

## Colby, Jaime

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**From:** Joe Gay <John.Gay@casella.com>  
**Sent:** Friday, May 7, 2021 4:36 PM  
**To:** Colby, Jaime  
**Cc:** Kevin Roy; Russell Anderson; Samuel Nicolai; Brian Oliver  
**Subject:** NCES May 3 Incident Report  
**Attachments:** Table.pdf; May 3 2021 NHDES Incident Report.pdf; 665-Incident Report-210501-1.pdf; May 7 2021 Incident Report Cover Letter.pdf

**EXTERNAL: Do not open attachments or click on links unless you recognize and trust the sender.**

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May 7, 2021

Ms. Jamie M. Colby, PE  
NH Department of Environmental Services  
Solid Waste Management Bureau  
P.O. Box 95, 29 Hazen Drive  
Concord, New Hampshire 03301

**RE: North Country Environmental Services, Inc.  
Landfill Facility - Bethlehem, NH  
Incident Report  
Permit # DES-SW-SP-03-002**

Dear Ms. Colby,

Please find enclosed an Incident Report and related documents that provides the required information pursuant to Env-SW 1005.09 that details the incident reported on Monday May 3, 2021 via phone.

Should you have any questions please do not hesitate to contact me at 802-236-5973.

Sincerely,

**NORTH COUNTRY ENVIRONMENTAL SERVICES, INC.**

/s/ John Gay

John Gay, E.I.  
Permits, Compliance & Engineering

*Enclosure: Incident Report & Attachments*

c. Kevin Roy, NCES  
Russell Anderson, NCES  
Samuel Nicolai, NCES  
Brian Oliver, NCES

**INCIDENT REPORT PURSUANT TO ENV-SW 1005.09  
MAY 7, 2021**

Facility Name: North Country Environmental Services, Inc. Landfill (NCES)

Facility Permit: DES-SW-SP-03-002

Location: 581 Trudeau Road, Bethlehem, New Hampshire, 03574

Accessed Via: Trudeau Road via Route 3/Route 302

Facility Owner: North Country Environmental Services, Inc.

Owner Contact: John Gay, E.I.  
North Country Environmental Services, Inc.  
1855 Vermont Route 100, Hyde Park, VT 05655

Date of Incident: May 1 to 3, 2021

Persons Involved: Kevin Roy, Division Manager, NCES  
Bruce Grover, Operations Manager, NCES  
Scott Wynott, Driver, Mr. Bults, Inc.

**Incident Description  
& Waste Material  
Quantity:**

Based on system control and tank level information, beginning at approximately 9:30 a.m. on May 1 and continuing intermittently until approximately 6:40 a.m. on May 3, the Stage IV Phase II sump pumped leachate to the on-site storage tank "A" (see attached figure) while Tank A was at capacity. The Stage IV Phase II pump did not receive an "inhibit" signal from the system control and resulted in intermittent pumping after tank storage were full. The continued pumping from Stage IV Phase II resulted in leachate flowing to a former valve box "401" that is no longer in service. Over this period and intermittently, valve box 401 filled with leachate and overtopped. Leachate flowed over the ground surface into the forebay of Detention Pond No. 4, located north of Valve Box 401.

Immediately, upon discovery, landfill personnel contacted the NCES compliance staff at 6:37 am who in turn notified the NH Spill response coordinator (via after hours contacting), Mr. Andrew Madison and also contacted Ms. Jaime Colby of the New Hampshire Department of Environmental Services, Waste Management Division (Division).

The total volume of leachate pumped from Stage IV Phase II after

the tanks were full is estimated to be up to 154,000 gallons based on totalizing flow meter readings. The amount of release from 404 valve box to the forebay of Detention Pond No. 4 cannot be determined precisely, however it is likely significantly less than the flow meter totalizer quantity due to residual capacity within the leachate storage, tanks, pipes and structures connected to the valve box structure.

### Cause

There is a master supervisory control and data acquisition system electronic control unit (SCADA) that collects and transmits electrical signal to various electronic control units around the site at NCES. This master SCADA control unit is located near the 162,000 gallon above ground storage tank.

Radio communication from the master SCADA control unit and the subordinate Stage IV Phase II control unit was under repair because the control signal had been lost. There was discussion between our SCADA controls vendor and our electrician on the necessary repairs, components were ordered, and a replacement of parts occurred on Tuesday April 27, 2021. After the parts were replaced, it was determined that the new parts had not resolved the communication error and therefore the issue was not resolved. The electrician inadvertently left the controls system in "automatic" mode and left the site. NCES site was not aware of this situation. On the morning of May 1 when the incident began, the Stage IV Phase II control unit was not able to receive a pump inhibit signal.

