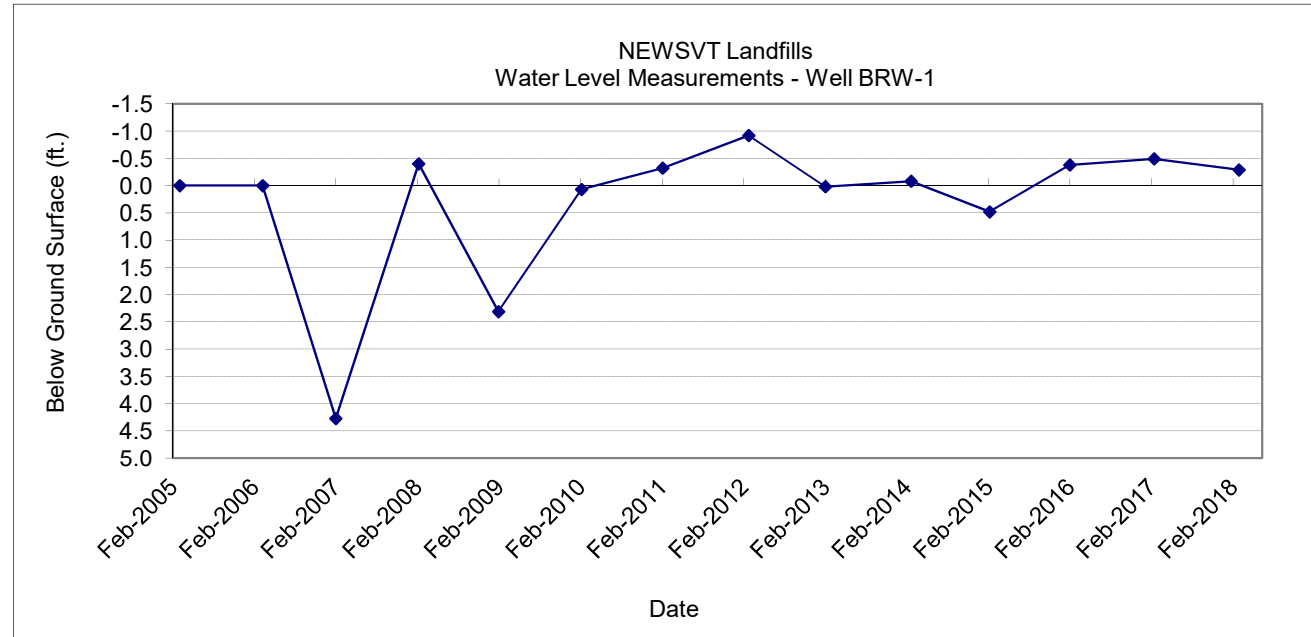
MW-BRW-1			
Date	Depth		Elevation feet
	BTOP	BGS	
3/10/2005	--	--	--
3/16/2006	--	--	--
2/6/2007	6.77	4.27	677.33
2/12/2008	2.1	-0.40	682.00
2/3/2009	4.81	2.31	679.29
2/10/2010	2.57	0.07	681.53
2/8/2011	2.18	-0.32	681.92
2/28/2012	1.58	-0.92	682.52
2/5/2013	2.52	0.02	681.58
2/24/2014	2.42	-0.08	681.68
2/10/2015	2.98	0.48	681.12
2/4/2016	2.12	-0.38	681.98
2/15/2017	2.01	-0.49	682.09
3/2/2018	2.21	-0.29	681.89

BGS = Below Ground Surface
 BTOP = Below Top of Pipe (PVC)
 GS = Ground surface
 PVC = PVC well casing (inside)
 TOC = Top of casing (outer casing)
 Well Type: Characterized by WHEM (Shallow or Deep,
 relative to Water Table;
 Completed in Surficial Material, or Bedrock).
 *Additional WL's taken in 2014, not included here
 Elevation data provided by survey conducted by Horizons
 Engineering on 8/8/13.

Well BRW-1*

Outer Casing Elev.	none	Ft.
Elevation PVC TOC	684.10	Ft.
Elevation GS	681.60	Ft.
Outer Casing Stickup	none	Ft.
PVC Stickup	2.50	Ft.
Well Depth BGS	14	Ft.
Well Bottom Elev.	667.60	Ft.
Screen Top Depth	9	Ft.
Screen Top Elev.	672.60	Ft.

