



North Country Environmental Services, Inc.



April 5, 2002

Mr. Michael McCluskey
Waste Management Division
New Hampshire Department of Environmental Services
6 Hazen Drive
Concord, NH 03301-0509

3 Pitkin Court
Montpelier, Vermont 05602

(802) 223-7221
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**RE: North Country Environmental Services, Inc. Landfill
Landfill Facility - Bethlehem, N.H
Stage II Secondary Detection System Flows
Investigation Report and Response Action Plan (NHDES Env-Wm 2506.09)**

{Via facsimile; (603) 271-2456, 2 pages – originals to follow conventional mail}

Dear Mr. McCluskey:

This letter serves as notification that the Stage I, Phase II (SIPII) cell at the above referenced facility exceeded the 100 gallons per tributary acre per day (g/a/d) threshold as allowed by the above referenced New Hampshire Department of Environmental Services Rule.

The average flow in the secondary leachate collection system of SIPII during March was 204.28 g/a/d. Env-Wm 2506.09 (e) and (f) require that an investigation be performed to evaluate the potential cause(s) and appropriate response actions when flows exceed 100 g/a/d.

As you are aware, during December of 2000 Pike Industries, Inc. installed an underdrain pipe approximately 230' feet long at the base of Stage I, Phases III & IV. This underdrain pipe (perforated and backfilled with stone) is connected to a solid outlet pipe that drains by gravity to a nearby ditch. This pipe was terminated approximately 40' from its designed easterly limit (closer to Phase II) due to the winter conditions.

On Thursday, March 21, 2002 landfill staff inspected the underdrain outlet pipe and confirmed that adjacent embankments clogged it with sediments that were washed in. At that time it could not be determined how far into the pipe the sediments were present. A sewer cleaning service was contracted to mobilize to the site and "sewer jet" the pipe. This activity occurred Monday, March 25, 2002. The sewer cleaning service concluded that the sediment had accumulated 20" – 30" into the end of the pipe and had eliminated the pipe from allowing free draining groundwater as designed. The sewer cleaning contractor had also determined that the pipe had sagged across the width of a +/- 24' wide access road that was crossed where optimal compaction was not achieved due to the winter conditions. The section of the pipe that has sagged will likely freeze and create blockage that will not allow the pipe to drain properly.

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As a result of flows exceeding the 25-g/a/d threshold for February 2002 and experiencing increased flows in Phases II through IV of Stage I in past years a site inspection was requested by you and performed on March 26, 2002.

Historically, flows have diminished to below action levels later in the spring and continue to be below action levels through the summer, fall and winter months. Laboratory analysis of water pumped from the secondary detection system continues to support the premise that the source of the water is infiltration of "clean" water rather than leakage through the primary liner.


Recommended Response Action

NCES proposes to extend the outlet drain pipe to a receptor swale with greater vertical distance between the bottom of the swale and the pipe to lessen the chance of sediments building up in the pipe and repairing the settled section of outlet drain pipe beneath the road. The groundwater level monitoring well installed in December 2000 and part of the remedial work at that time will be monitored once a week until secondary flow rates drop below threshold rates. The well will be monitored once a month from that point forward.

To limit further infiltration at the toe of slope near Phase II, we recommend that +/- 40 feet of underdrain pipe that did not get installed during the December 2000 project be installed at this time.

We believe these measures may reduce infiltration along the toe of Stage I and would like to proceed with this work as soon as the frost has receded. Should you have any questions please do not hesitate to contact me at (802) 223-7221.

Sincerely,
NORTH COUNTRY ENVIRONMENTAL SERVICES, INC.



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

cc: Larry Lackey, North Country Environmental Services, Inc. (via e-mail)
Ted Reeves, North Country Environmental Services, Inc. (via e-mail)
Lenny Wing, North Country Environmental Services, Inc. (via e-mail)
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