Assessment of Hazards:

Due to design of the pond having an earthen berm separating the forebay of the pond with the aft bay, the size (large) of the forebay, the low permeable nature of the soils utilized to construct the pond, the volume of water in the large forebay we are confident there was no risk to human health or safety or impact off property. Surface water and soil were impacted, on property.

Measures Taken:

The visually impacted stormwater was contained to the forebay of pond #4 and was immediately pumped from Detention Pond No. 4 to the leachate containment system on May 3 shortly after discovery of the release. Tank capacity was made available from the routine arrival of a leachate hauler first thing Monday.

Additionally, as soon as the stormwater pond water elevation was lowered, the sediment underlying the area of the forebay where

visual impacts were observed was excavated throughout the day on May 3 to a varied depth from 1 foot to approximately 4 feet in depth. The excavation was downward to a level that represented the natural subsurface soil. The total volume of sediment excavated from Detention Pond No. 4 is estimated to be 3,000 cubic yards. In addition, valve box 401 and associated piping was removed along with olfactory observed impacted soil immediately adjacent to the structure or around piping and was taken to the landfill and staged. We estimate that approximately 320 cubic yards of soil were removed from around Valve Box 401.

All stormwater from the forebay of Detention Pond No. 4 will be managed as wastewater and taken to a municipal wastewater treatment facility. The sediment underlying the western area of the pond was completely removed by the end of the day on May 3.

The additional following measures have been taken:

- Stormwater was steadily pumped from the forebay of Detention Pond No. 4 throughout the week and hauled to a municipal wastewater treatment facility.
- On May 3, approximately 3,000 cubic yards of sediment were excavated from Detention Pond No. 4, and approximately 320 cubic yards of soil was excavated from area surrounding valve box 401 where soils may have been impacted.
- A portion of stormwater discharging to Detention Pond No. 4 was diverted on May 3 to reduce addition of water to the pond.
- Water quality samples were also collected from the forebay and main bay of Detention Pond No. 4 along with the pond discharge area (refer to attached water quality report).
- On May 5, the following activities were performed:
  - Valve box 401 along with some associated piping and conduit was removed and as mentioned above approximately 320 cubic yards of backfill soil removed.
  - Valve box C and Valve Box 403 were inspected and no issues observed.
- On May 6, the following activities were performed:
  - Sediment samples were collected by Sanborn, Head & Associates, Inc. – the results will be provided to the Department.
  - The Stage IV Phase II primary flow meter was bench tested by a third-party vendor to confirm flow volume accuracy.
  - Stormwater from the forebay continued to be removed by pump systems and loaded into tankers or on site storage tanks for eventual off-site treatment.
- On May 7, the following activities were performed:

- Stormwater from the forebay continued to be removed by pump systems and loaded into tankers or on site storage tanks.
- Electrofusion capped the Stage III forcemain and leachate evaporation forcemain previously connected to valve box 401.

