

O'Rourke, James

From: Tim White <twhite@sanbornhead.com>
Sent: Wednesday, May 27, 2020 4:39 PM
To: O'Rourke, James
Cc: 'Joe Gay'; 'Kevin Roy'
Subject: NCES - April 2020 notification of results
Attachments: 20200527_NCES_Apr_Notify_Sum.pdf

Categories: Green Category

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Hi Jamie,

This email provides notification of the comparison of groundwater results to background values for the April 2020 sampling event at the NCES Landfill, consistent with the October 19, 2018 Groundwater Management and Release Detection Permit, Sanborn Head's April 7, 2020 letter to NHDES, and Env-Or 703.17(d)(2). Surface water results are also discussed below.

We have attached the following information:

- The first page of the attachment (Table 1) comparing April 2020 groundwater sampling results to background concentrations. **Note: November 2019 concentrations are also included on the table for reference.**
- The third page (Table 2) includes a discussion of "first time" background exceedances in release detection wells.

A brief summary of the results is below:

Groundwater

- Only two VOCs were detected in groundwater in April 2020:
 - **1,4-dioxane:** was detected at B-304DR at 1.1 µg/l in the primary sample and 1.3 ug/l in the duplicate sample. The concentration of 1,4-dioxane at B-304DR was within the range of concentrations recorded at B-304DR in November 2019 (1 to 1.4 ug/l). Refer to discussion of B-304UR/B-304DR below.
 - **DCDFM (Freon 12)** was detected at two locations:
 - DCDFM was detected at B-304DR at 4.3 µg/l in the primary sample and 4.5 ug/l in the duplicate sample in April 2020. DCDFM was last detected at B-304DR in April 2016 at a concentration of 22 ug/l (duplicate; 19 ug/l in primary).
 - DCDFM was detected at B-927M at 21 ug/l. This concentration was the highest concentration recorded at B-927M (up from the previous high of 17 ug/l in August 2019), but within the range of concentrations recorded at predecessor well B-921M prior to its decommissioning.
- The chloride concentrations at B-916M have been increasing over time and the April 2020 concentration was the highest in this well's period of record. Chloride was detected at B-916M at 96 mg/l (previous high value was 94 mg/l [Nov. 2019]). VOCs were not detected at B-916M in April 2020 and results for other analytes were generally consistent with recent values. Elevated chloride and specific conductance (sporadic) values at B-916M have been identified in previous events and are inferred to be related to previous phases of landfill development.
- MW-701 and B-918M were the only locations sampled for PFAS in April. The PFOA and PFOS concentrations were less than the GW-1/AGQS (70 parts per trillion [ppt] for individual or total concentrations for these two analytes). The results (in ppt) are summarized below:

	MW-701	B-918M
PFOA	12.7	9.55
PFOS	<4.43	4.42
PFBA	7.21	<4.35
PFPeA	13.7	4.71
PFHxA	19.2	7.02
PFHpA	6.19	<4.35
PFBS	5.86	<4.35

Note:

< indicates analyte was not detected above laboratory reporting limit indicated

B-304UR/B-304DR

The elevated concentrations of several analytes detected in B-304UR in November 2019 were not repeated in April 2020 sampling. At B-304UR, VOCs, 1,4-dioxane, and bromide were not detected in April 2020. Concentrations of chloride and nitrate were lower in April 2020 than in November 2019. At B-304DR, the 1,4-dioxane, bromide, and chloride concentrations in April 2020 were generally similar to November 2019 results. Given that it is deeper than B-304UR, 1,4-dioxane, DCDFM, and bromide concentrations would be expected to attenuate more slowly at B-304DR.

Together, the April 2020 results are consistent with effects related to the earthwork that was performed upgradient of these wells in summer 2019 to remove old, unused landfill infrastructure. On-going releases are not identified given that VOCs and 1,4-dioxane were not detected in April 2020 in B-304UR, nor in surface water samples downgradient of the B-304 wells.

Although not scheduled as part of Permit monitoring, analysis for VOCs and 1,4-dioxane are proposed for B-304UR and B-304DR in July 2020 as part of on-going monitoring of these locations.