WELL TYPE:	
SHALLOW	
Surficial	



NEWSVT Landfills - Water Level Measurements

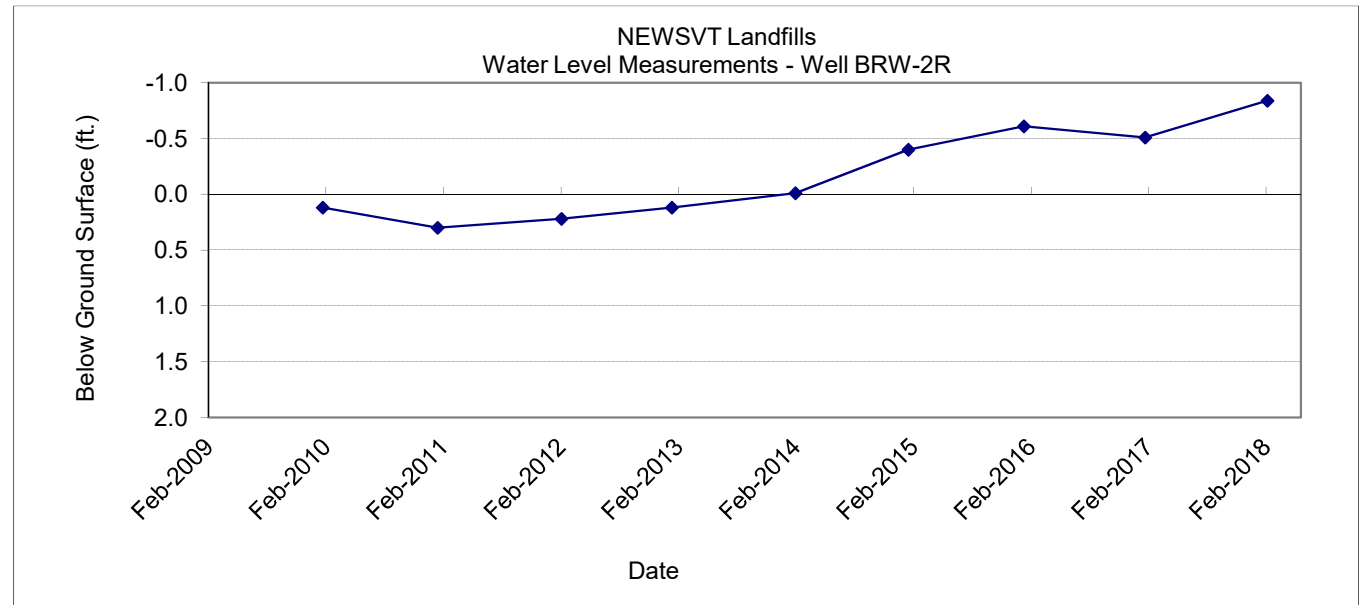
MW-BRW-2			
Date	Depth		Elevation feet
	BTOP	BGS	
3/10/2005	--	--	--
3/16/2006	--	--	--
2/6/2007	5.66	--	--
2/21/2008	4.54	--	--
2/3/2009	2.33	--	--
MW-BRW-2R			
DATE	DEPTH (FT)		ELEVATION FT.
	BTOP	BGS	
Replaced February 16, 2010			
2/16/2010	6.52	0.12	681.48
2/8/2011	6.70	0.30	681.30
2/28/2012	6.62	0.22	681.38
2/5/2013	6.52	0.12	681.48
2/24/2014	6.39	-0.01	681.61
2/10/2015	6.00	-0.40	682.00
2/4/2016	5.79	-0.61	682.21
2/15/2017	5.89	-0.51	682.11
3/2/2018	5.56	-0.84	682.44

BTOP = Below Top of Pipe (PVC)
 GS = Ground surface
 PVC = PVC well casing (inside)
 TOC = Top of casing (outer casing)
 Well Type: Characterized by WHEM (Shallow or Deep,
 relative to Water Table;
 Completed in Surficial Material, or Bedrock).
 *Additional WL's taken in 2014, not included here
 Elevation data provided by survey conducted by Horizons
 Engineering on 8/8/13.

Well BRW-2R*

Outer Casing Elev.	none	Ft.
Elevation PVC TOC	688.00	Ft.
Elevation GS	681.60	Ft.
Outer Casing Stickup	none	Ft.
PVC Stickup	6.40	Ft.
Well Depth BGS	9.5	Ft.
Well Bottom Elev.	672.10	Ft.
Screen Top Depth	4.5	Ft.
Screen Top Elev.	677.10	Ft.

