

In the Matter of the Application of  
**CHEMUNG COUNTY** for modification of the  
Part 360 permit for its municipal solid  
waste landfill on County Route 60 in  
Elmira, Town of Chemung.

RULINGS OF THE  
ADMINISTRATIVE  
LAW JUDGE ON ISSUES  
AND PARTY STATUS

(Application No. 8-0728-00004/00013)

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**BACKGROUND AND BRIEF APPLICATION DESCRIPTION**

Chemung County ("the County") has submitted an application to modify the permit for its municipal solid waste ("MSW") landfill on County Route 60 in Elmira, Town of Chemung. The permit is one to construct and operate a solid waste management facility, and was issued pursuant to Environmental Conservation Law ("ECL") Article 27, Title 7, and Part 360 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York ("6 NYCRR Part 360"). The proposed modification would raise the maximum waste acceptance limit from 120,000 to 180,000 tons per year, and establish an approved design capacity of 700 tons per day (or 54,600 tons per quarter, assuming a six day per week operation). [See 6 NYCRR 360-1.2(b)(8), definition of "approved design capacity".]

The application was submitted to the Region 8 office of the New York State Department of Environmental Conservation ("DEC") in December 2006 under a cover letter of New England Waste Services of New York, Inc. ("NEWSNY"), to whom the County leased the landfill's operation in September 2005. NEWSNY's cover letter, dated December 21, 2006, said that the modification was sought "to respond to current market conditions, and to more fully utilize the facilities available" at the landfill. The letter said that the landfill did not have an approved design capacity, and that establishing one in the permit would provide NEWSNY, a subsidiary of Casella Waste Systems, Inc., "with the flexibility to deal with normal variations in the demand for disposal services."

According to NEWSNY's letter, the proposed modification would not impact the facility's approved design volume, design configuration (including footprint area, elevation, and slopes) or construction. The letter said that waste handling and placement procedures described in the facility's approved operations and maintenance manual were adequate for the proposed

new design capacity, and that no new equipment would be required.

Under its agreement with the County, NEWSNY is responsible for the operations and management of all County-owned solid waste and recyclables management facilities through the year 2030, and is also responsible for obtaining all financing that may be required to implement improvements, modifications, and/or additions to the County's solid waste management facilities. Increasing the permitted tonnage limit is intended to enable NEWSNY to operate the landfill in a more cost-effective manner so that other improvements to the solid waste management system will be financially viable.

- State Environmental Quality Review Act ("SEQRA") Evaluation

On April 9, 2007, the Chemung County Legislature as lead agency completed its review of the proposed permit modification pursuant to SEQRA (ECL Article 8 and 6 NYCRR Part 617). The modification was identified as an unlisted action that would not result in any significant adverse environmental impacts. On that basis, a negative declaration was issued, and no environmental impact statement was prepared. DEC was an involved agency and a coordinated review was performed.

- Notice of Complete Application

A notice of complete application was issued by DEC on May 23, 2007. The notice was published in DEC's on-line Environmental Notice Bulletin on May 30, 2007, and in the Elmira Star Gazette during the week of May 28, 2007. The notice indicated that comments on the proposed modification would be accepted until June 18, 2007.

- Referral to DEC's Office of Hearings and Mediation Services ("OHMS")

On July 23, 2007, DEC Region 8 Staff referred this matter to OHMS for scheduling of a legislative hearing and issues conference pursuant to 6 NYCRR Part 624. This was done on the basis of what Staff determined to be significant public interest in the permit modification, given comments Staff had received. I was then assigned to the matter by DEC Chief Administrative Law Judge James T. McClymonds, as confirmed in his letter of July 31, 2007.

On August 15, 2007, I conducted a telephone conference call with counsel for DEC Staff, the County and NEWSNY. The call was held to review a hearing notice I had drafted, and to discuss hearing scheduling. Because of DEC Staff's concerns about noise impacts, and in light of efforts by the County and NEWSNY to address Staff's concerns, completion of the hearing notice was deferred. Subsequently, by letter of November 12, 2007, counsel for the County requested that the application be placed on indefinite hold. No further action was taken until February 5, 2010, when, at the County's behest, another call was held to discuss hearing arrangements.

Working with the County, NEWSNY and DEC Staff, I completed a Notice of Legislative Hearing and Issues Conference (Exhibit No. 1) that was issued on March 5, 2010. The notice was published in DEC's on-line Environmental Notice Bulletin (as shown in Exhibit No. 2) and appeared as a legal notice on March 11, 2010, in the Broader View Weekly and on March 12, 2010, in the Elmira Star Gazette (as verified by affidavits of publication, Exhibit No. 3.) Also, copies of the notice were circulated to relevant government officials and others known to have an interest in the permit modification, including people who had previously provided comments. (See Exhibit No. 4, a copy of the distribution list.) At the time the notice was published, the application materials were updated to reflect additions to the landfill's noise buffer (created through property acquisitions and noise easements) and supplemental record of compliance information for NEWSNY and other Casella-related entities, for the three years since the application was first made.

### **LEGISLATIVE HEARING**

As announced in the notice, a legislative hearing was held at 7 p.m. on April 27, 2010, in the chamber of the Chemung County Legislature, 203 Lake Street, Elmira. The hearing, over which I presided, was held to receive the public's unsworn comments about the application. Apart from representatives of the County, NEWSNY and DEC Staff, 20 public speakers were heard, many of them affiliated with Residents for the Preservation of Lowman and Chemung ("RFPLC"), a citizens' group that also filed a petition for party status (discussed below in relation to the issues conference). No public speakers were in favor of the application; speakers were either against the application or against the landfill's receipt of wastes associated with the development of gas wells in Pennsylvania's Marcellus Shale. As confirmed in a letter of May 18, 2010, NEWSNY acknowledges that

since the end of December 2009, the subject MSW landfill has been accepting drill cuttings (mostly from Marcellus Shale drilling operations), and that in March and April 2010, these cuttings accounted for about half of the total waste received.

NEWSNY and DEC Staff contend that drill cuttings from the Marcellus Shale can be safely disposed at the MSW landfill; however, many public speakers disagreed. Speakers said that cuttings from the Marcellus Shale are laden with radioactive elements and heavy metals, and should go to a landfill specially licensed to receive them. Some speakers said that DEC should not rely on NEWSNY's representations about the "very low" level of radioactivity in Marcellus Shale drill cuttings, but should conduct its own independent testing. Other speakers said that limited space in a County-owned landfill should not be used for wastes generated not only outside the county, but outside the state.

DEC is evaluating comments on a draft Supplemental Generic Environmental Impact Statement ("SGEIS") for horizontal drilling and high-volume hydraulic fracturing in New York State's Marcellus Shale. Hydraulic fracturing (commonly known as hydrofracking) consists of pumping a fluid and a propping material such as sand down a well under high pressure to create fractures in the rock and thereby release gas from the tight formation. Many hydrofracking opponents spoke at the legislative hearing. Some said that the practice has environmental risks, particularly for groundwater contamination. Others said that if hydrofracking wastes are disposed at the landfill, they could contaminate a nearby aquifer associated with the Chemung River.

NEWSNY argues that the landfill receives drill cutting wastes, and not hydrofracking wastes such as produced water (the flow-back water generated from well stimulation), sludges associated with produced water, or scale associated with the processing of produced water. However, speakers addressed wastes associated with both drilling and hydrofracking, arguing that hydrofracking wastewater is particularly hazardous and requires special treatment. One speaker proposed a ban on hydrofracking in the Marcellus Shale until its environmental impacts are better understood, and a renewed focus on "clean" energy alternatives such as wind, solar, hydrogen and hydropower.

Speakers on behalf of RFPLC challenged the need to raise the landfill's waste acceptance limit to 180,000 tons per year, arguing that the current limit, 120,000 tons per year, is more

than sufficient for the MSW generated within the county. One commenter called landfills archaic and said the County should focus more on recycling and reuse of materials, as well as organic waste composting. Another said any short-term revenues the County derives from landfilling are not worth the long-term environmental consequences, which may not yet be apparent.

Many speakers spoke about nuisance conditions they associate with the landfill: noise from truck traffic and heavy equipment operations, harmful gases, noxious odors, and vectors such as seagulls and rats. Neighbors spoke about how garbage attracts flocking seagulls, and how people are startled by the "bird bangers" used to disperse them. A resident of Roberts Hollow Road, west of the landfill, said she and another neighbor developed problems with rats a few years ago, and that an exterminator sent by NEWSNY twice set out rat poison at her house. Another person living three miles east of the landfill said she was concerned about a potential breach of the landfill liner, and the impact this could have on her well water.

One speaker, Earl Robinson, provided extensive information about the historical significance of the area surrounding the landfill, where there are many historic buildings and landmarks, and where a Revolutionary War battle was fought. Another said that in the vicinity of the landfill, property values were reduced and economic development opportunities were limited.

Apart from RFPLC, whose membership includes people living close to the landfill, other organizations from a wider area, including neighboring New York counties, offered oral and written comments. These speakers voiced special concern about the precedent they say would be established by allowing an MSW landfill to accept Marcellus Shale waste streams they consider inappropriate for such a facility. Among the speakers were members of the Committee to Preserve the Finger Lakes, the Dryden Resource Action Council, and the Dryden Resources Awareness Coalition. The Committee to Preserve the Finger Lakes provided a petition signed by more than 500 people urging the Chemung County Legislature to prohibit the acceptance of Marcellus Shale cuttings and affiliated wastes at its MSW and C&D debris landfills "as a step toward restoring the Chemung County environment and preserving it for this and future generations."