Surface Water

- VOCs were not detected in the surface water samples (Main Seep [S-1], SF-1, S-101, S-108, and S-109) collected in April 2020.
- Surface water results were generally consistent with recent values, with the only exception: nitrate at Main Seep S-1 in April 2020 (1.1 mg/l) was the highest concentration recorded at that location since November 2008, and slightly higher than the concentration in November 2019 (0.71 mg/l).
- Chloride concentrations at Main Seep S-1, SF-1, and S-101 in April 2020 were generally similar to or less than concentrations recorded at these locations in November 2019. The April 2020 results continue to confirm the transient nature of the chloride “pulse” that was detected at these locations in April and July 2019 related to a short-term road salt mixing operation in the Tucker pit in late 2018.

Based on this information, monitoring will continue as part of ongoing Permit activities, with the next sampling event planned for July 2020.

Please contact me if you have any questions.

Thank you.

-Tim

Timothy M. White, PG

Project Director

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TABLE 1
Evaluation of Background Exceedances - Groundwater Samples - April 2020
North Country Environmental Services, Inc.
Bethlehem, New Hampshire
Permit No. GWP-198704033-B-007

Sample Location	Sample Date	Sample Type	SU		C	mg/L							ug/L		
			pH	Specific Conductance		Temperature	Bromide	Chemical Oxygen Demand	Chloride	Nitrate	Total Kjeldahl Nitrogen (TKN)	Arsenic	Iron	Manganese	Dichlorodifluoromethane (CFC12)
GW-1 (AGQS)									10		0.01		0.84	1000	0.32
SMCL			6.5 - 8.5					250				0.3	0.05		
Background 2019-11			6.3 - 9.5	253	6.2-12.9	0.1, 0.4 §	24	7	2.5	0.92	0.0011	0.64	0.19	5	0.25
Background 2020-01			6.3 - 9.5	253	6.2-12.9	0.1, 0.4 §	24	7	2.5	0.92	0.0011	0.64	0.19	5	0.25
Background 2020-04			6.4 - 9.5	253	6.2-12.9	0.1, 0.4 §	24	7	2.5	0.92	0.0011	0.64	0.19	5	0.25
Background Wells															
B-923U	11/5/2019	N	Sampling not required as part of permit monitoring												
B-923U	4/21/2020	N	7.96	67.7	6.5	<0.1	<10	<1	<0.5	<0.5		<0.05	<0.005	<2	<0.25
B-924U	11/5/2019	N	6.81	104.4	7.8	<0.1	<10	1	2.5	<0.5		<0.05	<0.005	<5	<0.25
B-924U	4/21/2020	N	Sampling not required as part of permit monitoring												
B-924L	11/5/2019	N	Sampling not required as part of permit monitoring												
B-924L	4/21/2020	N	Sampling not required as part of permit monitoring												
B-925U	11/5/2019	N	Sampling not required as part of permit monitoring												
B-925U	4/21/2020	N	7.51	78.3	7.1	<0.1	<10	<1	<0.5	<0.5		0.064	<0.005	<2	<0.25
B-925L	11/5/2019	N	Sampling not required as part of permit monitoring												
B-925L	4/21/2020	N	Sampling not required as part of permit monitoring												
Release Detection Wells Outside the GMZ															
MW-603	11/6/2019	N	6.79	97.52	11.1	<0.1	<10	3.9	<0.5	<0.5		0.52	0.055	<5	<0.25
MW-603	4/20/2020	N	6.61	100	12.8	<0.1	<10	3	<0.5	<0.5		<0.05	0.019	<2	<0.25
B-903U	11/6/2019	N	6.31	124.5	6.9	<0.1	<10	1.8	0.89	<0.5		<0.05	<0.005	<5	<0.25
B-903U	4/20/2020	N	7.06	114.9	7.8	<0.1	<10	2.2	1.3	<0.5		0.063	0.009	<2	<0.25
B-903L	11/6/2019	N	Sampling not required as part of permit monitoring												
B-903L	4/20/2020	N	Sampling not required as part of permit monitoring												
B-904U	11/6/2019	N	6.93	79.92	10.4	<0.1	<10	1.5	<0.5	<0.5		<0.05	<0.005	<5	<0.25
B-904U	4/20/2020	N	6.34	126.8	11.1	<0.1	15	3.4	2.7	<0.5		0.28	0.22	<2	<0.25