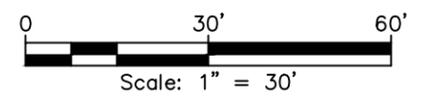
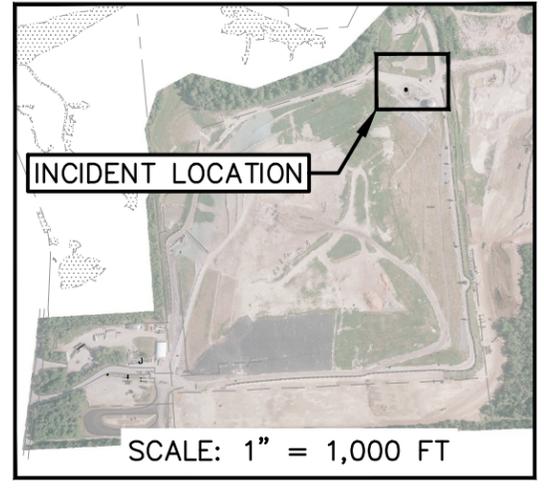
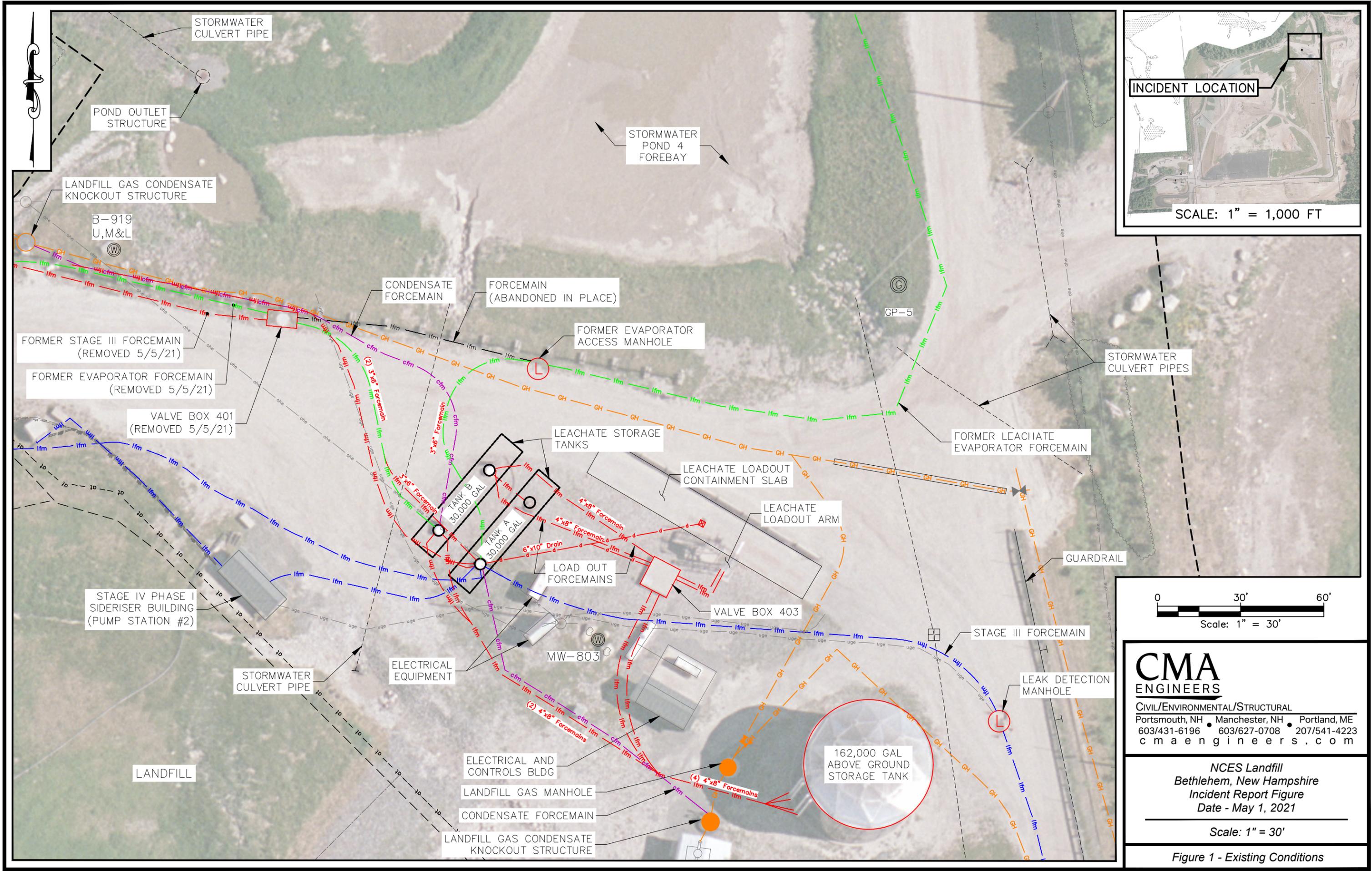
The following measures will be taken to reduce, eliminate and prevent reoccurrence:

- A full system on- site audit of the sites supervisory control and data acquisition system will be performed by June 1, 2021.
- We have collected pond sediment samples and will report the results to the Division.
- NCES will continue to remove forebay stormwater until the forebay is empty. The top 6" of soil from the pond will be dredged and taken into the landfill and used as daily cover. Native soil samples from below the sediment level in the forebay will be collected and analyzed.
- NCES staff will ensure that after any vendor has performed site maintenance that they check in with landfill staff before they leave the site.

