

## O'Rourke, James

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**From:** Tim White <twhite@sanbornhead.com>  
**Sent:** Thursday, May 22, 2025 12:09 PM  
**To:** O'Rourke, James  
**Cc:** Lindsey Menard; marc.morgan@casella.com; Kimberly Crosby; Russ Anderson; Samuel Nicolai; Matt Estabrooks; Gina Panik  
**Subject:** NCES Landfill - April 2025 Notification of Water Quality Results - PFAS  
**Attachments:** 20250522\_NCES\_April\_Notification\_Tables-PFAS.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

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Hi Jamie,

This email follows up on our May 5 notification of April tri-annual sampling results at NCES and provides a comparison of groundwater results to background values for PFAS analytes.

We have attached the following information:

- Table 1 compares April 2025 groundwater sampling results to background concentrations.
- Table 2 includes a discussion of initial background exceedances detected in release detection wells in April 2025.

As indicated in Table 2, three wells indicated an initial background exceedance for one PFAS analyte:

- **PFNA** at MW-701: PFNA was detected at 1.83 ng/L, which represented an initial detection and therefore initial exceedance of background at this location; however, it was detected only slightly above the laboratory reporting limit of 1.72 ng/L, and well below the AQGS of 11 ng/L. There were no other initial detections at MW-701 in April 2025, and concentrations of other analytes were within historical ranges. Comparison to background concentrations will continue to be monitored at this location in July 2025.
- **PFHxS** at B-928D: PFHxS was detected at 4.07 ng/L, which represented an initial detection and therefore initial exceedance of background at this location; however, it was detected only slightly above the laboratory reporting limit of 2.77 ng/L, and well below the AQGS of 18 ng/L. There were no other initial detections at B-928D in April 2025, and concentrations of other analytes were within historical ranges (except for PFHpA and PFOA). Comparison to background concentrations will continue to be monitored at this location in July 2025.
- **PFPeA** at B-932U: PFPeA was detected at 2.85 ng/L, only slightly above the laboratory reporting limit of 1.75 ng/L. B-932U was installed in July 2024; April 2025 represents the third sampling event at this location. Comparison to background concentrations will continue to be monitored in the fourth sampling event at this location in July 2025.

Other results were generally within the range of historical values, except ten detections which indicated new period of record maximum concentrations at five locations (but not initial exceedances of background):

- B-304DR: PFNA detected at 4.04 ng/L, slightly above the laboratory reporting limit of 2.02 ng/L but well below the AQGS of 11 ng/L. The previous maximum concentration was 3.78 ng/L in November 2024. We note that the laboratory reporting limits were typically 4 ng/L or higher prior to 2023.
- B-928D:

- PFHpA: detected at 10.9 ng/L. The previous maximum concentration was 9.77 ng/L in June 2022.
- PFOA: detected at 18.4 ng/L, above the AGQS of 12 ng/L. The previous maximum concentration was 12.6 ng/L in November 2024.
- B-932U:
  - PFBA: detected at 3.46 ng/L. The previous maximum concentration was 2.35 ng/L in November 2024. B-932U was installed in July 2024; April 2025 represents the third sampling event at this location.
  - PFHpA: detected at 3.62 ng/L. The previous maximum concentration was 2.48 ng/L in November 2024.
  - PFHxA: detected at 4.88 ng/L. The previous maximum concentration was 2.54 ng/L in November 2024.
  - PFOA: detected at 6.16 ng/L. The previous maximum concentration was 5.3 ng/L in July 2024.
- B-934U:
  - PFHpA: detected at 30.5 ng/L. The previous maximum concentration was 22.8 ng/L in November 2024. B-934U was installed in November 2024; April 2025 represents the second sampling event at this location.
  - PFHxS: detected at 2.62 ng/L. The previous maximum concentration was 2.40 ng/L in November 2024.
- MW-604:
  - PFOS: detected at 5.74J+ ng/L. "J+" indicates the ion transition ratio was outside of acceptance criteria and the concentration should be considered estimated with a potential high bias. The previous maximum concentration was 5.72 ng/L in July 2023.

These PFAS concentrations are not considered to represent material increases above previous results. Given the general absence of detections for other indicator analytes, the April results are not considered to be indicative of a new release.

