

August 8, 2011

\*\*\* FOR IMMEDIATE RELEASE \*\*\*

## **New York's Environmental Chief Issues Decision on Landfill Disposal of Marcellus Shale Waste**

In a decision issued on August 4, state Department of Environmental Conservation Commissioner Joseph Martens has upheld a hearing officer's decision that radioactivity in Marcellus Shale drill cuttings disposed at the Chemung County Landfill need not be considered when considering an application to increase the landfill's disposal rate, primarily to allow disposal of waste from Pennsylvania drilling sites. A hearing was held on April 28, 2010 to consider challenges by a local environmental group, Residents for the Protection of Lowman and Chemung, which introduced evidence that the drill cuttings have excessively high levels of NORM, naturally occurring radioactive materials, which New York regulations require to be disposed in a specially designed landfill.

However, Residents are pleased that the Commissioner ordered DEC staff to complete no less than a dozen new investigations into whether monitoring for radioactivity at the landfill is sufficient to protect health, safety and the environment. "While the Commissioner has ordered that the expansion permit be issued, it is clear he took our concerns very seriously," said Residents' president Jason Knapp. "We argued that radiation detectors at the landfill gate could not detect Radium-226, which can several thousand times more radioactive than background exposure in the brine that brought up to the surface with Marcellus Shale drill cuttings, the cuttings remain wet with brine even after much of the liquid is removed, and therefore DEC should take a harder look at how radiation is being monitored at the landfill and in the leachate that goes to the City of Elmira's water treatment plant. These concerns prompted the Commissioner to order more studies," according to Knapp.

Radioactivity cannot be removed by municipal water treatment facilities and will be discharged into whatever water body receives the treated waste water. In Chemung County, landfill leachate is sent to Elmira and after treatment is discharged to Chemung River. Downstream, the Chemung River joins the Susquehanna River, which has reportedly

already received several spills from Marcellus Shale drilling sites in Pennsylvania.

Environmental attorney Gary Abraham brought the challenge for Residents. “As DEC finalizes its final regulations governing drilling into the Marcellus formation in New York, this decision should result in added protections against exposure to radioactivity, which DEC’s preliminary studies already have found could be serious.”

***For more information see:***

Peter Mantius, *New York State Dismisses Radiation Threat From Gas Drilling Cuttings*, DC BUREAU, May 10, 2011, <<http://www.dcbureau.org/2011051010018/bulldog-blog/new-york-state-dismisses-radiation-threat-from-gas-drilling-cuttings.html>>

Gary Abraham, “Chemung County Landfill,” <<http://www.garyabraham.com/ChemungLF.html>> (includes full text of Commissioner Martens’ decision)

Gary Abraham, Memo to RFPLC, dated August 8, 2011 (attached)

# *LAW OFFICE OF GARY A. ABRAHAM*

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170 No. Second Street  
Allegany, New York 14706  
716-372-1913; fax is same (please call first)

gabraham44@eznet.net  
www.garyabraham.com

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TO: Jason Knapp, President  
Residents for the Protection of Lowman and Chemung, Inc.

SUBJECT: Decision by NYSDEC Commissioner Joseph J. Martens, *In the Matter of the Application for Modification of the Part 360 Permit for a Municipal Solid Waste Landfill on County Route 60 in Lowman, Town of Chemung, New York*, dated August 4, 2011

Attached please find a complete copy of the above-referenced final decision. The remainder of this memo summarizes and analyzes the decision.

Commissioner Martens' analysis begins by agreeing with RFLPC ("Residents") that low-level radioactive waste subject to Parts 380, 382 or 383 may not be disposed in a Part 360 MSW landfill if the waste has been "processed and concentrated," but ultimately concludes with DEC Staff that the Marcellus Shale drill cuttings disposed in the Chemung County Landfill as described by landfill operator NEWSNY have not been processed and concentrated. Therefore, despite acknowledging that the waste "contains NORM," the regulations do not prohibit its disposal in the landfill. (p. 10).

Regarding the processes utilized to separate drill cuttings solids from their liquid medium, "Residents' claim that this separation procedure elevates the radioactivity of the drill cuttings is speculative and unsubstantiated. . . . In addition, Residents' characterizations appear in part based upon comparisons of the radioactivity of drill cuttings to other Marcellus Shale waste streams (such as production brine, and dewatered brine and sludge waste) that are not drill cuttings and *are* prohibited from disposal at the Chemung County landfill." (pp. 11-12, emphasis added).

"Residents' challenges to the sampling, including sampling methodology, as well as its contentions regarding CoPhysics's qualifications, have been refuted or shown to be in error. . . . Accordingly, no further sampling is necessary." (pp. 13-14).

