



The State of New Hampshire
Department of Environmental Services



Robert R. Scott, Commissioner

July 21, 2021

**CERTIFIED MAIL
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RETURN RECEIPT REQUESTED**

**LETTER OF DEFICIENCY
No. WMD LOD 21-023**

North Country Environmental Services, Inc.
P.O. Box 9
Bethlehem, NH 03574
Email: john.gay@casella.com

**SUBJECT: North Country Environmental Services, Inc. Landfill, 581 Trudeau Rd., Bethlehem, NH
Solid Waste Permit No. DES-SW-SP-03-002**

Operating Deficiency – Leachate Release (May 1 - 3, 2021)

Dear Mr. Gay:

The New Hampshire Department of Environmental Services (NHDES) issues this Letter of Deficiency (LOD) to notify North Country Environmental Services, Inc. (NCES) that NHDES has identified compliance deficiencies, discussed below, concerning operation of the above-referenced solid waste facility.

On May 3, 2021, NCES reported a leachate spill or release from the facility's leachate storage units located outside the waste deposition area. Leachate was reportedly released through an open conduit from UST A to a valve box that is no longer in service (Valve Box 401). From the valve box, leachate reportedly traveled through an open conduit westward into soil, and overtopped the valve box to flow over the ground surface to the adjacent stormwater pond (Stormwater Pond No. 4). NHDES received a written incident report on May 7, 2021, and a "leachate management system audit" memorandum on June 10, 2021 as well as a follow-up letter to the audit on June 25, 2021.

NHDES hereby requests NCES address the deficiencies described below, in the manner specified in ***bold italic type***.

(1) Failure to provide leak-tight leachate storage units

NHDES understands that NCES has taken temporary measures to cap the conduit from UST A to the subject valve box, and has removed the valve box and westward running conduits.

Requested Response Action:

NHDES requests that NCES review by August 1, 2021 as-built construction plans and the field condition of the leachate storage system for the entire facility to identify any conduits at the facility, inclusive of the conduit from UST A to the location of the former valve box, that are no longer in use. By September 1, 2021, complete the decommissioning, by removal or grouting, of any such conduits identified to create the leak-tight system required pursuant to Env-Sw 805.06(g)(3)a.

Provide a description and "as-built" drawing(s) of all conduit decommissioning by October 1, 2021.

(2) Failure to operate and maintain the facility in a manner that controls to the greatest extent practicable spills, and assures compliance with the facility permit, Solid Waste Rules and RSA 149-M

NCES reported that the leachate release was due to the Stage IV, Phase II pump failing to receive a wireless radio signal that the leachate tank storage system was full and the pump should stop operating. As such, the pump continued to send leachate to the on-site leachate tank storage system, resulting in the system overflowing and releasing leachate. Further, NCES verbally reported to NHDES during our meeting on May 3, 2021 that it had been having problems with proper operation of the wireless communication system for several weeks.

Further, the "leachate management system audit" report received by NHDES on June 10, 2021, which focused on an audit of the supervisory control and data acquisition (SCADA) system, identified that multiple interlocks and other controls that would prevent spills are not present.

The incident and reporting indicates a failure to operate and maintain the leachate management system in a manner that controls to the greatest extent practicable spills pursuant to Env-Sw 1005.01(d)(6); to maintain the facility to assure compliance with the permit and the Solid Waste Rules pursuant to Env-Sw 1005.01(e); to execute facility repairs and correct, abate, and remediate facility operating problems in a timely manner pursuant to Env-Sw 1005.01(f); and to operate the facility in compliance with RSA 149-M, the Rules, and the permit pursuant to Env-Sw 1105.04(a).

NCES committed to a timeline for addressing the results of the audit in its letter dated June 24, 2021 and received by NHDES on June 25, 2021. A copy of NCES' letter is enclosed for reference.

Requested Response Action:

NHDES requests that NCES take the actions described in its June 24, 2021 letter to address the audit results, in accordance with the schedule provided in the June 24, 2021 letter, and provide monthly updates, as indicated in Item (3) below, on its progress addressing the results of the audit. With the final status report, provide record "as-built" drawings of any system modifications made.

(3) Incident report lacks necessary details

NCES submitted a written incident report on May 7, 2021 pursuant to Env-Sw 1005.09(a).