-Tim

**Timothy M. White, PG**

Senior Vice President

Licensed: PG in DE, NH, NY, OR, WA, WY

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TABLE 1  
Evaluation of Background Exceedances - April 2025  
North Country Environmental Services, Inc.  
Bethlehem, New Hampshire  
Permit No. GWP-198704033-B-008

Sample Location	Sample Date	Sample Type	SU	uS/cm	C	mg/L							ug/L			ng/L													
			pH	Specific Conductance	Temperature	Bromide	Chemical Oxygen Demand (COD)	Chloride	Nitrate	Total Kjeldahl Nitrogen (TKN)	Arsenic, Dissolved	Barium, Dissolved	Iron, Dissolved	Manganese, Dissolved	Nickel, Dissolved	Acetone	Dichlorodifluoromethane (CFC12)	Dioxane (1,4-)	Perfluorobutanoic Acid (PFBA) [3]	Perfluoropentanoic Acid (PFPeA) [4]	Perfluorohexanoic Acid (PFHxA) [5]	Perfluoroheptanoic Acid (PFHpA) [6]	Perfluorooctanoic Acid (PFOA) [7]	Perfluorononanoic Acid (PFNA) [8]	Perfluorobutanesulfonic Acid (PFBS) [4S]	Perfluoropentanesulfonic Acid (PFPeS) [5S]	Perfluorohexanesulfonic acid (PFHxS) [6S]	Perfluorooctanesulfonic Acid (PFOS) [8S]	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)
GW-1 (AGQS)								10		0.005	2		0.3	0.1	6000	1000	0.32					12	11			18	15		
SMCL			6.5-8.5					250					0.3	0.05															
Background 2024-11			6.3-8.6	125	5.6-11.9	0.1, 0.4 §	15	1.8	3.2	0.58	0.00051	0.025	0.41	0.072	0.0027	<10	<2	<0.25	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	
Background 2025-04			6.3-8.6	125	5.6-11.9	0.1, 0.4 §	15	1.8	3.2	0.58	0.00051	0.025	0.41	0.072	0.0027	<10	<2	<0.25	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	
Background Wells																													
B-923U	11/5/2024	N	7.46	68	7.5	<0.1	<10	<1	<0.5	<0.5			<0.05	<0.005		<10	<2	<0.25											
B-923U	4/15/2025	N	Sampling not required as part of permit monitoring																										
B-924U	11/5/2024	N	Sampling not required as part of permit monitoring																										
B-924U	4/15/2025	N	6.74	97	9.4	<0.1	<10	1	<0.5	<0.5			<0.05	<0.005		<10	<2	<0.25											
B-924L	11/5/2024	N	Sampling not required as part of permit monitoring																										
B-924L	4/15/2025	N	Sampling not required as part of permit monitoring																										
B-925U	11/5/2024	N	7.26	62	8.1	<0.1	<10	<1	<0.5	<0.5			<0.05	<0.005		<10	<2	<0.25											
B-925U	4/15/2025	N	Sampling not required as part of permit monitoring																										
B-925L	11/5/2024	N	Sampling not required as part of permit monitoring																										
B-925L	4/15/2025	N	Sampling not required as part of permit monitoring																										
B-929U	11/5/2024	N	6.49	80	8.2	<0.1	<10	1	2.2	<0.5			<0.05	<0.005		<10	<2	<0.25											
B-929U	4/15/2025	N	7.01	86	10.3	<0.1	<10	1.5	1.3	<0.5			<0.05	<0.005		<10	<2	<0.25											
B-929L	11/5/2024	N	Sampling not required as part of permit monitoring																										
B-929L	4/15/2025	N	Sampling not required as part of permit monitoring																										
Release Detection Wells Outside the GMZ																													
MW-701	11/4/2024	N	6.64	186	10.4	<0.1	<10	2.7	<0.5	<0.5			<0.05	0.55		<10	<2	<0.25	5.38	9.27	10.3	2.66	5.35	<1.74	2.98	<1.74	<1.74	5.89	<1.74
MW-701	1/16/2025	N	7.14	245	6.5	<0.1	<10	7.1	<0.5	0.94			<0.05	1.2		<10	<2	<0.25	6.33	11.8	12.9	3.94	11.0	<1.78	3.80	<1.78	<1.78	5.06	<1.78
MW-701	4/15/2025	N	6.75	211	9.6	<0.1	11	12	0.56	<0.5			<0.05	0.96		<10	<2	<0.25	8.54	15.6	17.8	4.98	11.9	1.83	2.98	<1.72	<1.72	6.38 J+	<1.7
B-915U	11/5/2024	N	6.24	184	9.9	<0.1	<10	7.8	0.59	<0.5			<0.05	<0.005		<10	<2	<0.25											
B-915U	4/15/2025	N	6.66	187	10.2	<0.1	<10	10	0.61	<0.5			<0.05	<0.005		<10	<2	<0.25											
B-915M	11/5/2024	N	6.34	259	8.2	<0.1	<10	39	0.55	<0.5			<0.05	<0.005		<10	<2	<0.25											
B-915M	4/15/2025	N	6.46	282	9.5	<0.1	<10	43	0.67	<0.5			<0.05	<0.005		<10	<2	<0.25											
B-915D	11/5/2024	N	Sampling not required as part of permit monitoring																										
B-915D	4/15/2025	N	Sampling not required as part of permit monitoring																										
B-916U	11/5/2024	N	5.93	63	10.8	<0.1	<10	<1	<0.5	<0.5			<0.05	0.0055		<10	<2	<0.25											
B-916U	4/15/2025	N	6.24	75	8.4	<0.1	<10	1.8	<0.5	<0.5			<0.05	0.0057		<10	<2	<0.25											
B-916M	11/5/2024	N	6.22	229	8.7	<0.1	<10	34	0.54	<0.5			<0.05	<0.005		<10	<2	<0.25											
B-916M	4/15/2025	N	6.44	236	8.6	<0.1	<10	30	0.63	<0.5			<0.05	<0.005		<10	<2	<0.25											
B-916D	11/5/2024	N	Sampling not required as part of permit monitoring																										
B-916D	4/15/2025	N	Sampling not required as part of permit monitoring																										
B-917U	11/5/2024	N	6.94	46	8.2	<0.1	<10	<1	<0.5	<0.5			<0.05	<0.005		<10	<2	<0.25											
B-917U	4/15/2025	N	7.18	48	8.5	<0.1	<10	1.1	<0.5	<0.5			<0.05	<0.005		<10	<2	<0.25											
B-909	11/5/2024	N	6.81	94	8.6	<0.1	<10	<1	<0.5	<0.5			<0.05	<0.005		<10	<2	<0.25											