Nevertheless, apart from specific regulatory requirements governing disposal of NORM, Part 360-1.11(a)(1) requires the landfill to provide an assurance that no significant adverse impact on public health, safety or welfare, the environment or natural resources will occur, and that the activity will otherwise comply with the landfill regulations. This general requirement warrants "further inquiry by Department staff, separate and apart from this proceeding." (pp. 14-15, referencing RFPLC Petition, at 10 & n34). Thus, ". . . other waste that exhibits unacceptable levels of radioactivity [may not be] received at the landfill." (pp. 16-17). Accordingly, I am directing that Department staff review the alarm levels that NEWSNY has selected for its radiation detection system," (p. 18), and several additional aspects of the landfill's radiation monitoring protocol. This

review is called for in light of Residents' challenges to the radiation monitoring detection level at NEWSNY's proposed two radiation detectors at the landfill's scale/weight station, which would be located on either side of incoming waste hauling trucks.

Specifically, Staff must determine the adequacy of protocols to determine:

- (1) alarm levels to detect whether "loads do not contain non-drill cutting wastes of higher radioactivity that are prohibited from disposal at the landfill"
- (2) "whether a load should be investigated or rejected"
- (3) "whether the comparison of radiation portal monitor readings to waste load concentrations represents an appropriate approach in setting the site specific exclusion or alarm limits on the detector"
- (4) whether NEWSNY's proposed detection system adequately "account[s] for disposal truck body thickness or other truck body characteristics"
- (5) the "range of accuracy" of the system considering the shielding provided by the truck and the rest of the waste in the load
- (6) what "degree of operator training for the detection system . . . may be necessary"
- (7) whether it is appropriate, as NEWSNY has proposed, to allow a yellow indicator light to indicate both "low alarm" for radioactivity and "low battery" of the detector system
- (8) whether adequate procedures are in place to address repeated triggering of the alarm
- (9) whether rejected waste is to be returned to the generator or sent to another disposal site
- (10) who must be notified about rejected loads; and
- (11) whether procedures to ensure that the C&D landfill does not receive cuttings separated from an oil-based medium are sufficient. (pp. 18-19).

Resolution of these questions for Staff are expected to be sufficient to allay RFLPC's concerns that landfill leachate "would exceed allowable drinking water standards for radium and would impact treatment at a wastewater treatment facility," but "their [specific] claims are speculative and insufficient" based on the assumption that flowback water or brine would accompany the cuttings, since these waste streams "are not authorized to be disposed at this landfill." (p. 19)

Accordingly, "I am directing Department staff to review leachate management practices at the landfill," and specifically to address:

- (12) whether the potential for clogging the leachate collection and removal system with finely-grained drill cuttings requires "a specific separation distance between the leachate collection system and the first layer of Marcellus Shale drill cuttings," or whether the separation distance should be reconsidered "for any reason"; and
- (13) "whether any circumstances exist that support adding parameters to the landfill's current leachate testing protocol." (p. 20)

These 13 inquiries must be completed within 30 days, the results of the inquiries must be copied to RFPLC, and if additional permit modifications result, further proceedings may be necessary (*see* Part 621.13(e)). However, Staff may request from the Commissioner an extension of time to reach its conclusions as to whether additional permit modifications are necessary.

Thus, the Commissioner decided that despite the conclusion that issues underlying these 13 inquiries are legally irrelevant to the landfill's request for permission to increase the volume of waste for disposal, and therefore a modification to the permit allowing the increase may now be issued, the issues must be addressed and, if their resolution requires further modification to the landfill's permit, may result in a new hearing.<sup>1</sup>

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See also Peter Mantius, *New York State Dismisses Radiation Threat From Gas Drilling Cuttings*, DC BUREAU, May 10, 2011, <<http://www.dcbureau.org/2011051010018/bulldog-blog/new-york-state-dismisses-radiation-threat-from-gas-drilling-cuttings.html>>;

Gary Abraham, "Chemung County Landfill," <<http://www.garyabraham.com/ChemungLF.html>>.

## ENDNOTE

1. The Commissioner's decision thus departs from conclusions asserted by NYSDEC regional Division of Materials Management staff engineer at a public meeting on January 11, 2011: "This stuff is so innocuous that under law and regulation and good environmental practice, it could be [buried] at the drill site," Scott Foti, a DEC official, testified in January. "It could be left right there." (quoted in Mantius, *above*). Residents relied on NYSDEC test results for brine returned to the surface at New York vertical wells drilled into the Marcellus Shale, finding the brine was between 14,530 and 123,000 pCi/L, or over 17,000 and as much as 144,000 times background exposures (which are generally 0.85 pCi/L), and Radium-226 concentrations between 2,472 and 16,030 pCi/L; and the fact that brine coats the surface of drill cuttings even after the liquid portion of the waste is separated from the solids. These facts were undisputed and appear to have prompted the Commissioner's order to staff to undertake further inquiries.