WELL TYPE:
SHALLOW
Surficial





Laboratory Report

WaiteHeindel Environmental Mgt	070338
7 Kilburn Street	
Suite 301	
Burlington, VT 05406	
Atten: Miles Waite	

PROJECT: NEWSVT Feb BRW
 WORK ORDER: **1803-04680**
 DATE RECEIVED: March 02, 2018
 DATE REPORTED: March 16, 2018
 SAMPLER: Wendy, Chris

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. All required method quality control elements including instrument calibration were performed in accordance with method requirements and determined to be acceptable unless otherwise noted.

The column labeled Lab/Tech in the accompanying report denotes the laboratory facility where the testing was performed and the technician who conducted the assay. A "W" designates the Williston, VT lab under NELAC certification ELAP 11263; "R" designates the Lebanon, NH facility under certification NH 2037 and "N" the Plattsburgh, NY lab under certification ELAP 11892. "Sub" indicates the testing was performed by a subcontracted laboratory. The accreditation status of the subcontracted lab is referenced in the corresponding NELAC and Qual fields.

The NELAC column also denotes the accreditation status of each laboratory for each reported parameter. "A" indicates the referenced laboratory is NELAC accredited for the parameter reported. "N" indicates the laboratory is not accredited. "U" indicates that NELAC does not offer accreditation for that parameter in that specific matrix. Test results denoted with an "A" meet all National Environmental Laboratory Accreditation Program requirements except where denoted by pertinent data qualifiers. Test results are representative of the samples as they were received at the laboratory

Endyne, Inc. warrants, to the best of its knowledge and belief, the accuracy of the analytical test results contained in this report, but makes no other warranty, expressed or implied, especially no warranties of merchantability or fitness for a particular purpose.

Reviewed by:

Harry B. Locker, Ph.D.
 Laboratory Director

www.endynelabs.com



160 James Brown Dr., Williston, VT 05495
 Ph 802-879-4333 Fax 802-879-7103

56 Etna Road, Lebanon, NH 03755
 Ph 603-678-4891 Fax 603-678-4893



Laboratory Report

CLIENT: WaiteHeindel Environmental Mgt
 PROJECT: NEWSVT Feb BRW
 REPORT DATE: 3/16/2018

WORK ORDER: **1803-04680**
 DATE RECEIVED: 03/02/2018

001 Site: BRW-1 Date Sampled: 3/2/18 Time: 10:47

Parameter	Result	Units	Method	Analysis Date	Lab/Tech	NELAC	Qual.
Chloride	< 10.0	mg/L	EPA 300.0	3/5/18	W AKJ	A	
COD	83	mg/L	Hach8000/EPA410.4	3/9/18	N JGM	A	
Antimony, Total	< 0.0020	mg/L	EPA 7010	3/15/18	W FAA	A	
Arsenic, Total	0.0026	mg/L	EPA 7010	3/16/18	W FAA	A	
Barium, Total	0.067	mg/L	EPA 6010C	3/15/18	W SJM	A	
Beryllium, Total	< 0.0010	mg/L	EPA 6010C	3/15/18	W SJM	A	
Cadmium, Total	< 0.0010	mg/L	EPA 6010C	3/15/18	W SJM	A	
Chromium, Total	0.0057	mg/L	EPA 6010C	3/15/18	W SJM	A	
Cobalt, Total	< 0.020	mg/L	EPA 6010C	3/15/18	W SJM	A	
Copper, Total	< 0.020	mg/L	EPA 6010C	3/15/18	W SJM	A	RPD
Iron, Dissolved	37	mg/L	EPA 200.7	3/9/18	W SJM	A	
Iron, Total	41	mg/L	EPA 6010C	3/15/18	W SJM	A	
Lead, Total	0.0016	mg/L	EPA 7010	3/16/18	W FAA	A	
Manganese, Dissolved	1.1	mg/L	EPA 200.7	3/9/18	W SJM	A	
Manganese, Total	1.1	mg/L	EPA 6010C	3/15/18	W SJM	A	
Mercury, Total	< 0.0002	mg/L	EPA 245.1	3/9/18	W CM	A	
Nickel, Total	0.0068	mg/L	EPA 6010C	3/15/18	W SJM	A	
Selenium, Total	< 0.0020	mg/L	EPA 7010	3/15/18	W FAA	A	
Silver, Total	< 0.010	mg/L	EPA 6010C	3/15/18	W SJM	A	RPD
Sodium, Total	8.4	mg/L	EPA 6010C	3/15/18	W SJM	A	
Thallium, Total	< 0.0010	mg/L	EPA 7010	3/15/18	W FAA	A	
Vanadium, Total	< 0.020	mg/L	EPA 6010C	3/15/18	W SJM	A	
Zinc, Total	< 0.020	mg/L	EPA 6010C	3/15/18	W SJM	A	