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Permit No. GWP-198704033-B-008

Sample Location	Sample Date	Sample Type	SU	uS/cm	C	mg/L								ug/L			ng/L												
			pH	Specific Conductance	Temperature	Bromide	Chemical Oxygen Demand (COD)	Chloride	Nitrate	Total Kjeldahl Nitrogen (TKN)	Arsenic, Dissolved	Barium, Dissolved	Iron, Dissolved	Manganese, Dissolved	Nickel, Dissolved	Acetone	Dichlorodifluoromethane (CFC12)	Dioxane (1,4-)	Perfluorobutanoic Acid (PFBA) [3]	Perfluoropentanoic Acid (PFPeA) [4]	Perfluorohexanoic Acid (PFHxA) [5]	Perfluoroheptanoic Acid (PFHpA) [6]	Perfluorooctanoic Acid (PFOA) [7]	Perfluorononanoic Acid (PFNA) [8]	Perfluorobutanesulfonic Acid (PFBS) [4S]	Perfluoropentanesulfonic Acid (PFPeS) [5S]	Perfluorohexanesulfonic acid (PFHxS) [6S]	Perfluorooctanesulfonic Acid (PFOS) [8S]	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)
GW-1 (AGQS)								10		0.005	2		0.3	0.1	6000	1000	0.32					12	11			18	15		
SMCL			6.5-8.5					250				0.3	0.05																
Background 2024-11			6.3-8.6	125	5.6-11.9	0.1, 0.4 §	15	1.8	3.2	0.58	0.00051	0.025	0.41	0.072	0.0027	<10	<2	<0.25	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	
Background 2025-04			6.3-8.6	125	5.6-11.9	0.1, 0.4 §	15	1.8	3.2	0.58	0.00051	0.025	0.41	0.072	0.0027	<10	<2	<0.25	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	
B-909	4/15/2025	N	7.1	110	9.2	<0.1	<10	<1	<0.5	<0.5			<0.05	<0.005		<10	<2	<0.25											
B-917D	11/5/2024	N	Sampling not required as part of permit monitoring																										
B-917D	4/15/2025	N	Sampling not required as part of permit monitoring																										
B-918U	11/4/2024	N	6.01	362	9.8	0.13	<10	65	2.4	<0.5			0.067	<0.005		<10	<2	<0.25											
B-918U	4/15/2025	N	6.31	382	10	0.11	<10	65	2.2	<0.5			<0.05	<0.005		<10	<2	<0.25											
B-918M	11/4/2024	N	6.78	164	9.9	<0.1	<10	14	1.1	<0.5			<0.05	<0.005		<10	<2	<0.25	<1.94	<1.94	<1.94	2.12	<1.94	<1.94	<1.94	<1.94	<1.94	<1.94	
B-918M	1/16/2025	N	7.34	191	7.2	<0.1	<10	13	1.1	<0.5			<0.05	<0.005		<10	<2	<0.25	<1.77	<1.77	<1.77	<1.77	1.92	<1.77	<1.77	<1.77	<1.77	<1.77	
B-918M	4/15/2025	N	7.32	184	10.8	<0.1	<10	13	1.1	<0.5			<0.05	<0.005		<10	<2	<0.25	2.67	2.81	4.08	2.93	3.63	<1.73	<1.73	<1.73	<1.73	<1.73	
B-918D	11/4/2024	N	Sampling not required as part of permit monitoring																										
B-918D	4/15/2025	N	Sampling not required as part of permit monitoring																										