## **ISSUES CONFERENCE**

As announced in the hearing notice, an issues conference was held on April 28, 2010, also in the chamber of the Chemung County Legislature. The purpose of the conference, conducted pursuant to 6 NYCRR 624.4(b), was to determine party status for any person or organization that had properly filed, and to narrow and define those issues, if any, requiring adjudication. Participating at the issues conference were counsel and other representatives for the County, NEWSNY, DEC Staff and RFPLC, which filed a timely petition for party status (Exhibit No. 7). (The petition states that it is filed on behalf of Residents for the Protection of Lowman and Chemung, though the actual name of the group is Residents for the Preservation of Lowman and Chemung.)

As permit holder and landfill owner, the County was represented by Ronald G. Hull, Esq., of Underberg & Kessler, LLP, in Rochester, New York.

As landfill operator, NEWSNY was represented by Thomas S. West, Esq., of The West Firm, PLLC, in Albany, New York.

DEC Staff was represented by Lisa P. Schwartz, Region 8 attorney, whose office is in Avon, New York.

RFPLC was represented by Gary A. Abraham, Esq., whose office is in Allegany, New York.

The conference went forward with a discussion of the proposed permit modification as well as the documents related to the proposal, which were gathered by NEWSNY in a binder marked as Exhibit No. 5. Also discussed was a draft permit (Exhibit No. 6) prepared by DEC Staff that incorporates the modifications proposed by the County as well as other changes offered by DEC Staff as updates and corrections. At the issues conference, the County and NEWSNY said they had no objections to the terms of DEC Staff's draft permit. (T: 108.) However, Staff said the permit might be altered further on the basis of information it was seeking about certain spill cleanup wastes that NEWSNY had reported receiving from natural gas well sites.

DEC Staff presented a letter of April 27, 2010 (Exhibit No. 8), confirming its request for this information, and soliciting a response by June 1, 2010. NEWSNY agreed to provide the information, and I directed that its response be provided to

RFPLC as well. Staff agreed with NEWSNY that drill cuttings, including those from the Marcellus Shale, are an acceptable waste stream for the MSW landfill, though not addressed explicitly in the existing Part 360 permit. Staff and RFPLC argued that this proceeding could properly consider which Marcellus Shale waste streams are appropriate for disposal at the landfill, while the County and NEWSNY maintained that such issues are not properly before me as part of their pending application, and therefore should be summarily dismissed.

In its petition, RFPLC offered to prove that the landfill's receipt of Marcellus Shale waste streams, including drill cuttings, does not comply with Part 360, and should be specifically prohibited under a permit modification. NEWSNY responded with a report, dated April 26, 2010, by Theodore E. Rahon, a certified health physicist and owner of CoPhysics Corp., a radiological science consulting firm located in Orange County, New York. That report (Exhibit No. 10) involved a screening analysis of confirmed Marcellus Shale samples collected at rig sites in the northern tier of Pennsylvania, and drill cuttings as delivered to three of NEWSNY's landfills. After analysis for total radioactivity levels, the report concluded that the rock cuttings from the Marcellus Shale gas drilling operations have radionuclide levels so low that they do not pose any environmental health problem and are acceptable for disposal at NEWSNY's Part 360-regulated solid waste landfills, particularly with the installation of portal radiation monitors at the truck scales.

As a separate issue, RFPLC offered to prove that without additional distance from Roberts Hollow Road, noise barriers or other mitigation, proposed operations in Cell IV-B, now under construction, would exceed the applicable noise limit in 6 NYCRR 360-1.14(p). The County and NEWSNY responded with a report, dated April 2010, by Barton & Loguidice, PC, their engineering consultants. That report (Exhibit No. 9) involved collecting sound level data to measure both the worst-case sound levels from existing landfill operations as well as site-specific sound attenuation from Cell IV-B. The report concluded that compliance with 6 NYCRR 360-1.14(p) would be maintained, even with a waste acceptance rate of 180,000 tons per year.

The aforementioned reports (Exhibit Nos. 9 and 10), offered at the issues conference, were not part of the County's original application, and neither RFPLC nor DEC Staff had sufficient time at the conference to review and respond to them. For that reason, I allowed them until May 19 to provide their responses.

I set the same deadline for RFPLC and DEC Staff to respond both to NEWSNY's proposed radiation monitoring procedure (Exhibit No. 13), and to drawings and a technical manual (Exhibit No. 14) explaining the radiation detection system that NEWSNY intends to employ.

DEC Staff responded through a letter of May 18, 2010, from Ms. Schwartz. RFPLC responded in a letter, also dated May 18, 2010, from Mr. Abraham, which was accompanied by a letter from RFPLC's previously identified noise expert, Stephen Szulecki; a report by Dr. Marvin Resnikoff, RFPLC's previously identified expert on radioactive waste management; and a letter from Dr. Anthony Ingraffea, a newly identified engineering expert. An additional letter, from Dr. Conrad Volz, an environmental health expert, was produced by RFPLC under separate cover.

In a letter of May 21, 2010, NEWSNY counsel Mr. West moved that I strike a number of RFPLC's submittals as going above and beyond what I had authorized, in an improper attempt to bolster its petition. According to NEWSNY, the submittals raised new arguments not previously advanced, reargued points previously made, and offered further information which NEWSNY said preexisted the issues conference, while offering two proposed experts (Dr. Ingraffea and Dr. Volz) not previously disclosed. NEWSNY said that, to the extent I did not strike the submittals, it wanted an opportunity to respond to them. I set up a conference call that was held June 1, 2010, with all parties' counsel, during which DEC Staff said that it joined NEWSNY's motion. Staff argued that RFPLC's submittal exceeded the restrictions I had set for it, and that addressing unsolicited information in RFPLC's papers would be a drain on Staff resources.

In a memorandum of June 3, 2010, I denied NEWSNY's motion as to Mr. Szulecki's letter, and received the letter in its entirety as responsive to the Barton & Loguidice sound level monitoring report. However, on the radioactivity issue, I struck portions of all three of RFPLC's submittals: the Resnikoff report and the Ingraffea and Volz letters.

As confirmed in my memorandum, a copy of which is attached to these rulings, NEWSNY was allowed until June 9 to respond to those portions of RFPLC's submittals that were not stricken, and RFPLC was allowed until June 30 to respond to any additional submittal that NEWSNY made. Both NEWSNY and RFPLC made timely submittals consistent with my directive.



Also as confirmed in my memorandum, DEC Staff was allowed until June 30 to respond both to RFPLC's submittals to the extent not stricken, and to NEWSNY's response to them. DEC Staff also made a timely submittal in this regard. Included with DEC Staff's submittal were new permit conditions that Staff had negotiated with the County and NEWSNY: one requiring real-time noise monitoring to ensure compliance with 6 NYCRR 360-1.14(p) when Cell IV-B operations are closest to Roberts Hollow Road, and another identifying particular Marcellus Shale waste streams as either acceptable for disposal or prohibited from disposal.

On July 20, 2010, I circulated a list of proposed corrections to the legislative hearing and issues conference transcripts. Each conference participant was afforded an opportunity to submit any objections to my corrections and to propose others of their own. NEWSNY, DEC Staff and RFPLC each made a timely submittal, and I have adopted all of their comments, proposals and suggestions. Along with the issues conference transcript, the conference exhibits and the participants' post-conference submittals have been evaluated as a basis for my rulings on issues and party status. A list of the conference exhibits is attached to these rulings.

#### **ISSUE FOR ADJUDICATION - - NOISE IMPACT**

An issue exists as to whether noise from Cell IV-B landfill operations under the higher maximum waste acceptance rate proposed by the County would exceed the allowable limit at 6 NYCRR 360-1.14(p) at properties along Roberts Hollow Road. [Petition, pages 11 and 12.]

According to 6 NYCRR 360-1.14(p), noise levels resulting from equipment or operations at the facility must be controlled to prevent transmission of sound levels beyond the facility property line at locations zoned or otherwise authorized for residential purposes to exceed certain Leq energy equivalent sound levels, which vary based on the character of the community. In this case, the parties have stipulated that the community's character is rural, which means that a sound level limit of 57 decibels (A) ("dBA") applies during the period between 7 a.m. and 10 p.m. The existing landfill permit (Exhibit No. 5, Item No. 1) restricts landfill operations to the period between 6 a.m. and 6 p.m.; however, as part of its proposed permit modification, the County has agreed to a revision of special permit condition No. 27, according to which operations would be forbidden prior to 7 a.m., thus removing

application of a stricter regulatory noise limit that applies to overnight hours.

Consistent with 6 NYCRR 624.4(c)(2), noise is a "substantive" issue because there is sufficient doubt whether the 57 dBA limit will be met at properties along Roberts Hollow Road, such that a reasonable person would require further inquiry. Also, consistent with 6 NYCRR 624.4(c)(3), noise is a "significant" issue because it has the potential to result in denial of the request for permit modification or the imposition of significant permit conditions beyond those in the draft permit.

- Parties' Noise Analyses

The noise issue can be litigated on the basis of competing noise analyses provided by Barton & Loguidice, engineers for the County and NEWSNY, and Mr. Szulecki, RFPLC's proposed expert, who performs noise assessments as part of a consulting firm, The Noise Consultancy, based in New Jersey.