002 Site: BRW-2R Date Sampled: 3/2/18 Time: 11:47

Parameter	Result	Units	Method	Analysis Date	Lab/Tech	NELAC	Qual.
Chloride	< 10.0	mg/L	EPA 300.0	3/5/18	W AKJ	A	
COD	< 10	mg/L	Hach8000/EPA410.4	3/9/18	N JGM	A	
Antimony, Total	< 0.0020	mg/L	EPA 7010	3/15/18	W FAA	A	
Arsenic, Total	< 0.0010	mg/L	EPA 7010	3/16/18	W FAA	A	
Barium, Total	< 0.020	mg/L	EPA 6010C	3/15/18	W SJM	A	
Beryllium, Total	< 0.0010	mg/L	EPA 6010C	3/15/18	W SJM	A	
Cadmium, Total	< 0.0010	mg/L	EPA 6010C	3/15/18	W SJM	A	
Chromium, Total	< 0.0050	mg/L	EPA 6010C	3/15/18	W SJM	A	
Cobalt, Total	< 0.020	mg/L	EPA 6010C	3/15/18	W SJM	A	
Copper, Total	< 0.020	mg/L	EPA 6010C	3/15/18	W SJM	A	
Iron, Dissolved	1.2	mg/L	EPA 200.7	3/9/18	W SJM	A	
Iron, Total	1.6	mg/L	EPA 6010C	3/15/18	W SJM	A	
Lead, Total	< 0.0010	mg/L	EPA 7010	3/16/18	W FAA	A	
Manganese, Dissolved	0.10	mg/L	EPA 200.7	3/9/18	W SJM	A	
Manganese, Total	0.098	mg/L	EPA 6010C	3/15/18	W SJM	A	
Mercury, Total	< 0.0002	mg/L	EPA 245.1	3/9/18	W CM	A	
Nickel, Total	< 0.0050	mg/L	EPA 6010C	3/15/18	W SJM	A	

CLIENT: WaiteHeindel Environmental Mgt
 PROJECT: NEWSVT Feb BRW
 REPORT DATE: 3/16/2018

WORK ORDER: 1803-04680
 DATE RECEIVED: 03/02/2018

002 Site: BRW-2R Date Sampled: 3/2/18 Time: 11:47

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Lab/Tech</u>	<u>NELAC</u>	<u>Qual.</u>
Selenium, Total	< 0.0020	mg/L	EPA 7010	3/15/18	W FAA	A	
Silver, Total	< 0.010	mg/L	EPA 6010C	3/15/18	W SJM	A	
Sodium, Total	5.4	mg/L	EPA 6010C	3/15/18	W SJM	A	
Thallium, Total	< 0.0010	mg/L	EPA 7010	3/15/18	W FAA	A	
Vanadium, Total	< 0.020	mg/L	EPA 6010C	3/15/18	W SJM	A	
Zinc, Total	< 0.020	mg/L	EPA 6010C	3/15/18	W SJM	A	

CLIENT: WaiteHeindel Environmental Mgt
 PROJECT: NEWSVT Feb BRW
 REPORT DATE: 3/16/2018