B-926U	11/5/2024	N	6.25	245	9.7	0.15	24	3.7	<0.5	0.57			<0.05	8.9		<10	<2	<0.25											
B-926U	4/15/2025	N	6.12	260	10.6	0.13	21	9.4	<0.5	<0.5			<0.05	6.7		<10	<2	<0.25											
B-926L	11/5/2024	N	6.4	213	8.3	<0.1	<10	29	0.63	<0.5			<0.05	<0.005		<10	<2	<0.25											
B-926L	4/15/2025	N	6.51	231	9.9	<0.1	<10	30	0.71	<0.5			<0.05	<0.005		<10	<2	<0.25											
B-927U	11/4/2024	N	6.25	357	11.8	<0.1	<10	47	2.1	<0.5			<0.05	<0.005		<10	<2	<0.25											
B-927U	4/14/2025	N	6.53	370	13.4	<0.1	<10	49	2.5	<0.5			<0.05	<0.005		<10	<2	<0.25											
B-927M	11/4/2024	N	6.96	142	10.9	<0.1	47	3.6	<0.5	<0.5			4.6	0.28		<10	14	<0.25											
B-927M	4/14/2025	N	7.03	156	15.2	<0.1	44	3.9	<0.5	<0.5			2.3	0.23		<10	18	<0.25											
B-927L	11/4/2024	N	Sampling not required as part of permit monitoring																										
B-927L	4/14/2025	N	Sampling not required as part of permit monitoring																										
B-930U	11/5/2024	N	6.87	97	9.5	<0.1	<10	<1	<0.5	<0.5			<0.05	<0.005		<10	<2	<0.25											
B-930U	4/15/2025	N	7	108	10.8	<0.1	<10	1.1	<0.5	<0.5			<0.05	<0.005		12	<2	<0.25											
B-930L	11/5/2024	N	Sampling not required as part of permit monitoring																										
B-930L	4/15/2025	N	Sampling not required as part of permit monitoring																										
B-931U	11/5/2024	N	7.03	85	9.5	<0.1	<10	1.8	<0.5	<0.5	<0.0005		<0.05	<0.005		<10	<2	<0.25											
B-931U	4/15/2025	N	7.25	106	9.8	<0.1	<10	2	<0.5	<0.5	<0.001		<0.05	<0.005		<10	<2	<0.25											
B-931L	11/5/2024	N	Sampling not required as part of permit monitoring																										
B-931L	4/15/2025	N	Sampling not required as part of permit monitoring																										
Release Detection Wells Inside the GMZ – Impacts Anticipated from Former Unlined Landfill																													
B-304UR	11/4/2024	N	6.66	486	10.7	<0.1	<10	22	8.7	<0.5			<0.05	<0.005		<10	<2	0.34	61.8	33.6	38.8	64.8	43	<1.79	21.1	4.38	48.1	<1.79	5.2 B
B-304UR	4/14/2025	N	6.8	278	13.4	<0.1	<10	14	2.4	<0.5			<0.05	<0.005		<10	<2	<0.25	29	20.7	27.7	26	25.1	<1.73	20.9	4.1	19.6	<1.73	3.6
B-304DR	11/4/2024	N	6.56	237	13.5	<0.1	<10	17	<0.5	<0.5			<0.05	2.3		<10	<2	<0.25	7.23	11.3	13.7	8.5	71.2	3.78	4.44	<2	7.65	<2	4.24 BJ+
B-304DR	11/4/2024	FD				<0.1	<10	11	<0.5	<0.5			<0.05	2.2		<10	<2	<0.25											
B-304DR	4/14/2025	N	6.65	257	16.8	<0.1	<10	16	<0.5	<0.5			<0.05	2.6		<10	<2	<0.25	5.26	7.51	9.34	5.03	44.7	4.04	2.59	<2.02	2.6	<2.02	2.54