B-904L	11/6/2019	N	Sampling not required as part of permit monitoring												
B-904L	4/20/2020	N	Sampling not required as part of permit monitoring												
B-914U	11/6/2019	N	6.47	81.97	13.4	<0.1	<10	2.8	<0.5	<0.5	0.0008	0.44	0.01	<5	<0.25
B-914U	4/20/2020	N	6	119.3	13.8	0.15	<10	5.7	<0.5	<0.5	<0.0005	<0.05	0.0098	<2	<0.25
B-914L	11/6/2019	N	Sampling not required as part of permit monitoring												
B-914L	4/20/2020	N	Sampling not required as part of permit monitoring												
B-915D	11/5/2019	N	Sampling not required as part of permit monitoring												
B-915D	4/21/2020	N	Sampling not required as part of permit monitoring												
B-916U	11/5/2019	N	6.26	89.12	10	0.11	12	8.7	<0.5	<0.5		<0.05	0.014	<5	<0.25
B-916U	4/21/2020	N	5.69	70.61	9	<0.1	<10	4.3	<0.5	<0.5		<0.05	0.01	<2	<0.25
B-916M	11/5/2019	N	6.18	418.1	8.5	<0.1	<10	94	<0.5	<0.5		<0.05	<0.005	<5	<0.25
B-916M	4/21/2020	N	6.22	449.2	8.7	<0.1	<10	96	<0.5	<0.5		0.056	<0.005	<2	<0.25
B-916D	11/5/2019	N	Sampling not required as part of permit monitoring												
B-916D	4/21/2020	N	Sampling not required as part of permit monitoring												
B-917U	11/5/2019	N	7.04	45.51	7.4	<0.1	<10	1	<0.5	<0.5		<0.05	<0.005	<5	<0.25
B-917U	4/21/2020	N	6.43	41.89	6.4	<0.1	<10	1	<0.5	<0.5		<0.05	<0.005	<2	<0.25
B-909	11/5/2019	N	7.23	51.3	8.7	<0.1	<10	1.1	<0.5	0.54		0.24	<0.005	<5	<0.25
B-909	4/21/2020	N	6.27	83.18	7.3	<0.1	<10	<1	<0.5	<0.5		0.13	<0.005	<2	<0.25
B-917D	11/5/2019	N	Sampling not required as part of permit monitoring												
B-917D	4/21/2020	N	Sampling not required as part of permit monitoring												
B-918U	11/4/2019	N	6.25	143.1	9.3	<0.1	<10	14	0.86	<0.5		<0.05	<0.005	<5	<0.25
B-918U	4/20/2020	N	6.47	181.3	8.8	<0.1	<10	22	6	<0.5		0.36	0.013	<2	<0.25
B-918D	11/4/2019	N	Sampling not required as part of permit monitoring												
B-918D	4/20/2020	N	Sampling not required as part of permit monitoring												
B-926U	11/5/2019	N	6.06	191.9	8.8	<0.1	17	31	<0.5	<0.5		0.1	2.2	<5	<0.25
B-926U	4/21/2020	N	5.96	178.5	8	<0.1	28	24	<0.5	1		0.065	2.2	<2	<0.25
B-926L	11/5/2019	N	6.24	321.3	8.3	<0.1	<10	61	<0.5	<0.5		<0.05	<0.005	<5	<0.25
B-926L	4/21/2020	N	6.63	308.6	8.4	<0.1	<10	58	<0.5	<0.5		<0.05	<0.005	<2	<0.25
B-927U	11/4/2019	N	6.25	351	10.7	<0.1	<10	50	2.4	<0.5		<0.05	0.0065	<5	<0.25
B-927U	4/20/2020	N	6.08	481.6	11.9	<0.1	<10	63	2.5	<0.5		<0.05	0.0087	<2	<0.25
B-927L	11/4/2019	N	Sampling not required as part of permit monitoring												
B-927L	4/20/2020	N	Sampling not required as part of permit monitoring												
B-927M	11/4/2019	N	6.83	101.9	14.4	<0.5	58	5.3	<3	<0.5		2.4	0.2	8	<0.25
B-927M	4/20/2020	N	6.95	113.8	14.3	<0.1	54	3.2	<0.5	<0.5		3.2	0.21	21	<0.25
B-918M	11/4/2019	N	6.74	225.1	9.2	<0.1	<10	15	<0.5	<0.5		<0.05	0.021	<5	<0.25
B-918M	1/7/2020	N	7.31	211	7.6	<0.1	<10	14	<0.5	<0.5		<0.05	0.019	<5	<0.25
B-918M	4/20/2020	N	6.74	199	9.3	<0.1	<10	12	<0.5	<0.5		<0.05	0.017	<2	<0.25
MW-701	11/4/2019	N	6.46	259.3	10.5	<0.1	17	15	<0.5	<0.5		<0.05	0.16	<5	<0.25
MW-701	1/7/2020	N	7.28	401.9	7	<0.1	<10	14	<0.5	<0.5		0.11	0.59	<5	<0.25
MW-701	4/20/2020	N	6.57	349.8	7.1	<0.1	14	33	2.5	<0.5		0.1	0.65	<2	<0.25
B-915U	11/5/2019	N	6.6	329.4	9.2	<0.1	<10	52	<0.5	<0.5		<0.05	0.0078	<5	<0.25
B-915U	4/21/2020	N	6.26	240.9	8.6	<0.1	<10	20	<0.5	<0.5		0.071	0.0054	<2	<0.25
B-915M	11/5/2019	N	6.09	192.2	8.7	<0.1	<10	77	<0.5	<0.5		<0.05	<0.005	<5	<0.25
B-915M	4/21/2020	N	6.12	341.3	8.5	<0.1	<10	71	<0.5	<0.5		0.12	<0.005	<2	<0.25