WORK ORDER: 1803-04680
 DATE RECEIVED: 03/02/2018

TEST METHOD: EPA 8260C

001	Site: BRW-1			Sampled: 3/2/18	10:47	Test Date: 3/7/18	W	TEL	
Parameter	Result	Unit	Nelac	Qual	Parameter	Result	Unit	Nelac	Qual
Dichlorodifluoromethane	< 5.0	ug/L	A		Chloromethane	< 3.0	ug/L	A	
Vinyl chloride	< 0.5	ug/L	A		Bromomethane	< 0.5	ug/L	A	
Chloroethane	< 5.0	ug/L	A		Trichlorofluoromethane	< 2.0	ug/L	A	
Diethyl ether	< 5.0	ug/L	N		1,1-Dichloroethene	< 0.7	ug/L	A	
Acetone	< 10.0	ug/L	A		Carbon disulfide	< 5.0	ug/L	A	
Methylene chloride	< 5.0	ug/L	A		t-Butanol	< 20.0	ug/L	N	
Methyl-t-butyl ether (MTBE)	< 2.0	ug/L	A		trans-1,2-Dichloroethene	< 1.0	ug/L	A	
Di-isopropyl ether (DIPE)	< 2.0	ug/L	N		1,1-Dichloroethane	< 1.0	ug/L	A	
Ethyl-t-butyl ether (ETBE)	< 2.0	ug/L	N		2-Butanone	< 10.0	ug/L	A	
2,2-Dichloropropane	< 1.0	ug/L	N		cis-1,2-Dichloroethene	< 1.0	ug/L	A	
Bromochloromethane	< 0.8	ug/L	A		Chloroform	< 1.0	ug/L	A	
Tetrahydrofuran	< 10.0	ug/L	N		1,1,1-Trichloroethane	< 1.0	ug/L	A	
Carbon tetrachloride	< 0.5	ug/L	A		1,1-Dichloropropene	< 1.0	ug/L	N	
Benzene	< 0.5	ug/L	A		t-Amylmethyl ether (TAME)	< 2.0	ug/L	N	
1,2-Dichloroethane	< 0.5	ug/L	A		Trichloroethene	< 0.5	ug/L	A	
1,2-Dichloropropane	< 0.5	ug/L	A		Dibromomethane	< 2.0	ug/L	A	
Bromodichloromethane	< 0.5	ug/L	A		cis-1,3-Dichloropropene	< 1.0	ug/L	A	
4-Methyl-2-pentanone (MIBK)	< 10.0	ug/L	A		Toluene	< 1.0	ug/L	A	
trans-1,3-Dichloropropene	< 1.0	ug/L	A		1,1,2-Trichloroethane	< 1.0	ug/L	A	
Tetrachloroethene	< 0.5	ug/L	A		1,3-Dichloropropane	< 1.0	ug/L	N	
2-Hexanone	< 10.0	ug/L	A		Dibromochloromethane	< 1.0	ug/L	A	
1,2-Dibromoethane	< 2.0	ug/L	A		Chlorobenzene	< 1.0	ug/L	A	
Ethylbenzene	< 1.0	ug/L	A		1,1,1,2-Tetrachloroethane	< 2.0	ug/L	A	
Xylenes, Total	< 2.0	ug/L	A		Styrene	< 1.0	ug/L	A	
Bromoform	< 2.0	ug/L	A		Isopropylbenzene	< 1.0	ug/L	A	
1,1,2,2-Tetrachloroethane	< 2.0	ug/L	A		Bromobenzene	< 1.0	ug/L	A	
n-Propylbenzene	< 1.0	ug/L	A		1,2,3-Trichloropropane	< 2.0	ug/L	A	
2-Chlorotoluene	< 1.0	ug/L	A		1,3,5-Trimethylbenzene	< 1.0	ug/L	A	
4-Chlorotoluene	< 1.0	ug/L	A		t-Butylbenzene	< 1.0	ug/L	A	
1,2,4-Trimethylbenzene	< 1.0	ug/L	A		s-Butylbenzene	< 1.0	ug/L	A	
4-Isopropyltoluene	< 1.0	ug/L	A		1,3-Dichlorobenzene	< 1.0	ug/L	A	
1,4-Dichlorobenzene	< 1.0	ug/L	A		1,2,3-Trimethylbenzene	< 1.0	ug/L	U	
n-Butylbenzene	< 1.0	ug/L	A		1,2-Dichlorobenzene	< 1.0	ug/L	A	
1,2-Dibromo-3-Chloropropane	< 2.0	ug/L	A		1,2,4-Trichlorobenzene	< 2.0	ug/L	A	
1,3,5-Trichlorobenzene	< 2.0	ug/L	N		Hexachlorobutadiene	< 0.5	ug/L	A	
Naphthalene	< 2.0	ug/L	A		1,2,3-Trichlorobenzene	< 2.0	ug/L	A	
Surr. 1 (Dibromofluoromethane)	104	%	A		Surr. 2 (Toluene d8)	95	%	A	
Surr. 3 (4-Bromofluorobenzene)	99	%	A		Unidentified Peaks	0		U	

CLIENT: WaiteHeindel Environmental Mgt
 PROJECT: NEWSVT Feb BRW
 REPORT DATE: 3/16/2018

