



*Bethlehem Conservation Commission  
Bethlehem, NH 03574*

October 11, 2008

Wayne Wheeler  
NHDES  
29 Hazen Drive, P.O. Box 95  
Concord, NH 03303-0095

SUBJECT: Type 1B and II Permit Modification Applications,  
NCES Landfill, Stage IV PHASE II, 581 Trudeau Road,  
Bethlehem, NH/Permit #DES-SW-SP-03-002

Dear Mr. Wheeler:

The BCC submitted testimony when I spoke at the hearing September 16, 2008. This is an update of that testimony, which we would like to be submitted as part of the public record. It has more informational attachments and expands on some points made that evening. And it makes a specific request for information. I will put this in the mail this morning but want to be sure it gets in by the end of the comment period, which is end of business day on October 16, 2008, which is why I am e-mailing it.

**Public Hearing Type 1B and II Permit Modification Applications, North  
Country Environmental Services Landfill, Stage IV Phase II, Permit#DES-  
SW-SP-03-002**

**Testimony Tuesday, September 16, 2008  
From the Bethlehem Conservation Commission, Cheryl Jensen, Chair**

First I would like to say it is disappointing that Commissioner Burack had a conflict and could not attend, especially since it's his department that chose the date. Now I'll continue.

We are asking DES to deny this permit because the department has not found the source of volatile organic compounds that have been showing up in the test wells at the landfill; it has not been able to put into effect a remediation plan yet to deal with those volatile organic compounds, and approving this permit will not

provide the time needed to assess whether that remediation plan will work. Also, looking at the DES technical review, DES is saying other Corrective Action Plans for other problems may be necessary.

I want to thank DES for requiring NCES to come up with a remediation plan for the VOCs and leachate **regardless** of whether this permit is approved. I just want to make it clear to people like me who aren't scientists what volatile organic compounds are. They are commonly used chemicals that evaporate when exposed to air but not when they get dumped in landfills. They are used in cleaning agents, paints, cosmetics, drugs and so on – all things that get thrown into landfills. They can potentially cause significant health problems that range from liver, kidney and lung problems to neurological disorders. And some VOC's are known or suspected to cause cancers. That's why there's all this fuss about them tonight.

When VOC's are dumped into a landfill they soak into the ground. If they reach the water table and the aquifer that lies under the landfill, they can stay there for years because the cool, dark, low-bacterial environment does not cause them to decompose. If the VOC's in the groundwater migrate to nearby wells, they can end up in someone's drinking water.

Now let me say two sentences about the aquifer: It is there under the landfill, as much as DES wants to try down play its importance. It is large. And as I understand it from talking to someone at USGS, it acts to recharge the Ammonoosuc River. So there are some concerns. Not only is the river protected by the state but it is a recreational asset and it provides Woodsville with its drinking water. **(PLEASE SEE ATTACHED TESTIMONY FROM THE JULY 15 PUBLIC MEETING ABOUT THE AQUIFER.)**

In 2006 and 2007 we became aware of reports that volatile organic compounds were showing up in the test wells at the landfill. That report found some higher-than-normal levels of VOCs as well as finding VOCs in wells where they had not been showing up before.

We were pleased when DES was concerned enough to tell NCES to initiate a remediation action plan to deal with the VOCs. At that point we asked Professor William McDowell for an independent review of the material. He is professor of water resources management, Department of Natural Resources and director of the NH Water Resources Research Center, University of New Hampshire.

One of the points he made is: "The occurrence of these compounds in a well that was previously clean suggests the possibility that leakage from the landfill has occurred and organic contaminants may be moving off-site in groundwater."

I am submitting that report for the record and want to say that we concur with this overall finding. He said: "I believe that adding an expansion to the dump is unwarranted until this situation is understood and resolved."

I talked to Prof. McDowell earlier this week to make sure his recommendation still stands since the remediation plan has not yet been implemented. He said: "Yes, if DES suspects there is a problem (as I do) then the prudent thing is to fix that first, before making it more complicated by putting another landfill on top of the old. Otherwise, it will be very hard to properly monitor the new addition."

I am not going to read any further from his report. I will just submit it and a synopsis along with my testimony. However, if anyone else here tonight speaks and misrepresents that report or speaks selectively from it, because it has happened before, I ask the moderator for the right to read from his summary of findings. Will I have that opportunity?

Summary of Professor McDowell's findings, which I am not reading but will be submitted along with the full report: **(SEE PROF. McDOWELL'S FULL REPORT, WHICH IS ATTACHED)**

- Professor McDowell said that the overall concentrations of VOCs are "not exceedingly high"..."the worry, however, is that these hits in the monitoring wells represent the tip of the iceberg, and that more contamination will follow unless action is taken."
- He also said that the compounds found in the tests "have significant or potentially significant health implications at moderate to high concentrations." Health issues range from liver, kidney and lung problems to neurological disorders.
- "The present level of contamination is not alarming but is (obviously) sufficient to warrant action by DES. No compounds exceed the MCL (maximum contaminant level), but only one compound actually has an MCL, so that is not too reassuring or meaningful a standard for safety."
- "Contamination of the aquifer is more of a concern than contamination of surface waters. Many of these compounds are quite volatile (e.g. ether) and would quickly be lost to the atmosphere once they enter surface waters. Thus, I do not think this poses an imminent threat to the

Ammonoosuc or local wetlands. They are not quickly lost from aquifers, however.”