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			pH	Specific Conductance	Temperature	Bromide	Chemical Oxygen Demand (COD)	Chloride	Nitrate	Total Kjeldahl Nitrogen (TKN)	Arsenic, Dissolved	Barium, Dissolved	Iron, Dissolved	Manganese, Dissolved	Nickel, Dissolved	Acetone	Dichlorodifluoromethane (CFC12)	Dioxane (1,4-)	Perfluorobutanoic Acid (PFBA) [3]	Perfluoropentanoic Acid (PFPeA) [4]	Perfluorohexanoic Acid (PFHxA) [5]	Perfluoroheptanoic Acid (PFHpA) [6]	Perfluorooctanoic Acid (PFOA) [7]	Perfluorononanoic Acid (PFNA) [8]	Perfluorobutanesulfonic Acid (PFBS) [4S]	Perfluoropentanesulfonic Acid (PFPeS) [5S]	Perfluorohexanesulfonic acid (PFHxS) [6S]	Perfluorooctanesulfonic Acid (PFOS) [8S]	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)
GW-1 (AGQS)								10		0.005	2		0.3	0.1	6000	1000	0.32					12	11				18	15	
SMCL			6.5-8.5					250					0.3	0.05															
Background 2024-11			6.3-8.6	125	5.6-11.9	0.1, 0.4 §	15	1.8	3.2	0.58	0.00051	0.025	0.41	0.072	0.0027	<10	<2	<0.25	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5
Background 2025-04			6.3-8.6	125	5.6-11.9	0.1, 0.4 §	15	1.8	3.2	0.58	0.00051	0.025	0.41	0.072	0.0027	<10	<2	<0.25	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5	<1.5- <2.5
B-304DR	4/14/2025	FD				<0.1	<10	15	<0.5	<0.5			<0.05	2.6		<10	<2	<0.25											
MW-802	11/4/2024	N	6.18	332	14.5	0.14	16	24	<0.5	<0.5	0.0085		7.4	5.3		<10	<2	<0.25											
MW-802	4/14/2025	N	6.27	218	16.9	<0.1	18	10	<0.5	<0.5	0.0084		2.9	2.2		<10	<2	<0.25											
MW-803	11/4/2024	N	6.37	449	16.4	0.18	90	8.2	<0.5	2.6	0.057		59	6.9		<10	<2	<0.25											
MW-803	11/4/2024	FD				0.19	100	7.7	<0.5	2.8	0.057		59	6.9		<10	<2	<0.25											
MW-803	4/14/2025	N	6.45	423	17.3	0.14	76	7	<0.5	2.4	0.063		57	5.8		<10	<2	<0.25											
MW-803	4/14/2025	FD				0.13	68	7.5	<0.5	2.3	0.059		56	5.8		<10	<2	<0.25											
B-919U	11/4/2024	N	6.93	224	9	<0.1	<10	4	0.68	<0.5	<0.0005		<0.05	<0.005		<10	<2	<0.25											
B-919U	4/14/2025	N	7.05	116	12.4	<0.1	<10	5.4	<0.5	<0.5	<0.001		0.076	<0.005		<10	<2	<0.25											
B-919M	11/4/2024	N	6.79	135	14.7	<0.1	<10	1.9	<0.5	<0.5	0.056		12	4.2		<10	<2	<0.25											
B-919M	4/14/2025	N	6.76	131	16.5	<0.1	<10	2.1	<0.5	<0.5	0.048		10	3.8		<10	<2	<0.25											
B-919D	11/4/2024	N	Sampling not required as part of permit monitoring																										
B-919D	4/14/2025	N	Sampling not required as part of permit monitoring																										
B-928U	11/4/2024	N	6.06	152	8.6	<0.1	<10	7.7	0.93	<0.5			<0.05	<0.005		<10	<2	<0.25	10.2	9.2	11.9	8.29	17.7	<1.82	9.32	<1.82	2.11	<1.82	<1.82