WORK ORDER: 1803-04680
 DATE RECEIVED: 03/02/2018

TEST METHOD: EPA 8260C

002	Site: BRW-2R			Sampled: 3/2/18	11:47	Test Date: 3/7/18	W	TEL	
Parameter	Result	Unit	Nelac	Qual	Parameter	Result	Unit	Nelac	Qual
Dichlorodifluoromethane	< 5.0	ug/L	A		Chloromethane	< 3.0	ug/L	A	
Vinyl chloride	< 0.5	ug/L	A		Bromomethane	< 0.5	ug/L	A	
Chloroethane	< 5.0	ug/L	A		Trichlorofluoromethane	< 2.0	ug/L	A	
Diethyl ether	< 5.0	ug/L	N		1,1-Dichloroethene	< 0.7	ug/L	A	
Acetone	< 10.0	ug/L	A		Carbon disulfide	< 5.0	ug/L	A	
Methylene chloride	< 5.0	ug/L	A		t-Butanol	< 20.0	ug/L	N	
Methyl-t-butyl ether (MTBE)	< 2.0	ug/L	A		trans-1,2-Dichloroethene	< 1.0	ug/L	A	
Di-isopropyl ether (DIPE)	< 2.0	ug/L	N		1,1-Dichloroethane	< 1.0	ug/L	A	
Ethyl-t-butyl ether (ETBE)	< 2.0	ug/L	N		2-Butanone	< 10.0	ug/L	A	
2,2-Dichloropropane	< 1.0	ug/L	N		cis-1,2-Dichloroethene	< 1.0	ug/L	A	
Bromochloromethane	< 0.8	ug/L	A		Chloroform	< 1.0	ug/L	A	
Tetrahydrofuran	< 10.0	ug/L	N		1,1,1-Trichloroethane	< 1.0	ug/L	A	
Carbon tetrachloride	< 0.5	ug/L	A		1,1-Dichloropropene	< 1.0	ug/L	N	
Benzene	< 0.5	ug/L	A		t-Amylmethyl ether (TAME)	< 2.0	ug/L	N	
1,2-Dichloroethane	< 0.5	ug/L	A		Trichloroethene	< 0.5	ug/L	A	
1,2-Dichloropropane	< 0.5	ug/L	A		Dibromomethane	< 2.0	ug/L	A	
Bromodichloromethane	< 0.5	ug/L	A		cis-1,3-Dichloropropene	< 1.0	ug/L	A	
4-Methyl-2-pentanone (MIBK)	< 10.0	ug/L	A		Toluene	< 1.0	ug/L	A	
trans-1,3-Dichloropropene	< 1.0	ug/L	A		1,1,2-Trichloroethane	< 1.0	ug/L	A	
Tetrachloroethene	< 0.5	ug/L	A		1,3-Dichloropropane	< 1.0	ug/L	N	
2-Hexanone	< 10.0	ug/L	A		Dibromochloromethane	< 1.0	ug/L	A	
1,2-Dibromoethane	< 2.0	ug/L	A		Chlorobenzene	< 1.0	ug/L	A	
Ethylbenzene	< 1.0	ug/L	A		1,1,1,2-Tetrachloroethane	< 2.0	ug/L	A	
Xylenes, Total	< 2.0	ug/L	A		Styrene	< 1.0	ug/L	A	
Bromoform	< 2.0	ug/L	A		Isopropylbenzene	< 1.0	ug/L	A	
1,1,2,2-Tetrachloroethane	< 2.0	ug/L	A		Bromobenzene	< 1.0	ug/L	A	
n-Propylbenzene	< 1.0	ug/L	A		1,2,3-Trichloropropane	< 2.0	ug/L	A	
2-Chlorotoluene	< 1.0	ug/L	A		1,3,5-Trimethylbenzene	< 1.0	ug/L	A	
4-Chlorotoluene	< 1.0	ug/L	A		t-Butylbenzene	< 1.0	ug/L	A	
1,2,4-Trimethylbenzene	< 1.0	ug/L	A		s-Butylbenzene	< 1.0	ug/L	A	
4-Isopropyltoluene	< 1.0	ug/L	A		1,3-Dichlorobenzene	< 1.0	ug/L	A	
1,4-Dichlorobenzene	< 1.0	ug/L	A		1,2,3-Trimethylbenzene	< 1.0	ug/L	U	
n-Butylbenzene	< 1.0	ug/L	A		1,2-Dichlorobenzene	< 1.0	ug/L	A	
1,2-Dibromo-3-Chloropropane	< 2.0	ug/L	A		1,2,4-Trichlorobenzene	< 2.0	ug/L	A	
1,3,5-Trichlorobenzene	< 2.0	ug/L	N		Hexachlorobutadiene	< 0.5	ug/L	A	
Naphthalene	< 2.0	ug/L	A		1,2,3-Trichlorobenzene	< 2.0	ug/L	A	
Surr. 1 (Dibromofluoromethane)	102	%	A		Surr. 2 (Toluene d8)	103	%	A	
Surr. 3 (4-Bromofluorobenzene)	95	%	A		Unidentified Peaks	0		U	