The commission would like to note that the town’s Natural Resource Inventory and Master Plan lists that aquifer as an important resource to the town.

- Professor McDowell had praise for the action taken by the Department of Environmental Services and said the tests conducted by the lab hired by North Country Environmental Services appeared to have been professionally done.
- However, he suggested it would be valuable to have some additional tests added to cover “inorganics and total dissolved organic matter.” He suggests adding sodium, potassium, calcium, magnesium, ammonium, sulfate, and dissolved organic carbon and nitrogen.

We presented all this information in a letter and accompanying materials sent to you, Mr. Wimsatt on September 27, 2007 from the BCC. We never received an answer to that letter.

At the July 15 meeting I learned that the remediation plan has not yet been put into place and it’s a year later. How can the department approve this permit when DES does not know what the source of these VOCs is -- and doesn’t know whether this remediation plan will work? An approval allows no time to study whether this plan will actually resolve the problem.

I would like to remind the people here of one of DES’s guiding principles: Minimizing environmental and human health risks to the greatest extent possible, especially for our most vulnerable populations.

When I talked to Prof. McDowell earlier this week I asked him about some parts of his report that I didn’t understand. And there is one important point that needs to be made.

While DES is testing for these volatile organic compounds, which it should because they are hazardous, Prof. McDowell points out that it’s hard to find out whether the liner is leaking because VOCs don’t show up in high levels, and some months they show up and other months they don’t. This can lead to the false conclusion that there isn’t a problem when there may actually be a problem. He suggests testing for less exotic things, tests that aren’t very expensive, but that can tell you whether a liner is leaking. He recommends testing for sodium,

even though it doesn't show up as VOCs. (SEE ATTACHED SEPT. 29, 2008 LETTER TO MICHAEL J. WIMSATT.)

Why doesn't DES test for those things? I'm curious.

I looked through your technical review of the permit, letter of September 8, 2008 from Michael J. Wimsatt to John Gay at NCES. There is so much disturbing information in it about VOCs, bromide, and leachate. Also, it looks like you may even have to ask for additional remediation or corrective action plans.

**Well B-913M:** Bromide concentrations were above background concentrations...  
"...if the concentrations remain elevated NCES must prepare and submit a Corrective Action Plan in accordance with Env-Or 703.15."

Additionally tetrahydrofuran has been detected with an overall increasing trend above background concentrations. This is part of the remediation that has not yet begun, and the letter notes that "groundwater performance standards must be proposed by NCES and approved by the Department in order for the success of this Corrective/Remedial Action Plan to be measured and evaluated."

**Wells B919U and B-921-M:** The VOC dichlorodifluoromethane has been detected at concentrations above background and is increasing in Well B-921M. Also, in April of 2008 bromide is still at elevated concentrations. The letter notes: Further evaluation of conditions in this area of the site is needed to confirm that there is not an ongoing release.

**Well B-304UR:** The April 2008 sampling data indicates bromide is present at a concentration of 0.48 mg/L. This is the highest observed concentration of bromide detected to date at this sampling location. Further evaluation of conditions in this area of the site is needed to confirm that there is not an ongoing release. (SEE ATTACHED LETTER 9-8-08 DES to NCES Tech.Commlter)

None of this has been done yet. And there is certainly not enough time to monitor any of the results. How can DES responsibly approve this permit?

If DES does approve the permit, the Bethlehem Conservation Commission requests a detailed rationale from DES about why it is disregarding each of the points under D. Groundwater Management and Release Detection Permit Issues made in the September 8, 2008 technical review letters.

I have a final question about the 500-year floodplain.

In 2007 we asked Mr. Ridge Mauck at DES about new legislation, SB 71, that puts into place some setback requirements for rivers and RSA 483 that is supposed to strengthen existing waste management regulations on designated rivers such as the Ammonoosuc -- to give these rivers extra protection. We asked a series of questions about the requirements under SB 71, setbacks, and the 500-year floodplain. Again, we never received a response.

Based on Tom Roy's comments last year, it doesn't look like the site plan depicts the extent of the 500-year floodplain and it should.

Has Casella noted anywhere in its application whether any portion of the land that NCES or Casella and its subsidiaries owns is within the 500 year floodplain? Will DES require the applicant to note on its application whether any part of the land that NCES or a Casella subsidiary owns that is within the 500-year floodplain?

**Again, we are asking that the permit be denied.** Thank you very much for your time.

Sincerely,



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cc: Governor John Lynch  
Thomas Burack, DES Commissioner  
Katherine Peters, Office of the Governor  
Rep. Martha McLeod  
Senator John T. Gallus  
Councilor Raymond S. Burton  
Bethlehem Board of Selectmen  
Chelsea Conaboy, Concord Monitor  
Arne Arnesen, Political Chowder  
Catherine Corkery, Sierra Club