B-928U	4/14/2025	N	6.65	173	10.6	<0.1	<10	14	1.6	<0.5			<0.05	<0.005		<10	<2	<0.25	8.48	7.86	10.3	7.49	15.5	<1.79	6.62	<1.79	1.8	<1.79	<1.79
B-928D	11/4/2024	N	6.72	168	10.1	<0.1	<10	10	1.1	<0.5			<0.05	<0.005		<10	<2	<0.25	7.8	6.76	10.4	7.62	12.6	<1.99	6.5	<1.99	<1.99	<1.99	<1.99
B-928D	4/14/2025	N	6.59	178	10.8	<0.1	<10	13	1.3	<0.5			<0.05	<0.005		<10	<2	<0.25	16.5	14.8	18.8	10.9	18.4	<2.77	22.1	<2.77	4.07	<2.77	<2.19
Groundwater Management Wells Inside the GMZ – Impacts Anticipated from Former Unlined Landfill																													
B-103S	11/4/2024	N	6.85	110	12	<0.1	<10	3.1	<0.5	<0.5			7.3	1.6		<10	<2	<0.25	<1.73	<1.73	<1.73	<1.73	<1.73	<1.73	<1.73	<1.73	<1.73	<1.73	<1.73
B-103S	4/14/2025	N	7.01	156	14	<0.1	<10	4.9	<0.5	<0.5			11	2.5		<10	<2	<0.25											
B-103D	11/4/2024	N	6.84	100	12.1	<0.1	<10	2.3	<0.5	<0.5			4	1.2		<10	<2	<0.25	<1.82	<1.82	<1.82	<1.82	<1.82	<1.82	<1.82	<1.82	<1.82	<1.82	<1.82
B-103D	4/14/2025	N	7.03	102	14.3	<0.1	<10	2.7	<0.5	<0.5			3.3	1.1		<10	<2	<0.25											
MW-604	11/4/2024	N	6.78	191	10.4														2.71	4.12	4.43	3.89	17.7	<1.86	5.73	<1.86	<1.86	1.99	<1.86
MW-604	4/14/2025	N	7.18	179	10.1														4.13	3.18	3.72	3.69	16.3	<3.03	3.68	<3.03	<3.03	5.74 J+	<1.92
Supplemental Site Investigation																													
B-932U	11/4/2024	N	6.27	93	10.6	<0.1	<10	5.7	<0.5	<0.5	<0.0005	0.0094	<0.05	0.041	<0.001	<10	<2	<0.25	2.35	<1.81	2.54	2.48	4.95	<1.81	4	<1.81	<1.81	1.94 J+	<1.81
B-932U	4/14/2025	N	6.52	68	7.1	<0.1	14	3.3	<0.5	<0.5	<0.001	0.0067	0.061	0.023	<0.001	<10	<2	<0.25	3.46	2.85	4.88	3.62	6.16	<1.75	2.75	<1.75	<1.75	<1.75	<1.75
B-932L	11/4/2024	N	7.02	133	9.2	<0.1	<10	3.3	<0.5	<0.5	0.00057	0.0077	<0.05	<0.005	<0.001	<10	<2	<0.25	<1.74	2.34	2.69	<1.74	2.54	<1.74	<1.74	<1.74	<1.74	<1.74	<1.74
B-932L	4/14/2025	N	7.15	128	11.8	<0.1	11	3.7	<0.5	<0.5	<0.001	0.0071	<0.05	<0.005	<0.001	<10	<2	<0.25	<3.64	<3.64	<3.64	<3.64	<3.64	<3.64	<3.64	<3.64	<3.64	<3.64	<3.64
B-933U	12/10/2024	N	6.93	108	11	<0.1	<10	2	<0.5	<0.5	0.0098	0.02	7	3.3	0.0021	<10	<2	<0.25	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
B-933U	4/14/2025	N	6.88	106	14	<0.1	<10	2.6	<0.5	<0.5	0.011	0.038	7.9	2.8	0.0015	<10	<2	<0.2	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<1.75
B-933L	12/10/2024	N	7.28	138	10.6	<0.1	<10	3.1	<0.5	<0.5	0.00067	0.02	<0.05	0.46	<0.001	<10	<2	<0.25	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
B-933L	4/14/2025	N	7.33	123	12.6	<0.1	<11	2.8	<0.5	<0.5	<0.001	0.01	0.062	0.055	<0.001	<10	<2	<0.25	<2.87	<2.87	<2.87	<2.87	<2.87	<2.87	<2.87	<2.87	<2.87	<2.87	<1.79
B-934U	12/10/2024	N	6.18	401	15.7	0.16	34	21	<0.5	0.93	0.0093	0.13	21	11	0.0066	<10	<2	0.55	41.2	68.1	90.7	22.8	19.8	<1.71	46.3	<1.71	2.40	<1.71	<1.71