CLIENT: WaiteHeindel Environmental Mgt
 PROJECT: NEWSVT Feb BRW
 REPORT DATE: 3/16/2018

WORK ORDER: 1803-04680
 DATE RECEIVED: 03/02/2018

TEST METHOD: EPA 8260C

003	Site: Trip Blank					Sampled: 2/26/18	13:30	Test Date: 3/7/18	W	TEL
Parameter	Result	Unit	Nelac	Qual	Parameter	Result	Unit	Nelac	Qual	
Dichlorodifluoromethane	< 5.0	ug/L	A		Chloromethane	< 3.0	ug/L	A		
Vinyl chloride	< 0.5	ug/L	A		Bromomethane	< 0.5	ug/L	A		
Chloroethane	< 5.0	ug/L	A		Trichlorofluoromethane	< 2.0	ug/L	A		
Diethyl ether	< 5.0	ug/L	N		1,1-Dichloroethene	< 0.7	ug/L	A		
Acetone	< 10.0	ug/L	A		Carbon disulfide	< 5.0	ug/L	A		
Methylene chloride	< 5.0	ug/L	A		t-Butanol	< 20.0	ug/L	N		
Methyl-t-butyl ether (MTBE)	< 2.0	ug/L	A		trans-1,2-Dichloroethene	< 1.0	ug/L	A		
Di-isopropyl ether (DIPE)	< 2.0	ug/L	N		1,1-Dichloroethane	< 1.0	ug/L	A		
Ethyl-t-butyl ether (ETBE)	< 2.0	ug/L	N		2-Butanone	< 10.0	ug/L	A		
2,2-Dichloropropane	< 1.0	ug/L	N		cis-1,2-Dichloroethene	< 1.0	ug/L	A		
Bromochloromethane	< 0.8	ug/L	A		Chloroform	< 1.0	ug/L	A		
Tetrahydrofuran	< 10.0	ug/L	N		1,1,1-Trichloroethane	< 1.0	ug/L	A		
Carbon tetrachloride	< 0.5	ug/L	A		1,1-Dichloropropene	< 1.0	ug/L	N		
Benzene	< 0.5	ug/L	A		t-Amylmethyl ether (TAME)	< 2.0	ug/L	N		
1,2-Dichloroethane	< 0.5	ug/L	A		Trichloroethene	< 0.5	ug/L	A		
1,2-Dichloropropane	< 0.5	ug/L	A		Dibromomethane	< 2.0	ug/L	A		
Bromodichloromethane	< 0.5	ug/L	A		cis-1,3-Dichloropropene	< 1.0	ug/L	A		
4-Methyl-2-pentanone (MIBK)	< 10.0	ug/L	A		Toluene	< 1.0	ug/L	A		
trans-1,3-Dichloropropene	< 1.0	ug/L	A		1,1,2-Trichloroethane	< 1.0	ug/L	A		
Tetrachloroethene	< 0.5	ug/L	A		1,3-Dichloropropane	< 1.0	ug/L	N		
2-Hexanone	< 10.0	ug/L	A		Dibromochloromethane	< 1.0	ug/L	A		
1,2-Dibromoethane	< 2.0	ug/L	A		Chlorobenzene	< 1.0	ug/L	A		
Ethylbenzene	< 1.0	ug/L	A		1,1,1,2-Tetrachloroethane	< 2.0	ug/L	A		
Xylenes, Total	< 2.0	ug/L	A		Styrene	< 1.0	ug/L	A		
Bromoform	< 2.0	ug/L	A		Isopropylbenzene	< 1.0	ug/L	A		
1,1,2,2-Tetrachloroethane	< 2.0	ug/L	A		Bromobenzene	< 1.0	ug/L	A		
n-Propylbenzene	< 1.0	ug/L	A		1,2,3-Trichloropropane	< 2.0	ug/L	A		
2-Chlorotoluene	< 1.0	ug/L	A		1,3,5-Trimethylbenzene	< 1.0	ug/L	A		
4-Chlorotoluene	< 1.0	ug/L	A		t-Butylbenzene	< 1.0	ug/L	A		
1,2,4-Trimethylbenzene	< 1.0	ug/L	A		s-Butylbenzene	< 1.0	ug/L	A		
4-Isopropyltoluene	< 1.0	ug/L	A		1,3-Dichlorobenzene	< 1.0	ug/L	A		
1,4-Dichlorobenzene	< 1.0	ug/L	A		1,2,3-Trimethylbenzene	< 1.0	ug/L	U		
n-Butylbenzene	< 1.0	ug/L	A		1,2-Dichlorobenzene	< 1.0	ug/L	A		
1,2-Dibromo-3-Chloropropane	< 2.0	ug/L	A		1,2,4-Trichlorobenzene	< 2.0	ug/L	A		
1,3,5-Trichlorobenzene	< 2.0	ug/L	N		Hexachlorobutadiene	< 0.5	ug/L	A		
Naphthalene	< 2.0	ug/L	A		1,2,3-Trichlorobenzene	< 2.0	ug/L	A		
Surr. 1 (Dibromofluoromethane)	100	%	A		Surr. 2 (Toluene d8)	102	%	A		
Surr. 3 (4-Bromofluorobenzene)	90	%	A		Unidentified Peaks	0		U		