The first noise analysis was done by Barton & Loguidice as part of the initial permit modification application, filed in December 2006. In its report (Exhibit No. 5, Item No. 3), Barton & Loguidice said that noise impacts would not change significantly under an increase in the annual disposal limit from 120,000 to 180,000 tons. According to the report, any change would be largely because of an increased number of waste hauling trucks on access roads, though the noise level per truck would remain the same. The report said that currently, during peak periods, waste is received and processed at the maximum rate possible, given the size of the active working face and the equipment available to cut, spread and compact the waste, neither of which are expected to change.

The report projected that at the higher limit, peak periods could be longer, though peak operational noise (including noise from waste transport vehicles) would not increase by much. It said that over the course of a typical day, the energy equivalent average noise level at nearby locations would increase by less than 1.8 dBA, having no appreciable effect on receptors.

By letter of July 26, 2007 (Exhibit No. 5, Item No. 29), DEC Staff requested that the County provide additional information demonstrating that noise levels from landfill operations would not exceed the rural residential noise limit

set forth in 6 NYCRR 360-1.14(p). Barton & Loguidice responded with noise modeling that is described in a letter of August 9, 2007, coupled with a noise contour map intended to show the buffer that would be required to maintain compliance, based on working face activities. (See Exhibit No. 5, Item No. 33). Commenting on the modeling, Gale Wolfe, a County engineer, wrote that the proposed tonnage increase was not expected to change the maximum one-hour Leq because there would be no change in working face operating procedures, and because landfill equipment is already operating at maximum estimated utilization rates during current peak periods.

Between the end of 2007 and early 2010, the County worked to expand the buffer between the landfill footprint and sensitive offsite receptors. Under a cover letter of March 4, 2010 (Exhibit No. 5, Item No. 38), NEWSNY provided an updated noise contour map showing buffer properties that had been acquired or over which noise easements had been secured. These included the Call property (south of Cell IV-B, to County Highway 60) which was purchased, and the Freeman Stephens property (west of Cell IV-B, to Roberts Hollows Road), for which a noise easement was taken. (The easement is included in Exhibit No. 5, Item No. 39, and the recording page for the easement is part of Exhibit No. 5, Item No. 40.) NEWSNY said that with the supplementation of its buffer and the prohibition of facility operations prior to 7 a.m., compliance with 6 NYCRR 30-1.14(p) had been demonstrated.

As part of its petition for party status, RFPLC provided a 13-page report from Mr. Szulecki (Exhibit "C", attached to Exhibit No. 7) that offered a critical review of Barton & Loguidice's noise analysis. Mr. Szulecki said that the working face data used by Barton & Loguidice significantly underrepresented the sound emission levels to be expected in a worst-case hour of activity, based on Szulecki's comparisons to measurements conducted at similar landfill working faces, measurements of individual equipment pieces, manufacturers' landfill equipment sound level data, and equipment sound levels referenced in DEC guidance. Whereas Mr. Wolfe had estimated that at 230 feet from the working face noise would be sufficiently attenuated to meet the regulatory limit of 57 dBA, Mr. Szulecki said that using his own compiled working face data, the 57 dBA limit would be exceeded up to a distance of about 800 feet from the working face: in other words, beyond the western property line, impacting residents living along Roberts Hollow Road. Among alleged modeling deficiencies, Mr. Szulecki said that Barton & Loguidice had improperly excluded a number of

noise sources from consideration, including sounds from bird deterrent noise makers, cell construction and closure, activities associated with a maintenance building and outdoor equipment storage area (both proximate to Roberts Hollow Road), waste trucks moving along the working face access and landfill perimeter roads, and trucks bearing water and alternative daily cover.

In its initial noise analysis, Barton & Loguidice presented a calculated sound level for the landfill working face of 69.8 dBA at 50 feet, which Mr. Szulecki said was at least 11 dBA too low, based on his comparison of similar working faces at other landfills. Facing this criticism, NEWSNY sent Barton & Loguidice back to the landfill in April 2010 both to measure worst-case sound levels from existing working face operations, and to measure site-specific sound attenuation from landfill Cell IV-B. The results of that study, based on measurements conducted on April 21, 2010, are documented in a report presented at the issues conference and marked as Exhibit No. 9. The study was done by establishing a 50 foot by 50 foot working face and locating sound level meters at 50, 100 and 150 feet north and east of the working face centroid. As noted in the report, the primary contributing noise sources at the working face included operational equipment and the unloading of waste trucks. During typical operations, a single compactor and bulldozer operate at the working face, with a second bulldozer added periodically during inclement weather. In order to simulate peak operating conditions, one compactor and two bulldozers were operated continuously at the working face throughout a one-hour period, during which 14 waste trucks were received. In addition, bird deterrent devices were set off five times during the hour, more often than is typical.

As a result of these so-called worst case operations simulated by Barton & Loguidice, a sound level of about 84.7 dBA was measured at 50 feet from the working face, approximating the sound level Mr. Szulecki said could reasonably be expected based on his comparison to other landfills. Barton & Loguidice then reproduced this sound level at the extreme southwestern corner of Cell IV-B, where NEWSNY contends that noise from working face operations would have the greatest impact upon residences along Roberts Hollow Road. The sound level was reproduced primarily through operations of a Caterpillar D6R bulldozer (provided by the contractor constructing Cell IV-B) traveling back and forth continuously for one hour along a set path traversing the cell's corner. According to the report, the noise of the bulldozer on the hard compacted soil/gravel surface was higher than would be

expected if the bulldozer was operating on soft waste; in fact, the noise was equivalent to all of that measured at the active working face. While the bulldozer moved back and forth, other reported activities included soil excavation and placement near the middle of Cell IV-B (related to the cell's construction), continuous operation of a pump east of the bulldozer (to draw down the stormwater pond located within the Cell IV-B footprint), the passage of a water truck along the site access road adjacent to the bulldozer's travel path, and working face operations to the east of Cell IV-B.

At a metered location along Roberts Hollow Road, 646 west of the cell's southwestern corner, the bulldozer operational noise (measured at 84.7 dBA at 50 feet west of the source) was reported to be intermittently audible, but quite faint. A one-hour Leq sound level of 52.1 dBA was recorded, and this sound level was reported to have been significantly influenced by the intermittent operation of a lawn mower at a nearby residence on the road's west side. According to the report, distance attenuation alone would have reduced the bulldozer noise to about 62 to 63 dBA at Roberts Hollow Road, so measurement of about 52 dBA at that location indicated substantial additional attenuation, which Barton & Loguidice attributed primarily to irregular topography, but also to vegetation, wind attenuation and atmospheric absorption.

The April 2010 sound level monitoring report prepared by Barton & Loguidice (Exhibit No. 9) basically supplanted its earlier work done as part of the application, and was offered to demonstrate that future worst case working face operations at the southwest corner of Cell IV-B would meet the requirement of 6 NYCRR 360-1.14(p) based upon actual site-specific attenuation between the source area and boundary locations along Roberts Hollow Road. Because neither DEC Staff nor RFPLC had sufficient time before or at the issues conference to review and respond to the report, they were afforded until May 19 to provide their responses.

In a letter of May 18, 2010, DEC counsel said the report further supported Staff's previous assertion that the proposed modification would not be expected to result in a violation of the 57 dBA rural residential standard. DEC Staff said that it agreed with Barton & Loguidice that a simple distance attenuation calculation indicated that the 84.7 dBA sound level (as measured 50 feet from the source) would be reduced to about 62 to 63 dBA at Roberts Hollow Road, and that it had no reason to dispute the methodologies or findings of the April 2010 noise

study, which indicated that additional attenuation factors were at work. Staff said that the number and potential interaction of factors affecting noise transmission to the west of the landfill (including vegetative cover between source and receptor, natural and manmade landforms, and landfill geometry) presented a complex issue, and that it would be difficult to accurately model using simple calculations. Therefore, Staff said that a series of onsite measurements, taken once Cell IV-B is operating, would be a more accurate and therefore preferable method of ensuring regulatory compliance, and noted that such noise monitoring, according to a plan not yet developed, was required under special condition No. 72 of its draft permit.

Mr. Szulecki responded to the sound level monitoring report in a letter of May 18, 2010. He was critical of the approach by which Barton & Loguidice simulated working face conditions in the southwest corner of Cell IV-B and measured resultant sound levels at various locations, including one along Roberts Hollow Road. He said such measurements only represent a "snap shot" of conditions at the time they are taken, whereas modeling, his preferred approach, "provides a time-tested approach to the determination of outdoor sound levels under various conditions such as source height, receptor height, distance between source and receptor, type of ground, topography, wind speed and direction, and presence of screening objects." According to Mr. Szulecki, measurements without modeling cannot reasonably be used to determine compliance with 6 NYCRR 360-1.14(p), unless such measurements are purposefully conducted under strict environmental and site conditions. In this instance, Mr. Szulecki said it was apparent from the report that intervening topography between the noise source at the southwest corner of Cell IV-B and Barton & Loguidice's measurement location at Roberts Hollow Road acted like a noise barrier by screening the direct path of sound propagation, resulting in a lower measured sound level than would be expected in the topography's absence. Also, he said that a southwest wind, as recorded at the Elmira airport, likely influenced the sound of the simulated working face operations at its source, in the southwest corner of Cell IV-B, causing the sound rays to bend upward, thereby reducing the sound as measured at Roberts Hollow Road. According to Mr. Szulecki, that sound would likely have been about 9 dBA higher (in other words, about 61 dBA, above the 57 dBA limit) if not for the intervening topography and upwind conditions.