For the quantity and types of wastes involved in the incident and clean-up activities pursuant to Env-Sw 1005.09(c)(4)b., the report states that the volume of leachate pumped after the tanks were reported full is approximately 154,000 gallons. This is an incomplete response because it lacks information required by Env-Sw 1005.09(c) on the quantity of liquids and sediments removed from the stormwater pond, inclusive of the forebay, aftbay and level spreader, and the quantity of soils excavated in and around the subject valve box, the westward running conduits and other areas where the ground surface was superficially excavated ("scraped") to remove potentially impacted soils.

For the assessment required pursuant to Env-Sw 1005.09(c)(4)d., the report states that the leachate was contained onsite and therefore posed “no risk to human health or safety or impact off property.” This is an incomplete response and does not include an assessment of “actual or potential hazards to the environment, safety and human health.” NHDES anticipates that such an assessment will include a review of the actual or potential hazards posed by leachate, the possible exposure routes (e.g., inhalation, ingestion, dermal contact) for humans and the environment, and conclude whether an actual or potential hazard was posed to the environment, safety and human health, inclusive of the health and safety of site workers.

For the measures proposed to be taken to reduce, prevent or eliminate a recurrence of the incident pursuant to Env-Sw 1005.09(c)(5), the report states that the permittee would conduct a supervisory control and data acquisition (SCADA) system analysis, report data from sediment samples already collected, complete removal of sediments from the forebay of the stormwater pond and collect confirmatory soil samples, and ensure that vendors “check in” with landfill staff before leaving the site. This is an incomplete response because the proposed measures do not address near or short-term measures, such as temporary operating procedures while there is unreliable communication with the Stage IV Phase II pump, and removing liquids and sediments from the stormwater pond aftbay and level spreader. The proposed measures also do not address long-term measures, such as a permanent resolution to the wireless communication issue, evaluating and decommissioning existing leachate infrastructure, and/or otherwise changing leachate management practices.

Requested Response Action:

NHDES requests that NCES submit an amended incident report, containing the missing information identified above, by August 1, 2021, and provide monthly updates (on the first of each month, starting on August 1, 2021) on the status of addressing leachate infrastructure and management practices until such time as the measures identified pursuant to Env-Sw 1005.09(c)(5), inclusive of those identified in Items (1) and (2) above, have been in place for at least one month. With the final status report, provide record “as-built” drawings of any system modifications made. Note that the permittee is not relieved from seeking permit modifications when required pursuant to Env-Sw 300.

Please address all matters related to this Letter of Deficiency to:

Debra Sonderegger, Enforcement Coordinator
NHDES/WMD
P.O. Box 95
Concord, NH 03302-0095
Fax: 603-271-2456
Email: debra.a.sonderegger@des.nh.gov
Telephone: (603) 271-0674

A copy of the New Hampshire Solid Waste Rules, Env-Sw 100 et seq. is available on the NHDES website at <http://des.nh.gov/organization/commissioner/legal/rules/index.htm> or by contacting the Public Information Center at (603) 271-2975. Statutes are available via the State of NH website, www.nh.gov.

Thank you in advance for giving this Letter of Deficiency immediate attention. Failure to respond as requested may result in enforcement action pursuant to RSA 149-M with regard to the noted deficiencies. Potential enforcement actions include issuance of an administrative order or referral to the New Hampshire Department of Justice (NHDOJ) for enforcement. Also, please be advised that issuance of this Letter of Deficiency and your response actions do not limit NHDES from seeking monetary penalties for the noted deficiencies, either administratively pursuant to RSA 149-M or by referral to NHDOJ.

Your cooperation is appreciated.

Sincerely,



Sarah Yuhas Kirn, P.G., Assistant Director
Waste Management Division
Tel.: (603) 848-8641
Email: sarah.l.yuhaskirn@des.nh.gov

encl. June 24, 2021 letter from NCES to NHDES

ec: Kevin Roy, NCES, email: kevin.roy@casella.com
Gabe Boisseau, Chair-Board of Selectmen, Town of Bethlehem, email: selectman3@bethlehemnh.org
Town Clerk, Town of Bethlehem, email: townclerk@bethlehemnh.org
Tim Fleury, Administrative Assistant, Town of Bethlehem, email: admin@bethlehemnh.org
NHDES Legal Unit

June 24, 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,

North Country Environmental Services, Inc writes to provide a follow up to the Leachate Management System Audit that was performed by Sanborn, Head & Associates, Inc. (SHA) and summarized in a Memorandum dated June 9, 2021. We have reiterated the findings and recommendations from SHA below in normal print with the current status of improvement in **bold print**.

1. Finding - The Flare Condensate Knockout Pot transfer pump does not have an UST A high level float or level transducer high-high level alarm interlock to prevent condensate flow to UST A (like the three pumps stations).