TABLE 1  
Evaluation of Background Exceedances - April 2025  
North Country Environmental Services, Inc.  
Bethlehem, New Hampshire  
Permit No. GWP-198704033-B-008

Sample Location	Sample Date	Sample Type	SU	uS/cm	C	mg/L									ug/L			ng/L											
			pH	Specific Conductance	Temperature	Bromide	Chemical Oxygen Demand (COD)	Chloride	Nitrate	Total Kjeldahl Nitrogen (TKN)	Arsenic, Dissolved	Barium, Dissolved	Iron, Dissolved	Manganese, Dissolved	Nickel, Dissolved	Acetone	Dichlorodifluoromethane (CFC12)	Dioxane (1,4-)	Perfluorobutanoic Acid (PFBA) [3]	Perfluoropentanoic Acid (PFPeA) [4]	Perfluorohexanoic Acid (PFHxA) [5]	Perfluoroheptanoic Acid (PFHpA) [6]	Perfluorooctanoic Acid (PFOA) [7]	Perfluorononanoic Acid (PFNA) [8]	Perfluorobutanesulfonic Acid (PFBS) [4S]	Perfluoropentanesulfonic Acid (PFPeS) [5S]	Perfluorohexanesulfonic acid (PFHxS) [6S]	Perfluorooctanesulfonic Acid (PFOS) [8S]	1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)
GW-1 (AGQS)								10		0.005	2		0.3	0.1	6000	1000	0.32					12	11			18	15		
SMCL			6.5-8.5					250				0.3	0.05													18	15		
Background 2024-11			6.3-8.6	125	5.6-11.9	0.1, 0.4 §	15	1.8	3.2	0.58	0.00051	0.025	0.41	0.072	0.0027	<10	<2	<0.25	<1.5-<2.5	<1.5-<2.5	<1.5-<2.5	<1.5-<2.5	<1.5-<2.5	<1.5-<2.5	<1.5-<2.5	<1.5-<2.5	<1.5-<2.5	<1.5-<2.5	
Background 2025-04			6.3-8.6	125	5.6-11.9	0.1, 0.4 §	15	1.8	3.2	0.58	0.00051	0.025	0.41	0.072	0.0027	<10	<2	<0.25	<1.5-<2.5	<1.5-<2.5	<1.5-<2.5	<1.5-<2.5	<1.5-<2.5	<1.5-<2.5	<1.5-<2.5	<1.5-<2.5	<1.5-<2.5	<1.5-<2.5	
B-934U	4/14/2025	N	6.44	362	17.8	0.12	<10	8.6	<0.5	1.3	0.016	0.056	35	6.9	0.0036	<10	<2	<0.25	31.8	49.6	61.5	30.5	9.13	<1.87	29.1	<1.87	2.62	<1.87	<1.91
B-934L	12/10/2024	N	6.74	162	15.2	<0.1	<10	2.7	<0.5	<0.5	0.04	0.055	15	2.8	0.0011	<10	<2	<0.25	<1.77	<1.77	<1.77	<1.77	<1.77	<1.77	<1.77	<1.77	<1.77	<1.77	<1.77
B-934L	4/14/2025	N	6.8	157	18.4	<0.1	<10	2.7	<0.5	<0.5	0.037	0.063	14	2.9	0.0011	<10	<2	<0.25	<1.93	<1.93	<1.93	<1.93	<1.93	<1.93	<1.93	<1.93	<1.93	<1.93	<1.91
MW-802L	12/10/2024	N	7.40	205	13.1	<0.1	<10	9.5	<0.5	<0.5	0.0005	0.014	0.35	0.37	0.0014	<10	<2	<0.25	<1.86	<1.86	<1.86	<1.86	<1.86	<1.86	<1.86	<1.86	<1.86	<1.86	<1.86
MW-802L	4/14/2025	N	7.26	200	15.4	<0.1	<11	9.4	<0.5	<0.5	<0.001	0.01	0.29	0.39	<0.001	<10	<2	<0.25	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.73