Mr. Szulecki performed his own straight-line acoustical modeling by moving the sound source location further east into Cell IV-B, about 750 feet from the Garew property on Roberts

Hollow Road, where working face operations would be at a higher elevation than in the cell's southwest corner, and where he said intervening topography would not have a screening effect on sound propagation. Assuming a no-wind condition and allowing for attenuation from geometric divergence (distance) and from ground and atmospheric absorption, Mr. Szulecki modeled a sound level of 59.8 dBA at the Garew property, as documented in Table 1 of his May 18 letter. He added that he did not consider this modeled sound source location to be the only one which would result in an exceedance of the 57 dBA limit, and faulted Barton & Loguidice for not identifying the location in Cell IV-B where operations would result in the highest possible sound level as received at the closest appropriate residential boundary.

Mr. Szulecki acknowledged that, for its measurement exercise, Barton & Loguidice had generated a sound level (84.7 dBA at 50 feet) within the range of values he had previously suggested (80.9 to 86.5 dBA at 50 feet), but added that these values were only for sound associated with the working face, and did not account for trucks operating outside the working face (e.g., perimeter roads), maintenance building activities, cell construction and closure, activities at the adjacent C&D debris landfill, soil mining and bird deterrent devices. Furthermore, he said that the size, type, manufacturer and quantity of heavy equipment and how it is used during worst-case-hour conditions must be comparable for measurements at one facility to readily apply to another facility.

In a response dated June 8, 2010, Barton & Loguidice defended its selection of the southwest corner of Cell IV-B as a worst case location for study because it is the nearest point that working face operations would be to the property boundaries south and west of the landfill. It said that its metering location at Roberts Hollow Road, in a power line right-of-way, represented a worst case location for monitoring because of the minimal screening by trees and shrubs. Barton & Loguidice said that additional receptor locations along Roberts Hollow Road, located farther from the Cell IV-B footprint, are expected to benefit from greater distance attenuation, as well as additional attenuation by trees and shrubs, and the line-of-sight barrier effects of existing topography. Responding to Mr. Szulecki's modeling, Barton & Loguidice offered a figure generated from available survey data and permitted final landfill grades to show that existing topography does in fact prohibit a direct line of sight from Mr. Szulecki's selected noise source (within Cell IV-B) to the Garew property. According to Barton & Loguidice, breaking this line between the source and the

receptor provides at least a 5 dBA reduction in sound, which, had Mr. Szulecki included it, would have brought the Leq at the referenced receptor to a level below 57 dBA. Barton & Loguidice provided other figures to show that existing topography would provide additional barrier attenuation for Cell IV-B operations even at final grades that Mr. Szulecki did not include in his analysis, affording protection to the Rivera, Morrison and Kline properties, all north of the Garew property on Roberts Hollow Road, and about which Mr. Szulecki had expressed particular concerns. These three properties are also shielded from Cell IV-B by heavy deciduous woods, which Barton & Loguidice said would provide additional sound attenuation, at least during leaf-on conditions.

On June 30, 2010, RFPLC and DEC Staff provided their final submittals on the noise issue, completing the issues conference record.

RFPLC continued to assert that the measurements conducted by Barton & Loguidice in April 2010 could not reasonably be relied upon to demonstrate compliance with 6 NYCRR 360-1.14(p). Mr. Szulecki said that it is not reasonable to suggest the sound emissions received at a receptor, based on single location at a single elevation, are representative of all locations on a landfill cell with the topographic complexity of Cell IV-B. Furthermore, he said it was even more unreasonable when consideration is given to the complexity of the topography west of Cell IV-B, where the terrain slopes downward from east to west and north to south.

According to Mr. Szulecki, operations at a location on the landfill that is more distant from the residential receptors on Roberts Hollow Road, and at a greater elevation where topographic screening is not present, will reasonably result in a higher sound level at those receptors. He said that based on the topographic figures it had produced as part of its June 8 submittal, Barton & Loguidice must have digital topographic data for Cell IV-B and the area to its west as AutoCad files, and from that data it would not be difficult to determine those areas on Cell IV-B where there is an unbroken line of sight to receptor locations, and to then determine if compliance is achievable at those locations. For his own modeling exercise, Mr. Szulecki said he had chosen source and receptor locations based on two sets of two-dimensional topographic data used in conjunction with one another: the 1994 final contours of Cell IV-B as provided by DEC Staff, and topographic figures as provided in the application and other sources to represent the



terrain west to Roberts Hollow Road. This, he said, was less than ideal to determine locations on Cell IV-B where the elevation is such that there is not intervening topography that breaks the line of sight to potentially impacted Roberts Hollow Road receptors.

In its June 30 submittal, DEC Staff said it agreed with Mr. Szulecki that a west side screening berm, directly west of the bulldozer used to simulate working face sound in Barton & Loguidice's April 2010 noise study, is about seven feet higher than the bulldozer path, and that this would have attenuated the sound Barton & Loguidice measured at Roberts Hollow Road. However, Staff said that Mr. Szulecki's own modeling, done as part of his May 18 submittal, had not accounted for topographic attenuation either, nor had it accounted for vegetation buffering the road from Cell IV-B. Staff said that based on the figures provided in Barton & Loguidice's June 8 report and Staff's own examination of the site, existing vegetation and landforms will attenuate sound transmission to the areas west of the landfill over the entire time waste is placed in Cell IV-B. Accounting for attenuation due to topography, ground, atmosphere, vegetation and distance, DEC Staff provided a worst case calculation that working face activities in Cell IV-B would result in an Leq sound level of 53.2 dBA 650 feet away.

DEC Staff reiterated that factors affecting sound transmission to the west of the landfill present a complex issue, making future sound levels difficult to accurately model with simple calculation. Therefore, Staff said that actual measurements are the preferred method to predict and determine regulatory compliance. In that regard, Staff presented new language for special condition No. 72, which it reported was acceptable to the County. That new language specified that anticipated noise monitoring would be conducted on a real-time basis "[w]henver operations occur in Cell IV-B within 800 feet of Roberts Hollow Road, or such other distance as the Department may determine based upon the operation of the noise monitoring system contemplated by this condition . . . The real time monitoring of operational noise will be active and continuous so that landfill operations can be immediately adjusted if noise levels begin to approach the regulatory limits set forth in 6 NYCRR 360-1.14(p). An amendment to the approved Environmental Monitoring Plan that details the real time continuous monitoring system for Cell [IV-B] operations shall be submitted for Department approval within thirty (30) days from permit issuance and be operational no later than thirty (30) days after the Department's approval of the amendment. Thereafter, all noise

monitoring shall be in conformance with the Department approved amendment."

The proposed real-time noise monitoring program was outlined in a June 8, 2010, submittal from Barton & Loguidice, and clarified in a June 29, 2010, letter from John Brusa, a Barton & Loguidice engineer, to DEC Staff. According to the proposal, the monitoring system would consist of two permanently installed noise monitoring terminals: one on the Stephens property between the landfill and the Garew property, and the other on the landfill property west of the maintenance building between the landfill and the Morrison and Kline properties. Each terminal would be provided with weather protection and equipped with a manufacturer-approved primary and backup power supply system to ensure continuous operation. Sound level data recorded at the terminals would be continuously transmitted to a site computer for direct readout, and system software would provide for continuous updating and direct read-out of the one-hour Leq for compliance evaluation. In addition, the communications would be relayed from the computer to a visual warning system at the working face to alert operators of impending violation of the noise criterion. The warning system would consist of a visual signal light or similar device that would be positioned in direct view of working face operators. Similar to a traffic signal, a green light would indicate that operators can proceed under current operating conditions; a yellow light would serve as a preliminary warning that noise levels are increasing toward 57 dBA; and a red light would serve as a final warning, providing the operators time to reduce or cease working face operations and maintain equipment at idle in order to reduce the one-hour Leq noise level.

Because working face operations are the predominant noise source at the landfill, temporarily curbing such operations is expected to reduce the one-hour Leq noise level; if it does not, other noise sources would be investigated and documented by landfill personnel. Other proposed measures to ensure regulatory compliance include changes in operational procedures (e.g. limiting equipment operation to specific run-times during a one-hour period), changes in working face locations (moving operations to the east, farther from Roberts Hollow Road), and queuing of trucks at the scalehouse (limiting access for unloading). Under the monitoring program, raw data would be stored on the facility computer, and a software package would allow for the generation of summary reports, furnished monthly to DEC Staff, for use in tracking and evaluating data. In addition, DEC Staff would be notified each time that the red

warning light is activated during the landfill's hours of operation. (The June 8 submittal says these hours are from 7 a.m. to 4 p.m., though this apparently refers to operations at the working face, since the draft permit also allows operations of the facility between 4 and 6 p.m.)

- Attenuation by Topography

For the purpose of its sound level measurement, Barton & Loguidice simulated working face operations in the southwest corner of Cell IV-B and measured the impact at a location on Roberts Hollow Road selected because it is in a cleared power line right-of-way, with minimal vegetative screening. Because the southwest corner is the location of Cell IV-B closest to the road, operations there were deemed to have the worst case impact on offsite receptors. However, even from that location, topography acts like a noise barrier screening sound propagation to the west.

As part of his May 18 submittal, Mr. Szulecki performed acoustical modeling based on a selected location further east into Cell IV-B, at a higher elevation than the southwest corner, where he said intervening topography would not have a screening effect on the sound propagation from working face operations, and where he calculated such operations would lead to a violation of 6 NYCRR 360-1.14(p) at the Garew property. Barton & Loguidice responded with modeling of its own, as part of its June 8 submittal, which indicated that existing topography would in fact prohibit a direct line of sight from this noise source to the Garew property receptor, and that accounting for the 5 dBA attenuation attributable to breaking the line of sight, noise at the Garew property would not exceed 57 dBA.