Report Summary of Qualifiers and Notes

RPD: The Relative Percent Difference of the Matrix Spike Duplicate was above method acceptance limits.

NEWSVT Feb BRW

Endyne Inc. COC

1803-04680

Prepared: 1/30/17



1803-04680

<u>Bill to:</u>	<u>Report to:</u>	Customer #	07
Mr. Joe Gay	Miles Waite	NEWSVTLFG	
Casella Waste Management Inc.	WaiteHeindel Environmental Mgt	WaiteHeindel Environmental Mgt	
220 Avenue B	7 Kilburn Street	NEWSVT Feb BRW	
Williston VT 05495	Burlington VT 05406		
Ph: (802)-651-5454	john.gay@casella.com:mwaite@	W-7033E	

Page 1 of 2

BRW-1	Sampled Date/Time:	2/2/18 @ 1047	Sampler:	WS/CP
Chloride	1 - 2 oz Plastic		<6C	
COD	1 - 2 oz Plastic		<6C, H2SO4 ✓	
Iron, Dissolved	1 - 8 oz plastic diss Met		Filter then preserve w HNO3	
Manganese, Dissolved				
Metals Furnace Digestion	1 - 16 oz Plastic Total Metal		HNO3 pH < 2	
Antimony, Total				
Arsenic, Total				
Barium, Total				
Beryllium, Total				
Cadmium, Total				
Chromium, Total				
Cobalt, Total				
Copper, Total				
Iron, Total				
Lead, Total				
Manganese, Total				
Mercury, Total				
Nickel, Total				
Selenium, Total				
Silver, Total				
Sodium, Total				
Thallium, Total				
Vanadium, Total				
Zinc, Total				
VOC w/ Oxygenates, Water	2 - 40ml vials		<6C, HCl	

BRW-2R

Sampled Date/Time: 3/2/18 @ 1147

Sampler: WS/CP

Chloride 1 - 2 oz Plastic <6C
 COD 1 - 2 oz Plastic <6C, H2SO4 ✓
 Iron, Dissolved 1 - 8 oz plastic diss Met Filter then preserve w HNO3
 Manganese, Dissolved
 Metals Furnace Digestion 1 - 16 oz Plastic Total Metal HNO3 pH< 2
 Antimony, Total
 Arsenic, Total
 Barium, Total
 Beryllium, Total
 Cadmium, Total
 Chromium, Total
 Cobalt, Total
 Copper, Total
 Iron, Total
 Lead, Total
 Manganese, Total
 Mercury, Total
 Nickel, Total
 Selenium, Total
 Silver, Total
 Sodium, Total
 Thallium, Total
 Vanadium, Total
 Zinc, Total

VOC w/ Oxygenates, Water 2 - 40ml vials <6C, HCl

Trip Blank

Sampled Date/Time: 2/26/18 @

Sampler: 1330

VOC w/ Oxygenates, Water 2 - 40ml vials <6C, HCl

Relinquished by: Wendy Greenleaf 1625 3/2/18
 Date Time

Accepted by: Gene Tomney 3/2/18 @ 1627
 Date Time

Relinquished by: _____
 Date Time

Received by: _____
 Date Time

Sites/Parameters correct as listed. Client Initials WS

Client Authorization to use Subcontract lab Client Initials WS

Sample origin: VT NH NY Other

Special reporting instructions: (PO#) _____

Requested Turnaround Time: Routine: _____ Rush Due Date _____

Deliv: <u>Client</u>	Temp C: <u>-0.4</u>	Comment:
Tmpl Ck	Log by	Lab use Only



160 James Brown Dr.
 Williston, VT 05495
 Ph 802-879-4333
 Fax 802-879-7103

56 Etna Road
 Lebanon, NH 03766
 Ph 603-678-4891
 Fax 603-678-4893

315 New York Rd.
 Plattsburgh, NY 12903
 Ph 518-563-1720
 Fax 518-563-0052