TABLE 1
Evaluation of Background Exceedances - Groundwater Samples - April 2020
North Country Environmental Services, Inc.
Bethlehem, New Hampshire
Permit No. GWP-198704033-B-007

Sample Location	Sample Date	Sample Type	SU	uS/cm	C	mg/L							ug/L		
			pH	Specific Conductance	Temperature	Bromide	Chemical Oxygen Demand	Chloride	Nitrate	Total Kjeldahl Nitrogen (TKN)	Arsenic	Iron	Manganese	Dichlorodifluoromethane (CF ₂ Cl ₂)	Dioxane (1,4-)
GW-1 (AGQS)									10		0.01		0.84	1000	0.32
SMCL			6.5 - 8.5					250				0.3	0.05		
Background 2019-11			6.3 - 9.5	253	6.2-12.9	0.1, 0.4 §	24	7	2.5	0.92	0.0011	0.64	0.19	5	0.25
Background 2020-01			6.3 - 9.5	253	6.2-12.9	0.1, 0.4 §	24	7	2.5	0.92	0.0011	0.64	0.19	5	0.25
Background 2020-04			6.4 - 9.5	253	6.2-12.9	0.1, 0.4 §	24	7	2.5	0.92	0.0011	0.64	0.19	5	0.25
Release Detection Wells Inside the GMZ - Impacts Anticipated from Former Unlined Landfill															
B-919D	11/4/2019	N	Sampling not required as part of permit monitoring												
B-919D	4/20/2020	N	Sampling not required as part of permit monitoring												
MW-801	11/6/2019	N	7.11	101.5	11.4	<0.1	19	2.8	<0.5	<0.5	0.012	5.6	3.7	<5	<0.25
MW-801	4/20/2020	N	6.35	132	11.6	<0.1	<10	2.4	<0.5	<0.5	0.013	5.1	3.5	<2	<0.25
MW-802	11/5/2019	N	6.23	318.8	14.5	0.15	57	17	<0.5	0.68	0.03	23	4	<5	<0.25
MW-802	4/20/2020	N	6.27	347	17.6	0.21	39	18	<0.5	0.78	0.033	24	4.5	<2	<0.25
MW-803	11/5/2019	N	6.31	499.5	14.8	0.16	39	36	<0.5	1.6	0.074	62	6.7	<5	<0.25
MW-803	11/5/2019	FD				0.15	38	40	<0.5	1.1	0.074	65	6.9	<5	<0.25
MW-803	4/20/2020	N	6.35	583.8	18	0.25	70	32	<0.5	1.7	0.077	78	12	<2	<0.25
MW-803	4/20/2020	FD				0.23	67	30	<0.5	1.7	0.077	77	12	<2	<0.25
B-919U	11/4/2019	N	6.47	164.5	11	<0.1	<10	20	<0.5	<0.5	<0.0005	<0.05	<0.005	<5	<0.25
B-919U	4/20/2020	N	6	335.5	11.5	<0.1	<10	15	0.71	<0.5	<0.0005	<0.05	<0.005	<2	<0.25
B-919M	11/5/2019	N	7	210.8	14.5	<0.1	<10	2.5	<0.5	<0.5	0.013	0.47	2.9	<5	<0.25
B-919M	4/20/2020	N	6.97	210.9	15.7	<0.1	<10	3.1	<0.5	<0.5	0.0076	0.14	0.78	<2	<0.25
B-304UR	11/4/2019	N	6.1	823.2	10.8	1.5	15	200	3.4	<0.5		<0.05	0.011	<5	5.4
B-304UR	11/22/2019	N	6.28	1103	11.3	1.7		220							6.9
B-304UR	4/21/2020	N	6.26	309.3	10.5	<0.1	<10	33	2.3	<0.5		0.15	0.0095	<2	<0.25
B-304DR	11/4/2019	N	6.38	404.9	11.5	0.24	<10	52	<0.5	<0.5		<0.05	2.7	<5	1
B-304DR	11/22/2019	N	6.75	391	12.4	0.28		54							1.4
B-304DR	4/21/2020	N	6.42	423.9	12.7	0.33	<10	60	<0.5	<0.5		0.068	3.2	4.3	1.1
B-304DR	4/21/2020	FD				0.36	<10	57	<0.5	<0.5		0.14	3.1	4.5	1.3
Groundwater Management Wells Inside the GMZ - Impacts Anticipated from Former Unlined Landfill															
B-102S	11/6/2019	N	6.24	119.3	12.2	<0.1	<10	8.9	<0.5	<0.5		0.31	1.1	<5	<0.25
B-102S	4/20/2020	N	6.19	138.7	11.5	0.9	<10	11	1.6	<0.5		0.12	0.58	<2	<0.25
B-102D	11/6/2019	N	6.71	101.8	12	<0.1	<10	2.1	<0.5	<0.5		9	1.1	<5	<0.25
B-102D	4/20/2020	N	6.9	106.6	12.6	<0.1	<10	1.7	<0.5	<0.5		9.4	1.3	<2	<0.25
B-103S	11/5/2019	N	6.94	134.3	12.5	<0.1	<10	4.9	<0.5	0.69		8.8	1.8	<5	<0.25
B-103S	11/5/2019	FD				<0.1	<10	4.6	<0.5	<0.5		8.8	1.7	<5	<0.25
B-103S	4/21/2020	N	6.48	142	11.3	<0.1	<10	4.1	<0.5	<0.5		8.2	1.6	<2	<0.25
B-103D	11/5/2019	N	6.88	100.5	12.3	<0.1	<10	2.8	<0.5	0.51		3.9	1	<5	<0.25
B-103D	4/21/2020	N	6.74	105.3	13	<0.1	<10	2.8	<0.5	0.51		1.6	0.94	<2	<0.25
MW-604	11/6/2019	N	Sampling not required as part of permit monitoring												
MW-604	4/21/2020	N	Sampling not required as part of permit monitoring												