In its June 8 submittal, Barton & Loguidice provided cross-sections (Figures R-1 through R-4) intended to show that existing topography would block the direct line of sight to the landfill equipment stack heights through the final fill grades of Cell IV-B for all adjacent receptors, providing an estimated 5 to 9 dBA reduction in sound levels. However, in an e-mail to NEWSNY counsel dated June 18, Mr. Abraham, RFPLC counsel, expressed concern that built-out topography - in particular, for a sediment basin and a roadway to the west of Cell IV-B, in the direction of identified sensitive receptors - would alter the existing topography, requiring substantial excavation and grading that would eliminate obstacles to the line-of-sight path for noise from elevated landfilling locations. He wrote that because Barton & Loguidice had not shown the built-out

topography for critical areas of Cell IV-B, and because its conclusions were based on intervening topography that he believed would be graded to a lower elevation during construction of the perimeter road and sediment basin, its predicted noise impacts could not be relied on.

To settle the issue, Mr. Abraham requested that NEWSNY counsel provide a Digital Terrain Model (DTM) in three dimensions for the full build-out of Cell IV-B, showing the transition from the perimeter road and sediment basin to the existing topography and the topography west to Roberts Hollow Road. In response, DEC Staff indicated that the road and the basin, displayed on a 1994 final landfill contour drawing that Staff had provided to Mr. Szulecki on May 4, 2010, were not part of "recently approved" Cell IV-B construction plans, and should be eliminated from any sound level evaluation. Also, NEWSNY responded that it would not provide any additional information absent a ruling from me, arguing that there is no need for modeling of an existing, permitted landfill where actual measurements can be taken and monitoring can be conducted to ensure compliance.

By letter of June 22, 2010, Mr. Abraham requested a ruling as to whether the requested DTM data, together with sufficient information from the new construction plans to fully understand that data, should be provided. He wrote that prior to May 4, 2010, DEC Staff had indicated to Mr. Szulecki that digital topographic data did not exist because the final landfill contours were developed over 15 years ago, before utilization of such data became common. However, he added that the detailed cross-sections provided as part of Barton & Loguidice's June 8 submittal clearly originate in digital data, and are presumably based on the new construction plans, which Mr. Abraham said he was unaware of until June 18, when Staff responded to his e-mail.

NEWSNY counsel opposed Mr. Abraham's request in an e-mail received later that same day. Mr. West argued that discovery was not allowed pursuant to 6 NYCRR 624.7(a) absent extraordinary circumstances, which he said did not exist, that the request was an improper fishing expedition, and that DTM files do not exist.

I ruled on the request by e-mail, also on June 22. I said that in light of Mr. West's representation that DTM files do not exist, there was no basis for ordering their production, or for extending the June 30 deadline for RFPLC's final submittal, as

Mr. Abraham had requested if new information were ordered produced. Also, I said that because I had not yet ruled whether noise would be an issue for adjudication, discovery was limited to information that would be available under the state's Freedom of Information Law to any member of the public. Finally, I said such information would include any approved plans for the landfill's construction, including those recently approved for Cell IV-B, which I advised Mr. Abraham to secure directly from DEC Staff.

On June 23, Mr. Abraham requested by telephone that DEC Staff provide him with current construction plans, and on June 24, Ms. Schwartz responded by e-mail. Ms. Schwartz wrote that she understood that Mr. Abraham was seeking terrain information which shows planned construction around Cell IV-B, and then provided a list of documents held by DEC that could be considered responsive to this request. One of those documents was a sub-grade grading plan for Cell IV-B, received on June 7 and approved on June 9, which was identified as the most current approved construction plan (i.e., engineering drawing) for the cell. Ms. Schwartz said the plan showed the subgrade elevation and limited topography in the site areas west of Cell IV-B and its associated screening berm. Because DEC indicated it had this oversized document in hard copy only and did not have the means to copy it or convert it to PDF format, Mr. Abraham, by e-mail on June 25, requested that DEC Staff make the document available to a copying service he had used in the past. In a cover letter to RFPLC's June 30 submittal, Mr. Abraham wrote that the document had not been reviewed because it had not yet been received from the copying service. He added that RFPLC continued to suffer from an absence of information regarding locations on the Cell IV-B working face where sufficient elevation will be reached to eliminate intervening terrain as an attenuating factor for sensitive receptors, and that a complete noise assessment was not possible without this locational information.

Regardless of what information DEC Staff has, Mr. Abraham argues that Barton & Loguidice must have three-dimensional digital terrain data for the area west of Cell IV-B, as a basis for the two-dimensional terrain cross sections for that area which were part of its June 8 submittal. Even if it is not part of a DTM application, he says that the data, if shared with Mr. Szulecki, would be useful in understanding noise impacts. In an e-mail dated June 25, Mr. West argues that there are numerous methods available to digitize the terrain between the landfill and the sensitive receptors, which RFPLC should avail itself of

if it believes in its issue. However, Mr. Abraham responds that digitizing information from engineering drawings is painstaking, costly work, which would be unnecessary if, as Mr. Szulecki maintains, digital topographic data already exists.

According to 6 NYCRR 360-1.9(c), an application to modify a permit for a solid waste management facility must include a demonstration that, as modified, the facility will be capable of compliance with applicable Part 360 requirements, which include the operational requirements at 360-1.14. Here, an issue exists as to whether that demonstration has been made in relation to the requirement at 6 NYCRR 360-1.14(p) for noise attributable to Cell IV-B operations. Resolution of this issue depends upon an accurate, comprehensive understanding of the topography between the cell footprint and residential receptors along Roberts Hollow Road, which may have been altered through the recently approved construction plans. It also depends on modeling that would indicate whether existing topography will serve to attenuate noise throughout Cell IV-B's fill progression.

As discussed above, RFPLC argues that there may already be digital topographic data that would be helpful to litigate this issue. However, even if there is not, RFPLC should be extended the opportunity to develop that data for itself, as a full party to this proceeding. Also, it should have the opportunity to revisit its analysis in light of the construction plans that were submitted and approved in early June, after the petition deadline and after the issues conference. If, in fact, a perimeter road and sediment basin have been removed from the area between the Cell IV-B footprint and Roberts Hollow Road, those changes may serve to attenuate noise at nearby residences. However, this remains subject to verification, and RFPLC has been diligent in its quest for relevant information once it became aware that the plans had changed. RFPLC presumes that the cross-sections developed as part of Barton & Loguidice's June 8 submittal are based on the recently-approved construction plans, but that is not clear either.

In his June 22 letter to me, Mr. Abraham writes that it does not seem reasonable to believe that, to the immediate west of Cell IV-B, no additional grading to manage stormwater runoff or to construct a service road will be undertaken that may change the terrain. He adds that while it is understandable that a waste hauling access road will not be built along the western periphery of the landfill, the operator and DEC Staff will need to periodically monitor the western berm and waste mass for slope failure, vectors, and cover integrity, and

therefore a service road may be required to assure that such monitoring is effective.

Adjudication of the noise issue must include not only a consideration of topography as a noise attenuating factor, but the impact of attenuation due to distance, vegetation, and other factors, as noted in DEC's program policy for assessing and mitigating noise impacts (DEP-00-3, as revised February 2, 2001). These factors can be applied in a straight line sound propagation analysis consistent with the modeling performed to date by Mr. Szulecki, and the cross-sections provided by Barton & Loguidice.

NEWSNY contends that by reproducing a working face noise level consistent with that proposed by Mr. Szulecki at the southwest corner of Cell IV-B, and then measuring the impact at Roberts Hollow Road, it has provided a worst case analysis confirming compliance with 6 NYCRR 30-1.14(p). However, leaving aside Mr. Szulecki's criticism of the analysis, it provides an assessment for only one sound source location and elevation, or, using Mr. Szulecki's terminology, a "snapshot" of impact analysis, whereas modeling can account for variables reflecting all the locations and elevations within the cell where landfilling will occur, and all the relevant receptor locations.

- Real-Time Noise Monitoring

To avoid a modeling debate, NEWSNY has more recently proposed real-time noise monitoring to demonstrate compliance with 6 NYCRR 360-1.14(p) at all times that Cell IV-B operations occur within 800 feet of Roberts Hollow Road, a distance apparently extracted from Mr. Szulecki's initial report, where he calculated that the 57 dBA limit would be exceeded up to a distance of about 800 feet from the working face.

While I applaud the monitoring proposal, I note that it can only confirm whether compliance has been achieved, and cannot demonstrate compliance in the first instance. In a similar case, I ruled that the need to adjudicate noise impacts for an expansion of the Sullivan County landfill was not eliminated by a permit condition requiring annual noise testing once operations commence because DEC needed a reasonable assurance that the expansion would comply with the applicable noise standard before it could be permitted. If, as it turned out, compliance was not maintained, I noted that the County risked a shutdown of the landfill or, at the least, further restrictions on its operations, which, even if they were imposed for a short

period, would be disruptive to those who depend on the facility. For that reason, I concluded, Sullivan County should not be allowed to proceed at its own peril, in the absence of a reliable understanding of potential environmental impacts. (Matter of Sullivan County Division of Solid Waste, Rulings on Issues and Party Status, January 18, 2007, page 27.)

