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Alexander B. Grannis
Commissioner

May 18, 2010

Edward Buhrmaster, Esq.
NYS Department of Environmental Conservation
Office of Hearings and Mediation Services
625 Broadway – 1st floor
Albany, New York 12233-1550

Dear Judge Buhrmaster:

Re: Chemung County Landfill Permit Modification
DEC Project No. 8-0728-00004/00013

This letter presents the Department staff response to the April 2010 sound level monitoring summary report prepared by Barton and Loguidice and the April 2010 radiological survey report on Marcellus shale drill cuttings prepared by CoPhysics Corp. ("CoPhysics"), which were provided at the issues conference on April 28, 2010, in support of the County's application for permit modification, and in response to claims made in the petition for party status filed by Residents for the Preservation of Lowman and Chemung ("RFPLC"). As directed by the ALJ's memorandum of May 6, 2010, this letter also explains the Department staff position as to how use of newly installed radiation detectors at the Chemung County Municipal Solid Waste Landfill ("Landfill") may address RFPLC's concern about the disposal of potentially high radioactive Marcellus shale gas drilling wastes.

I. Barton and Loguidice April 2010 sound level monitoring report

The sound level monitoring report further supports the previous assertion of Department staff that the proposed modification is not expected to result in violation of the rural community noise standard at 6 NYCRR 360-1.14(p) under the conditions of the draft permit.

Department staff reviewed the applicant's "Sound Level Monitoring Summary Report, April 2010" using NYSDEC Program Policy DEP-00-01 "Assessing and Mitigating Noise Impacts" as guidance. DEP-00-01 indicates a simple distance attenuation calculation (inverse square rule) should be used for first level noise impact evaluations. The policy states that if a first level investigation demonstrates a potential impact a second level evaluation should be performed. The applicants study concludes and Department staff agrees that a simple distance attenuation calculation indicates the 84.7dB (A) sound level (as measured 50 ft from the source) would be reduced to about 62 to 63 dB (A) at the Roberts Hollow property line.

Part 360-1.14(p) establishes a 57 dB (A) Leq sound limit at the solid waste facility property line in a rural setting (7:00 am to 10:00pm). The first level evaluation concludes a 5 to 6 dB (A) exceedance would be

expected at the Roberts Hollow property line. This result requires that a second level evaluation be performed. DEP-00-01 indicates second level evaluations can consist of calculation that takes into consideration mitigating and adverse factors affecting noise transmission, or it can rely on data gathered by actual on-site measurements. The conclusions of the "Sound Level Monitoring Summary Report, April 2010" are based on onsite measurements conducted as part of the April 2010 study.

Department staff finds no reason to dispute the methodologies or finding of the applicant's April 2010 noise study. Because the number and potential interaction of factors affecting noise transmission to the west of the Chemung landfill present a complex issue, staff believes it would be difficult to accurately model using simple calculations. Some of the factors which should be considered in any such calculation include vegetative cover between the source and receptor, natural and manmade landforms, and landfill geometry. As a result, Department staff believes a series of onsite measurements, such as those which are required by special condition number 72 of the draft permit, is a more accurate and therefore preferable method to insure regulatory compliance with the 6 NYCRR 360 noise requirements.

Additionally, yesterday Department staff received from RFPLC a noise report by The Noise Consultancy concerning the permit modification application. Due to the timing of the submission, Department staff has not yet reviewed this report. If Department staff determines that it wishes to respond to this report, I will make an appropriate request to the Administrative Law Judge at that time.

II. CoPhysics Corp. April 2010 radiological survey report on Marcellus shale drill cuttings ("CoPhysics report")

The CoPhysics report further supports the previous assertion of Department staff that the proposed modification is not expected to result in any regulatory violations because the naturally occurring radioactive material ("NORM") in Marcellus shale drill cuttings is not processed and concentrated, and, as such, these drill cuttings are not required to be disposed at a facility authorized under 6 NYCRR 380, 382 or 383.

The data presented in the CoPhysics report are not required to show regulatory compliance. However, the results do show that concentrations of the primary radionuclide of concern, radium-226, fall near the low end of potential concentrations in the Marcellus shale. The concentrations reported (4.3 pCi/g or less) would not pose a public health or environmental threat even if left on the ground surface. Also, even at the higher concentrations that have been reported for some Marcellus shale drill cuttings samples, they would not be inappropriate for disposal in a properly managed 6 NYCRR 360 regulated facility such as the Landfill.

III. The radiation detectors newly installed at the Landfill

While there is no regulatory requirement to install them, the use of portal type radiation detectors at solid waste transfer stations and disposal sites is a well established practice. Their main purpose is to preclude the inadvertent disposal of regulated radioactive materials or waste in solid waste landfills. The primary materials they detect are unregulated medical isotopes from patients or – less frequently – improperly disposed radioactive materials. Portal monitors need to be sensitive enough to detect these sources when shielded by the rest of a waste load. The Ludlum system installed at the Landfill is sensitive enough to detect these materials and is in fact designed specifically for this purpose. Once appropriately prepared and tested, this system is also capable of differentiating between Marcellus shale drill cuttings (no alarm) and the potentially higher radioactive content in non-cuttings drilling waste streams (alarming due to the higher radioactivity content.)

Proposed Section 4.4.1 of the applicant's Operations and Maintenance Manual dealing with use of the portal monitor and handling of a truck with a load that sets off the system alarm is generally adequate. However, Department staff has not yet seen information describing operator training, system calibration, or differentiation between how different types of waste loads (municipal waste vs. drill cuttings) will be handled in the event of a system alarm. While there are no regulatory requirements specifically addressing these issues, there is information available in the general scientific and industry literature which can be used to support these efforts. Department staff understands that the applicant is working with CoPhysics to address these needs.

The radiation monitoring system installed at the Landfill is capable of addressing the concerns expressed by RFPLC for exclusion of drilling waste streams that potentially contain higher levels of NORM. However, until it is verified that the necessary procedures are in place, the applicant's capacity to use the recently installed radiation monitors to properly discriminate between loads of cuttings and the non-cuttings wastes with potentially higher radioactive content cannot be confirmed. Department staff is willing to work with the applicant as the necessary procedures are established.

Sincerely,

Lisa Perla Schwartz
Assistant Regional Attorney

cc: Ronald G. Hull, Esq.
Thomas S. West, Esq.
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