Notes:

1. Samples were collected by Sanborn Head on the dates indicated. Samples were analyzed by Eastern Analytical, Inc. (EAI) of Concord, New Hampshire. Field duplicate samples are indicated by "FD" in the Sample Type column.
2. Only detected analytes which exceed background in one or more sample in the current rounds are presented herein. Blank cells for an analyte indicate not analyzed. Refer to the analytical laboratory reports for the complete list of parameters analyzed. Results are compared to their respective background values from time of sampling.
3. pH is presented in standard units (s.u.), specific conductance is presented in microSiemens per centimeter (µS/cm), and temperature is presented in degrees Celsius (C). Indicator parameter and metals results are presented in milligrams per liter (mg/L) which is equivalent to parts per million. Volatile organic compound (VOC) results are presented in micrograms per liter (µg/L) which is equivalent to parts per billion (ppb).
4. "<" indicates the analyte was not detected above the listed laboratory reporting limit.
"§" indicates background value for bromide is 0.4 mg/L for wells within the groundwater management zone (GMZ) established for the site, and 0.1 mg/L for wells outside the GMZ.
5. "GW-1" refers to the New Hampshire GW-1 Groundwater Standards as defined in New Hampshire Department of Environmental Services (NHDES) Contaminated Sites Risk Characterization and Management Policy (RCMP) (January 1998, with 2000 through 2018 revisions/addenda). GW-1 Groundwater Standards are intended to be equivalent to the Ambient Groundwater Quality Standards (AGQSs) promulgated in Env-Or 600 (June 2015 with October 2016, and September 2018 amendments). For analytes where GW-1 and AGQS values differ, the values presented in this table reflect the AGQSs in the latest Env-Or 600 update. The AGQS/GW-1 Groundwater Standards are intended to be protective of groundwater as a source of drinking water.
"SMCL" refers to the USEPA Secondary Maximum Contaminant Levels as presented in the National Primary Drinking Water Standards (May 2009). The SMCLs are established as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor. These analytes are not considered by USEPA to present a risk to human health at the SMCL.
6. **Bold** values exceed the GW-1/AGQS.
Italic values exceed the SMCL.
Green shading indicates a concentration exceeding background.
Yellow shading indicates a concentration exceeding background for the first time.
7. Refer to the report text and the text of Appendix A for further information about calculation and selection of background concentrations.