This case is different because real-time monitoring is proposed, not testing on an annual basis, and because Cell IV-B is not a proposed landfill expansion, but part of a permitted facility and will be filled eventually, whether or not this permit modification is approved. Even so, the underlying point remains the same: monitoring does not substitute for an analysis providing a reasonable assurance of compliance.

As is acknowledged in the monitoring proposal, failure to maintain compliance with 6 NYCRR 360-1.14(p) would adversely affect operations, in terms of curbing activities at the working face, moving the working face elsewhere, or holding back trucks that have arrived to unload. Rather than adopt a "wait and see" approach, approval of the pending application should occur only after careful consideration of potential worst case impacts, which can be done through straight line sound propagation modeling.

#### - Modeling Considerations

For the purpose of straight line modeling, I accept Barton & Loguidice's measured working face sound emission level (84.7 dBA at 50 feet) as reasonably conservative, despite Mr. Szulecki's criticisms. That is due to how the level was generated: by measuring sound from one compactor and two bulldozers, whereas the second bulldozer would be used only periodically; by operating the compactor and two bulldozers continuously in the working face area throughout the one-hour measurement period; by measuring the sound of 14 unloading trucks, more than are reportedly received at current peak operations; by entering the trucks within 50 feet of the closest measurement meter, and the compactor and dozers within 10 feet of the closest meters; by operating the compactor generally with the rear of the machine oriented in the general direction of one or the other of the two meter lines; and by setting off more than the usual number of "bird bangers" per hour. Also, the sound emission level is within the range of those offered by Mr. Szulecki in his initial submittal, which is part of RFPLC's petition for party status.



To assess impacts, all noise sources from the facility must be accounted for, because, for offsite receptors, they have a cumulative environmental impact. On the other hand, for purposes of this hearing, operational noise can be restricted to that from the working face, provided there are no other operational activities, unaccounted for in Barton & Loguidice's noise measurement, that would contribute significantly to noise impacts along Roberts Hollow Road in the area west of Cell IV-B. Such activities could include the movement of vehicles in the area between the road and the working face, though, as noted above, it appears that a perimeter road originally planned for the area west of Cell IV-B has been removed from the landfill's construction plans. Also, as noted by Barton & Loguidice in its June 8 submittal, its measured working face sound level already accounts for waste trucks climbing access roads to the working face, site vehicles passing on an access road, and several water truck passes. The working face operations conducted for the sound level measurements also included noise from a continuously operated large diesel stormwater pump, and "typical" activities associated with a maintenance building that apparently is used as an equipment repair shop.

Mr. Szulecki expressed concern about noise from soil mining, though I have no information that such activity is planned for the area west of Cell IV-B. (There is a soil borrow area for daily cover, but that is on the east side of the landfill, away from Roberts Hollow Road.)

Cell IV-B is the last permitted cell for the landfill, and any expansion of the landfill would occur on properties to the east (see Appendix "B" to Exhibit 20, a drawing of the proposed cells), farther from Roberts Hollow Road. It is unknown to what extent landfilling in Cell IV-B would occur simultaneously with closure activities in cells already filled.

Finally, there is a C&D debris landfill immediately south of the MSW landfill, but it is a considerable distance from the properties of concern to RFPLC, and it is limited to about 20,000 tons of waste per year, which suggests it operates more quietly than the MSW landfill.

- Compliance with 6 NYCRR 360-1.14(p)(4)

As a separate issue bearing on noise impacts, RFPLC has challenged whether the landfill maintains compliance with 6 NYCRR 360-1.14(p)(4), which requires that sound levels for internal combustion-powered equipment used at the facility not

exceed 80 decibels at a distance of 50 feet from the operating equipment. In his May 18 submittal, Mr. Szulecki said that the Caterpillar D6R bulldozer used to simulate working face operations has a spatially-averaged maximum sound level of 86 dBA at 15 meters (49.2 feet) according to its manufacturer, and that a higher sound level could be experienced during actual working conditions. In its June 8 submittal, Barton & Loguidice said that this dozer is owned and operated by a construction company working onsite for the Cell IV-B construction, which is scheduled to be completed by the end of September 2010, and is not part of the landfill's operating equipment.

On the understanding that the bulldozer will be removed from the site after cell construction is finished, the sound it creates is not relevant to an analysis of subsequent landfilling in that cell. Furthermore, any existing violation of 6 NYCRR 360-1.14(p) attributable to use of the bulldozer is not relevant to the proposed permit modification, which is unrelated to construction activities.

In his June 30 submittal, Mr. Szulecki argues further that the Al-jon 81K compactor which was reported to have been operating at the working face during the April 21 measurements has been reported in a noise assessment for another landfill to emit a maximum sound level as a sound power level (Lw) of 118 dBA, which equates to a sound pressure level (Lp) of 84.6 dBA at 50 feet. Assuming this compactor will continue to be used at the landfill, there is some question whether its operation would be in violation of 6 NYCRR 360-1.14(p)(4). However, it is unclear from the regulation itself under what conditions sound levels should be measured, and what type of measurement should be taken to ensure compliance.

Because the issue of compactor noise was not proposed until the last round of submittals, the other parties have not had an opportunity to respond to it. Therefore, I shall reserve any ruling or further comment until that opportunity is provided. I note, however, that this same issue arose several years ago in my hearing on the Sullivan County landfill expansion. In that case, the County sought a variance from 6 NYCRR 360-1.14(p)(4) for its compactor, as the County said it could not identify one that would meet the requirement at the heavy machine weight it would need for operations. The County also said that DEC was considering striking the requirement from its regulations, which meant there was no incentive for manufacturers to redesign their equipment.

## **OTHER PROPOSED ISSUES**

### Marcellus Shale Waste Streams

RFPLC proposes that the landfill permit be modified to specifically prohibit acceptance of Marcellus Shale waste streams, which it contends are likely too radioactive for disposal in a landfill regulated under Part 360. [Petition, pages 8 to 11.]

The MSW landfill has been accepting drill cuttings (mostly from Marcellus Shale drilling operations) in increasing amounts since the end of December 2009, and in March and April 2010, these cuttings comprised about half of the incoming waste on a tonnage basis. When the cuttings began arriving, the permit contained no specific allowance for them; instead, the permit allowed for the receipt of MSW generally, as well as industrial waste not considered incompatible with MSW. [See special permit conditions 28 and 31(d) of the existing permit, Exhibit 5, Item No. 1.]

As NEWSNY counsel explained and DEC counsel confirmed at the issues conference, the cuttings at issue are basically ground rock fragments that result from the grinding and chipping action of the drill bit as it creates a well to extract natural gas from the Marcellus Shale. Two types of drilling methods are used to support development of the Marcellus Shale: (1) air drilling, typically for the vertical segment of the well, so as not to contaminate groundwater; and (2) fluid-based drilling, for the horizontal leg, with the fluid used to drive the cutter head, cool and lubricate the drill bit, and bring the cuttings from the well bottom to the land surface, where the cuttings are then separated from the liquids. The fluids used for drilling in Pennsylvania are either water-based or oil-based. According to a January 21, 2010, DEC Staff e-mail attached as Exhibit "A" to RFPLC's petition, DEC Staff authorized the receipt of gas well drill cuttings at the Chemung County landfill facility, noting that cuttings from wells using water-based cutting fluids may be disposed in the MSW or C&D debris landfills, but that cuttings from wells using oil-based cutting fluids may be disposed in the MSW landfill only.

RFPLC contends that the cuttings generated from horizontal drilling in the Marcellus Shale should be barred from the Chemung County landfill and directed instead to a landfill specially licensed for disposal of processed and concentrated naturally-occurring radioactive materials ("NORM"). Through the

proposed testimony of Dr. Marvin Resnikoff, attached as Exhibit "B" to its petition, RFPLC offers to prove that drill cuttings and dewatered brine sludge from Marcellus Shale wells are likely to exceed levels of radioactivity allowable for materials that may be disposed in a landfill under Part 360, and that additional information must be provided to determine the specific radioactivity of these wastes. According to RFPLC, Dr. Resnikoff would testify that drill cuttings from Marcellus Shale wells have radium concentrations substantially higher than the maximum permissible dose at the boundary of an operating nuclear reactor, dewatered brine sludge from such wells has even higher concentrations of radioactivity, and landfill leachate treated at the City of Elmira wastewater treatment plant and discharged to the Chemung River can be expected to exceed allowable drinking water standards for radium.

At the issues conference, NEWSNY presented a radiological survey report (Exhibit No. 10) prepared by Dr. Theodore Rahon, a certified health physicist with CoPhysics Corp., a radiological science consulting firm in Orange County. The report involved an analysis of confirmed Marcellus Shale samples collected at rig sites in northern Pennsylvania, drill cuttings as delivered to NEWSNY's solid waste landfills, and natural soil and rock samples from the landfill sites. During the study, conducted in March 2010, samples were taken and analyzed via gamma spectroscopy for the three main radionuclides in the naturally-occurring groups: radium-226, thorium-232, and potassium-40.

Based on the documented results, the report concluded that the Pennsylvania drill cuttings had radium-226 concentrations that were slightly greater than the local background at the NEWSNY landfill sites, but not so great that the cuttings should be classified as NORM. Also, the report concluded that the cuttings' thorium-232 and radiopotassium levels were less than local background. In summary, the report said that the cuttings, as sampled, had radionuclide levels that did not pose any environmental health problem even if deposited in areas accessible by the general public. Therefore, the report said, disposal of the cuttings at the County's MSW landfill is certainly acceptable.