- Notes:
1. Samples were collected by Sanborn Head on the dates indicated. Samples were analyzed by Eurofins Environment Testing – Eastern Analytical (EA; formerly Eastern Analytical, Inc.) of Concord, New Hampshire. PFAS samples were analyzed by Pace Analytical (formerly Alpha) of Mansfield, Massachusetts by USEPA Method 537 (modified) with isotope dilution.
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). Per- and polyfluoroalkyl substances (PFAS) results are presented in nanograms per liter (ng/L) which is equivalent to parts per trillion (ppt).
4. "§" 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.  
"<" indicates the analyte was not detected above the listed laboratory reporting limit.  
"J+" indicates the ion transition ratio is outside of acceptance criteria and the concentration should be considered estimated with a potential high bias.  
"B" indicates the analyte was detected in the associated field blank at concentrations less than ten times (10x) the concentration in the field blank.  
Blank cells indicate the sample was not analyzed for that analyte.  
[3] = number of carbons in the alkyl chain for perfluorinated carboxylic acids (PFCAs). The carbon included in the carboxylic functional group is non-fluorinated and the remaining carbons (i.e., alkyl chain) are fluorinated.  
[4S] = number of carbons in the alkyl chain for perfluorinated sulfonic acids (PFSAs). All of the carbons are fluorinated.
5. "GW-1" Groundwater Standards are from the 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 AGQSs promulgated in Env-Or 600 (June 2015 with October 2016, September 2018, September 2019, May 2020, January 2021, and July 2021 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 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 exceeds current background.  
Yellow shading indicates a concentration exceeds background for the first time.
7. Refer to the report text for further information about calculation and selection of background concentrations.

**TABLE 2**  
**Initial Background Exceedances - April 2025**  
**North Country Environmental Services, Inc.**  
**Bethlehem, New Hampshire**  
**Permit No. GWP-198704033-B-008**

Location	Analyte	Concentration / Value	Previous Max/Min	April 2025 Site Background (refer to Table 1)	GW-1 (AGQS)	SMCL	# of sampling events for analyte
Background Wells							
No initial exceedances of background							
Release Detection Wells Outside the GMZ							
MW-701	Perfluorononanoic Acid (PFNA)	1.83 ng/L	<1.78 ng/L	<1.5-<2.5 ng/L	11 ng/L	NS	26
	Comments: PFNA represented an initial detection and therefore initial exceedance of background at this location; however, it was detected only slightly above the laboratory reporting limit of 1.72 ng/L, and well below the AQGS of 11 ng/L. There were no other initial detections at MW-701 in April 2025, and concentrations of other analytes were within historical ranges. Comparison to background concentrations will continue to be monitored at this location in July 2025.						
Release Detection Wells Inside the GMZ – Impacts Anticipated from Former Unlined Landfill							
B-928D	Perfluorohexanesulfonic Acid (PFHxS)	4.07 ng/L	<1.99 ng/L	<1.5-<2.5 ng/L	18 ng/L	NS	13
	Comments: PFHxS represented an initial detection and therefore initial exceedance of background at this location; however, it was detected only slightly above the laboratory reporting limit of 2.77 ng/L, and well below the AQGS of 18 ng/L. There were no other initial detections at B-928D in April 2025, and concentrations of other analytes were within historical ranges (except for PFHpA and PFOA). Comparison to background concentrations will continue to be monitored at this location in July 2025.						
Groundwater Management Wells Inside the GMZ – Impacts Anticipated from Former Unlined Landfill							
No initial exceedances of background							
Supplemental Site Investigation							
B-932U	Perfluoropentanoic Acid (PFPeA)	2.85 ng/L	<1.81 ng/L	<1.5-<2.5 ng/L	NS	NS	3
	Comments: B-932U was installed in July 2024; April 2025 represents the third sampling event at this location. PFPeA was detected only slightly above the laboratory reporting limit of 1.75 ng/L. Comparison to background concentrations will continue to be monitored in the fourth sampling event at this location in July 2025.						

Notes:

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 November 2024 monitoring report for a discussion of methods used to develop background concentrations.
3. "GW-1" Groundwater Standards are from the 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 AGQSS promulgated in Env-Or 600 (June 2015 with October 2016, September 2018, September 2019, May 2020, January 2021, and July 2021 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 to present a risk to human health at the SMCL.
4. ng/L = nanograms per liter, which are equivalent to parts per trillion (ppt)