Recommendation - Install an interlock circuit for the Flare Condensate Knockout pump to prevent the Flare Condensate Knockout Pump from pumping when an UST A high-level float or high-level transducer alarm is initiated.

Reprogramming of the master control panel to provide an interlock signal will be completed during the week of June 28, 2021.

2. Finding - The North Condensate Knockout Structure transfer pump is connected to an independent controller and not the master control panel. An interlock for the pump should be connected to the master panel to prevent flow when the high-level alarm conditions are activated at UST B.

Recommendation - Install an interlock circuit for a condensate pump at the master panel. This will prevent the North Condensate Knockout Pot Pump from pumping when a UST B high-level float or high-level transducer alarm is activated.

A switching relay is required and will be installed during the week of June 28, 2021.

3. Finding - AST Leak Alarm located in the secondary tank of the AST does not prevent UST B from pumping to the AST.

Recommendation - Add an interlock control at the master panel for the AST secondary level alarm to prevent UST B from transferring leachate to the AST when a leak is detected in the secondary containment space of the AST.

Reprogramming of the master control panel to add the interlock signal will be completed during the week of June 28, 2021.

4. Finding – The UST A pump does not appear to be sized appropriately or is fouled. This is based on the observation of the pump that conveys leachate from UST A to UST B operating continuously while not keeping up with flow rates from the three landfill stages supplying leachate to UST A.

Recommendation – Inspect the existing pump and possibly increase the pump size so transfer of leachate to UST B matches or exceeds the flow rate from the three upstream pump stations.

NCES will have a new pump installed by July 23, 2021.

5. Finding – The Stage III leachate manhole was buried. It was unearthed by NCES personnel and opened by Gates Electric for inspection.

Recommendation – The manhole cover should be raised to grade so that the manhole is easily accessible for testing.

NCES will install a manhole riser on the Stage III manhole during the week of June 28, 2021.

6. Finding – The Leachate Loadout volume batch controller does not have a reset when a partial load is transferred to the tanker truck. If the tanker driver does not activate the emergency stop switch upon a partial load removal the loadout pump could activate when a truck is not present.

Recommendation – Install a stop timer in the control logic or a stand-alone reset switch so that loadout pump does not activate without a tanker truck present.

NCES intends to have our electrician install a rundown timer as well as a proximity switch as an added level of protection for overfill by July 23, 2021.

7. Finding – The Former Evaporator Leak Detection Manhole float switch was not connected to the master panel.

Recommendation – Evaluate if this manhole is still needed and remove the manhole if it is not. If the manhole is needed it should be equipped with a leak detection switch.

NCES will have the manhole removed during the week of June 28, 2021.

8. Finding – The Stage III Leak Detection Manhole switch was not connected to the master panel.

Recommendation – Connect the Stage III Leak Detection Manhole to the master control panel.

The switch was connected to the control system; however, the programming required a minor adjustment to recognize the signal. The reprogramming will be completed during the week of June 28, 2021.

9. Finding – Stage IV Phase II radio signal loss.

Recommendation – Disable the pump run enable interlock switch from the master control panel upon loss of radio signal and/or hard wire the locations together via the RS-485 network.

The radio signal was repaired on May 26, 2021 and was confirmed to be operating correctly. NCES will have the Stage IV Phase II control panel hard wired to the master panel by August 6, 2021.

10. **Finding** – The existing Hand/Off/Auto switches from leachate source pumps do not have a HAND switch position safety interlock.

Recommendation – Apply a HAND switch power timer via control logic and add a hand power interlock relay to disable potential long term inadvertent HAND switch pump run operation from any leachate pump station.

Reprogramming of the control panels to add an interlock signal when pumps are in the “hand” position on switching will be completed during the week of June 28, 2021.

11. **Finding** – Valve Box 403 gravity drains to UST A. The leak detection float in Valve Box 403 only activates a light on the control panel and does not interlock the UST B or AST Loadout pumps.

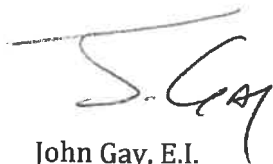
Recommendation – Update control interlock to prevent pumping from UST B and AST to Valve Box 403.

The switch was connected to the control system; however, the programming requires a minor adjustment to recognize the signal. The reprogramming will be completed during the week of June 28, 2021.

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

Sincerely,

NORTH COUNTRY ENVIRONMENTAL SERVICES, INC.



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

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