Because neither DEC Staff nor RFPLC had sufficient time before or at the issues conference to review and respond to the CoPhysics report, they were afforded until May 19 to provide their responses. In its May 18 letter, DEC Staff said that the report showed that the cuttings' concentrations of the primary radionuclide of concern, radium-226, fell near the low end of

potential concentrations in the Marcellus Shale, and were so low that they would not pose a public health or environmental threat even if left on the ground surface. Also, Staff said that even at the higher concentrations that have been reported for some Marcellus Shale drill cutting samples, the cuttings would not be inappropriate for disposal in a properly managed landfill regulated under Part 360.

Responding for RFPLC, Dr. Resnikoff criticized the report in three respects, and NEWSNY responded to the criticisms as part of its June 9 submittal.

First, Dr. Resnikoff said that the CoPhysics analysis involved use of an EPA measurement protocol for gamma detection in radioactive materials dissolved in water. (NEWSNY acknowledged this, but said that its modification of the protocol, which is acknowledged in the CoPhysics report, is the same as used by EPA and the U.S. Army Corps of Engineers at Superfund laboratories to measure radium in rock and soil.)

Second, Dr. Resnikoff said that the use of bismuth-224 as a surrogate for radium-226 in the CoPhysics report is not permissible. (NEWSNY countered that EPA and the U.S. Army Corps of Engineers both use bismuth-224 as a gamma emitting surrogate for radium.)

Third, Dr. Resnikoff said that the CoPhysics report does not state whether the rock cuttings were taken from a horizontal or vertical bore hole, which is significant because under the temperature and pressure conditions that exist in a deep hole, the introduction of liquids into a horizontal well enhances Radium-226. (NEWSNY replied that references in the report to the "lateral distance" into the formation from which Marcellus Shale samples were taken confirm that the samples were taken from the horizontal section of the well bore, which NEWSNY counsel indicated at the issues conference was a deliberate decision, on the expectation that people would consider that section to have the highest level of radioactivity (T: 234-235).)

Another proposed expert for RFPLC, Dr. Anthony Ingraffea, provided a letter dated May 17, 2010, stating that there is no information in the CoPhysics report that allows one to determine whether the waste that was sampled and tested, as reported, in fact originated from the Marcellus Shale. In response, NEWSNY provided a report of Billman Geologic Consultants, Inc. (Attachment "1" to NEWSNY's June 9 submittal), which characterized the drill cutting samples collected during the

CoPhysics study as Marcellus Shale, given their classic black color after the samples were washed and viewed under a microscope. The report is dated April 17, 2010, but according to NEWSNY counsel, was not offered during the issues conference because there was no real dispute at that time about the source of the Marcellus Shale samples.

Finally, Dr. Conrad Volz, a third proposed expert for RFPLC, provided a letter dated May 19, 2010, stating it is not clear from the CoPhysics report that samples were taken from and are scientifically representative of waste that originates from the horizontal portion of a Marcellus Shale drilling operation, which he says is known to be enriched in various naturally occurring radionuclides in the uranium-238 decay chain. The Billman Geologic Consultants report, which includes a review of the drilling logs for the rig site samples, responds to this concern as well.

The study documented in the CoPhysics report was restricted to a consideration of rock cuttings from gas drilling operations, the only Marcellus Shale wastes DEC Staff has explicitly approved for disposal at the Chemung County landfill. The study did not consider pipe scale, brine filtrates and associated sludges, which the report acknowledged have been known to contain elevated levels of NORM. To prevent the disposal of such materials, NEWSNY ordered the installation of what CoPhysics describes as the most sensitive gamma radiation detection system available (Ludlum Measurements, Inc. Model 375P-1000) at the landfill's truck scales. CoPhysics said it would calibrate the monitors' alarms so that any levels of radioactivity exceeding regulatory limits are appropriately addressed. Also, CoPhysics said it would assist in procedure development and training as necessary to ensure proper use of the monitors.

At the time of the issues conference, the detection system had been installed at the truck scales, but was not yet operating, pending a modification of the operation and maintenance manual required for the landfill pursuant to 6 NYCRR 360-2.9. For the other participants' consideration, NEWSNY provided a draft radiation monitoring protocol (Exhibit No. 13) as well as a technical manual for the radiation detection system (Exhibit No. 14).

According to the proposed protocol, each inbound load will be screened for radioactivity by a digital waste monitor located at the scale/weigh station. Waste hauling vehicles will be

scanned as they stop on the scale or slowly pass over it. As a truck passes the sensor at the scale, the detection system will measure the radiation level emitted by the truck and compare it to the normal background radiation in the area. If everything is normal and there is no radiation being detected, a green light will remain on. When radiation above a background setpoint is detected, an audible alarm will sound, a red light on top of the monitor housing will flash on and off, and a digital readout will indicate the level of radiation.

In the event radioactivity is detected, the scale house attendant will immediately notify the truck driver to stop, back off the scale, and slowly reapproach to verify the monitor reading. In the case of any alarm events, the vehicle will be asked to pull off the scale and park in a designated area adjacent to the scale house. Landfill staff will immediately notify DEC and the County, and work cooperatively with regulatory agencies to determine the best course of action. Also, the facility's monthly operational report, furnished to DEC, will include a record of the incident.

In its May 18 submittal, DEC Staff said that NEWSNY's proposed protocol was generally adequate, but that Staff had not yet seen information describing operator training, system calibration, or differentiation between how different types of waste loads (municipal waste vs. drill cuttings) would be handled in the event of a system alarm. While Staff said there are no regulatory requirements specifically addressing these issues, it added that there is information available in the general scientific and industry literature which could be used to support these efforts, and that it understood that NEWSNY was working with CoPhysics to address those needs.

NEWSNY emphasizes that it installed the portal-type radiation detectors not at DEC Staff's request, but at its own initiative, to address concerns of the public, and of the County and NEWSNY themselves, that the landfill not accept materials that are unsafe or inappropriate for disposal. According to DEC Staff, while there is no regulatory requirement to install them, the use of such detectors at solid waste disposal sites is a well-established practice, and is intended to preclude the inadvertent receipt of regulated radioactive materials. According to Staff, portal monitors need to be sensitive enough to detect such materials when shielded by the rest of a waste load, and the Ludlum system is designed specifically to meet this requirement. Staff also says that the system is capable of differentiating between Marcellus Shale drill cuttings, which

are not expected to trigger an alarm, and other Marcellus shale wastes that would likely be more highly radioactive.

At the issues conference, DEC Staff held open the possibility of "restructuring" the landfill's permit following Staff's investigation of spill cleanup wastes that NEWSNY had reported were received at the landfill from natural gas well sites in Pennsylvania. In one instance, in March 2010, the landfill reported receiving brine-contaminated soil from a producing natural gas well facility operated by Fortuna Energy. In another instance, in April 2010, the landfill reported receiving soil contaminated by filtered produced water from a well site operated by Chesapeake Energy.

DEC Staff requested additional information about these waste streams in a letter dated April 27, 2010 (Exhibit No. 8), which was presented at the issues conference. As directed by Staff, NEWSNY responded by letter dated June 1, 2010.

In its June 30 submittal, DEC Staff reported that its investigation of the two incidents was closed, and that it had no reason to believe that unpermitted waste had been disposed at the landfill. However, Staff added that a new special permit condition must be added to the landfill's permit, both to clarify the Marcellus Shale drilling waste that can and cannot be accepted at the landfill, and to eliminate the future need for inquiry into the exact nature of waste after its disposal, as occurred in relation to the contaminated soil received at the landfill earlier this year.

Staff's language - which it says is acceptable to NEWSNY and the County - reads as follows:

"The following applies to wastes generated during any drilling and/or development of natural gas wells targeting the Marcellus Shale, and/or wastes generated from the production of natural gas from any wells completed in the Marcellus Shale.

a. Flowback water related filter sludge, production brine related filter sludge, and free-phase liquids of any origin, are prohibited from disposal.

b. Drill cuttings including those generated from operations using air, water and/or oil-based drilling fluids may be accepted for disposal.



c. Except as noted above, acceptance of all other waste streams requires prior written approval from the Department.

d. The amount and type of waste accepted at the landfill must be reported in the facility's annual report to the Department."

RULING: No issue exists for adjudication. The permit modification proposed by RFPLC, to prohibit the landfill's disposal of Marcellus Shale gas waste streams, is unrelated to and involves issues distinct from those bearing on the permit modification proposed by the County, to increase the tonnage of undifferentiated waste allowable at the landfill. RFPLC's concerns about the radioactivity of particular Marcellus Shale waste streams should have been - and may still be - raised before DEC Staff in a request for modification of the landfill permit under 6 NYCRR 621.13(b). Also, RFPLC may petition DEC under 6 NYCRR Part 619 for a declaratory ruling on its claim that particular wastes constitute processed and concentrated NORM that may not legally be disposed in a landfill regulated under Part 360.

RFPLC's proposed permit modification is unrelated to the one proposed by the County because the County's proposal is not tied to the acceptance of Marcellus Shale wastes. By its application, the County is not proposing to initiate receipt of such wastes at its MSW landfill; such wastes, limited to drill cuttings, have been received at the landfill since January 2010, under authority of the existing permit (as allowable non-hazardous waste) and with the written approval of DEC's regional solid waste engineer (see January 21, 2010, e-mail of Gary Maslanka, attached in Exhibit "A" to RFPLC's petition). Also, the County is not seeking permission to take in larger quantities of Marcellus Shale wastes; the permit does not limit the allowable tonnage of particular wastes, only the tonnage of all wastes combined. Finally, the County is not seeking to take in Marcellus Shale wastes other than those Staff has previously allowed.