TABLE 2
Summary of First Time Background Concentration Exceedances
Release Detection Wells – NCES Landfill Bethlehem, NH
April 2020

Location	Analyte	Concentration / Value	Previous Max/Min	April 2020 Site Background (refer to Table 1)	GW-1 (AGQS)	# of sampling events for analyte	Comments
Release Detection Wells Outside the GMZ							
B-909	pH	6.27 s.u.	6.43 s.u. Jul 2017	6.4 - 9.5 s.u.	6.5 to 8.5 s.u. (SMCL)	19	pH at B-909 in April 2020 was only slightly below the sitewide pH range, and was similar to values historically recorded at other nearby "M" wells B-915M and B-916M. VOCs were not detected at B-909 nor its triplet [B-917] wells in April 2020. Other parameters at B-909 in April 2020 were within the range of historical results.
B-926U	Chemical Oxygen Demand	28 mg/l	17 mg/l Nov 2019	24 mg/l	NS	8	COD has been sporadically detected at B-926U since it was first sampled in November 2017. COD at B-926U in April 2020 was the highest recorded at this location in its relatively short period of record (8 sampling events since Nov. 2017). However the COD concentration at B-926U in April 2020 was only slightly above the sitewide COD background value and was similar to values historically measured at nearby/upgradient well MW-701. With the exception of TKN (discussed below), other parameters at B-926U in April 2020 were within the range of historical results.
	Total Kjeldahl Nitrogen (TKN)	1 mg/l	<0.5 mg/l Nov 2019	0.92 mg/l	NS	8	April 2020 was the first time TKN was detected at B-926U within its relatively short period of record (8 sampling events since Nov. 2017). TKN at B-926U in April 2020 was only slightly above the sitewide TKN background and was within the range of values historically measured at nearby/upgradient well MW-701 (TKN was not detected at MW-701 in April 2020).
Groundwater Management Wells Inside the GMZ – Impacts Anticipated from Former Unlined Landfill							
B-102S	Bromide	0.9 mg/l	0.3 mg/l Apr 1997	0.4 mg/l	NS	75	The April 2020 result was the highest bromide concentration detected at this well in its period of record. VOCs were not detected at B-102S in April 2020, nor at the couplet well, B-102D (where bromide was also non-detect). Nitrate was detected at B-102S in April 2020 for the first time since November 2013, but below the GW-1/AGQS. Other parameters at B-102S in April 2020 were within the range of historical results.

Notes:
 mg/l = milligrams per liter, which are equivalent to parts per million (ppm)
 s.u. = standard units of pH

1. The number of sampling events for an analyte includes primary samples and re-samples collected inclusive of the current monitoring period, but does not include field duplicates, if collected.
2. Refer to Appendix A of the upcoming April 2020 monitoring report for a discussion of methods used to develop background concentrations.
3. "GW-1" refers to the New Hampshire GW-1 Groundwater Standards as defined in New Hampshire Department of Environmental Services (NHDES) Contaminated Sites Risk Characterization and Management Policy (RCMP) (January 1998, with 2000 through 2018 revisions/addenda). GW-1 Groundwater Standards are intended to be equivalent to the Ambient Groundwater Quality Standards (AGQSs) promulgated in Env-Or 600 (June 2015 with October 2016, and September 2018 amendments). For analytes where GW-1 and AGQS values differ, the values presented in this table reflect the AGQSs in the latest Env-Or 600 update. The AGQS/GW-1 Groundwater Standards are intended to be protective of groundwater as a source of drinking water.

"SMCL" refers to the USEPA Secondary Maximum Contaminant Levels as presented in the National Primary Drinking Water Standards (May 2009). The SMCLs are established as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor. These analytes are not considered by USEPA to present a risk to human health at the SMCL.