## **Attachments**

Figure 1

Table 1



**CMA**  
**ENGINEERS**  
 CIVIL/ENVIRONMENTAL/STRUCTURAL  
 Portsmouth, NH • Manchester, NH • Portland, ME  
 603/431-6196 • 603/627-0708 • 207/541-4223  
 cmaengineers.com

*NCES Landfill  
 Bethlehem, New Hampshire  
 Incident Report Figure  
 Date - May 1, 2021*

Scale: 1" = 30'

**Figure 1 - Existing Conditions**

**TABLE 1**  
**Stormwater Detention Pond No.4 Summary of Field Parameters and Analytical Results**  
**North Country Environmental Services, Inc.**  
**Bethlehem, New Hampshire**

Sample Location	Sample Date	Field Measure				Volatile Organic Compounds										
		s.u	µS/cm	°C	NTU	Concentrations in µg/L										
		pH	Specific Conductance	Temperature	Turbidity	Acetone	Butanone (2-) (MEK)	Diethyl Ether (Ethyl Ether)	Dioxane (1,4-)	Ethylbenzene	Methylene Chloride (Dichloromethane)	Tert Butyl Alcohol (TBA) (tert-Butanol)	Tetrahydrofuran	Toluene	Xylene (m,p-)	Xylene (o-)
<b>Aquatic Life Fresh</b>	<b>Acute</b>	NS	NS	NS	NS	NS	NS	NS	NS	32,000	11,000(e)	NS	NS	17,500	NS	NS
	<b>Chronic</b>	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
<b>Human Health</b>	<b>Water &amp; Fish</b>	NS	NS	NS	NS	NS	NS	NS	NS	530	20(c)	NS	NS	1,300(l)	NS	NS
	<b>Fish Only</b>	NS	NS	NS	NS	NS	NS	NS	NS	2,100	1,000(c)	NS	NS	15,000	NS	NS
	<b>NHDES GW-1 (AGQS)</b>	NS	NS	NS	NS	6,000	4,000	1,400	0.32	700	5	40	600	1,000	10,000	10,000
DP-4_LS	05/04/21	8.42	204	9.4	321	48	37	<2	<b>0.34</b>	<1	<1	<30	<10	<1	<1	<1
DP-4_Aft	05/04/21	7.63	224	9.4	415	47	36	<2	<b>0.52</b>	<1	<1	<30	<10	<1	<1	<1
DP-4_Fore	05/04/21	7.19	793	10.6	259	130	160	8.7	<b>4.5</b>	2.5	<b>5.6</b>	39	71	6	3.4	1.8

Notes:

1. Samples were collected by Sanborn Head personnel on the dates indicated and analyzed by Eastern Analytical, Inc. (EAI) of Concord, New Hampshire.
2. pH is presented in standard units (s.u.), specific conductance is presented in microSiemens per centimeter (µS/cm), temperature is presented in degrees Celsius (°C), and turbidity is presented in nephelometric turbidity units (NTU). VOC results are presented in micrograms per liter (µg/L) which is equivalent to parts per billion (ppb).
3. "<" indicates the analyte was not detected above the listed laboratory reporting limit.
4. "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, September 2018, September 2019, May 2020, and December 2020 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.  
  
"Acquatic Life Fresh" and Human Health" refers to the New Hampshire Water Quality Criteria for Toxic Substances as defined in Env-Wq 1703.21 and contained in Table 1703.1 Water Quality Criteria for Toxic Substances (December 2016). Footnotes from Table 1703.1 which appear above:  
(c) The letter "c" shall indicate that these criteria for the protection of human health are based on carcinogenicity using a risk factor of one in 1,000,000, while the human health criteria without this footnote are based on systemic toxicity. Other risk factors shall be allowed only as specified in Env-Wq 1703.20.  
(e) The letter "e" shall indicate that the following classes of compounds have 2 or more isomers and the appropriate aquatic life criteria apply to the sum of the concentrations of each isomer.  
(l) The letter "l" shall indicate that there is a more stringent drinking water maximum contaminant level (MCL) specified in Env-Dw 700, so if the surface water is a source for a public water system as defined in RSA 485:1-a, XV or is within 20 miles upstream of any active surface water intake for a public water system, the department shall use the MCL values shown in table 1703-2A for the water and fish ingestion human health criteria.
5. "NS" indicates there is no standard listed for the analyte.
6. **Bold** values exceed the GW-1 Groundwater (AGQS) Standard for that analyte.