While a modification of the permit, Staff's new special condition merely confirms its and the permittee's prior understanding that drill cuttings may be accepted for disposal. The permit condition explicitly prohibits the disposal of flowback water related filter sludge, production brine related filter sludge, and free-phase liquids of any origin. However, such wastes are not allowed now, nor has the County sought permission to receive them.

RFPLC maintains that the County's pending application is timed to the landfill's acceptance of Marcellus Shale gas drilling wastes. However, the application was made in December 2006, two years before Pennsylvania's Marcellus Shale drilling boom. The modification was proposed merely "to respond to current market conditions, and to more fully utilize the facilities available at the Chemung County Landfill." After being referred for hearing in 2007, the application was dormant until early this year, but that was to provide an opportunity for expansion of the landfill buffer, to attenuate noise impacts that were of concern to DEC Staff. The application itself contains no reference to Marcellus Shale wastes, and the CoPhysics report is not intended to supplement the application, but to address concerns voiced by RFPLC and other members of the public.

If the County's application is approved, one may expect that the landfill will continue to receive a substantial amount of drill cuttings from the Marcellus Shale. That is because drill cuttings (mostly from the Marcellus Shale) constituted about half of the waste disposed at the MSW landfill in March and April 2010, the most recent months for which the record contains information, and because NEWSNY has told the County it expects drill cuttings will continue to be disposed at the landfill for several more years (see e-mail of Larry Shilling, landfill district manager, dated February 8, 2010, attached in Exhibit "A" of RFPLC's petition). On the other hand, if the County's application is denied, the landfill could still receive a substantial amount of Marcellus Shale drill cuttings, and these cuttings could become an even larger portion of the total waste stream, regardless of whether the application is approved or denied.

While the continued receipt of Marcellus Shale drill cuttings is foreseeable, that is not the purpose of the application, as permission for that has already been secured. Instead, as NEWSNY counsel said at the issue conference, the application "has to do with getting more volume into the landfill to improve the economics of the landfill so we can move forward with the process of further expansions of the landfill and further solid waste solutions in the region" (T: 184). According to NEWSNY counsel, Marcellus Shale gas drilling provides a market opportunity for landfill operators that may not have existed a couple years ago, but it is not the primary purpose of NEWSNY or the County to be in the gas drilling waste disposal business. (T: 32)

At issue for the County's application is whether under the proposed higher annual waste acceptance limit, the landfill will be capable of compliance with Part 360 operating requirements, including the one for noise from a solid waste management facility.

RFPLC's proposed permit modification, to prohibit the landfill's acceptance of Marcellus Shale gas wastes, involves different, unrelated issues: about whether such wastes, in any amount, can be safely disposed at the landfill; the levels of radioactivity in such wastes; and whether that radioactivity is processed and concentrated prior to disposal, which bears on whether such wastes are appropriate for disposal in a Part 360 solid waste landfill, or must go instead to a low-level radioactive waste disposal facility regulated under Part 382.

At the issues conference, NEWSNY said that the landfill should be able to receive drill cutting wastes as well as soil contaminated with brine or produced water, but that produced water itself, sludges associated with produced water, and scale that results from the processing of produced water are properly excluded. Drill cuttings are the only waste stream specifically allowed under Staff's new permit condition, though other wastes derived from activities in the Marcellus Shale could be accepted if approved by DEC in advance. According to NEWSNY, the landfill does not take in - and NEWSNY does not propose to take in - any liquid wastes associated with hydrofracking.

At the issues conference, RFPLC provided a July 21, 2009, memorandum of the New York State Department of Health (Exhibit No. 11) that expressed concerns about the handling and disposal of production brine from gas wells in the Marcellus Shale, due to high levels of radium-226. NEWSNY counsel challenged the relevance of the document, arguing that NEWSNY is not proposing to take production brine at this facility, and that production brine is not part of the drilling process, but comes after the well is perforated and hydrofracked and then goes into the production phase (T: 169 - 171). DEC Staff agreed that, on the issue of drill cuttings, the DOH memorandum is irrelevant, as there is no reason to think that the cuttings should contain produced water. (T: 235)

NEWSNY points out that, under its application to increase the annual tonnage limit, no change to permissible waste streams is proposed. NEWSNY argues that, as a matter of statewide import, the issue of which wastes from the natural gas industry

may be disposed in a MSW landfill should be determined on the basis of regulations and policies applicable to all facilities, and not decided within the context of a particular permit application. I agree. In fact, this issue is before DEC in its development of, and review of comments on, the draft SGEIS for the issuance of permits for horizontal drilling and hydraulic fracturing in the Marcellus Shale.

At the issues conference, DEC Staff said it would be efficient to allow issues of allowable wastes to be entertained at this hearing, given its concern about spill cleanup wastes that had been received at the landfill. On the other hand, after concluding its investigation of those wastes, Staff reaffirmed that the issue proposed by RFPLC does not meet the regulatory standards for adjudication.

RFPLC also said it would be efficient to entertain its issue within this proceeding, now that its petition has been filed, and to the extent that the County's application is designed for, or would likely lead to, the acceptance of a large amount of Marcellus Shale wastes. I disagree. Because RFPLC's issue is unrelated to the permit modification proposed by the County, its further consideration has the potential of delaying approval of that modification if the County can demonstrate that the approval is warranted. Also, under DEC's permitting procedures, members of the public are not entitled to adjudication of their requests for permit modification.

DEC may modify permits on the basis of various grounds under 6 NYCRR 621.13(a), and permittees may request a hearing under 6 NYCRR 621.13(d) if they oppose the modification. However, under 6 NYCRR 621.13(b), interested members of the public may only request that permits be modified, and while DEC Staff must respond to the request, rejection of an interested party's request is not subject to public notice, comment or hearings.

RFPLC was able to propose its issue here because the County applied to modify its permit, and that application was referred to this office for proceedings under Part 624. However, if there had been no hearing referral, or if the County, even now, withdrew its application, RFPLC's issue would remain, which demonstrates that it does not arise from the tonnage increase, but exists independently.

In its petition, RFPLC maintains that the receipt of Marcellus Shale gas drilling wastes has changed the

environmental conditions at the landfill. Whatever the merits of this claim, "a material change in environmental conditions" since issuance of an existing permit provides a basis for that permit's modification under 6 NYCRR 621.13(a)(4), though, pursuant to 6 NYCRR 621.13(b), an interested party's request for such modification must be directed to DEC's regional permit administrator.

In the statement he provided for RFPLC's petition, Dr. Resnikoff projected that the Marcellus Shale drill cuttings disposed at the Chemung County landfill would have radioactive concentrations far above background concentrations. However, upon sampling of the cuttings, CoPhysics concluded that this was not the case: that the radium concentrations were only slightly greater than background, and the thorium and radiopotassium levels were actually less than background. According to the CoPhysics report, material is called NORM only if the concentration of uranium, radium or thorium is much higher than background, and the cuttings' radium levels were not high enough to necessitate that classification. As discussed above, RFPLC offered statements from three experts raising questions about the CoPhysics report, though DEC Staff accepted the report as confirming its position that the drill cuttings are not a threat to public health or the environment.

At the issues conference, NEWSNY and DEC Staff agreed that, to the extent the cuttings constitute or contain NORM, the NORM has not been processed and concentrated. According to NEWSNY, the only thing that happens to the cuttings is that they are physically separated from the fluids if they are in a fluid medium, and that this occurs through shakers and other mechanisms (T: 211). The mechanisms themselves are not in apparent dispute, but RFPLC disagrees with NEWSNY and DEC Staff as to whether the mechanisms process and concentrate the NORM in the wastes.

Whether the drill cuttings contain NORM that has been processed and concentrated is key to determining whether the cuttings should be disposed in a solid waste landfill regulated under Part 360 or, in the alternative, a low-level radioactive waste disposal facility regulated under Part 382. As DEC Staff counsel explained at the issues conference, the County's MSW landfill may dispose of any waste stream that is not prohibited by Part 360 or the permit issued pursuant to that part. Part 360 prohibits the disposal of radioactive materials which are regulated under Parts 380, 382 and 383 [see 6 NYCRR 360-1.5(b) and 360-2.17(m)]; however, Parts 380, 382 and 383 do not apply

to NORM or materials containing NORM unless that NORM has been processed and concentrated [see 6 NYCRR 380-1.2(e), 382.1(c)(5), and 383-1.1(b)(5)]. According to Staff counsel, since there has been no processing and concentration of the NORM in the drill cuttings, "the drill cuttings are not subject to the 380 series regulations. They are not prohibited from disposal at the landfill. And it's our position that therefore there is no adjudicable issue as to those drill cuttings in this proceeding" (T: 221). NEWSNY agreed with Staff's analysis.

As a practical matter, issues about Marcellus Shale wastes could be adjudicated in this proceeding, based on the record developed at and since the issues conference. However, doing so would serve no useful purpose if, as I contend, the determination of such issues is not relevant to a decision on the County's application. Therefore, I grant the County's motion that these issues be summarily dismissed.

With the dismissal of these issues, the permit may be amended immediately by incorporating the new special permit condition set out in Staff's letter of June 30, 2010, because the condition has been agreed to by Staff and the permittee. This can be done prior to resolution of the noise issue, because the outcome on that issue has no bearing on the condition.

Also, procedures for radiological monitoring of incoming waste may be finalized for inclusion in the landfill's operation and maintenance manual, as proposed by NEWSNY. The use of properly calibrated radiation detectors should assure that the landfill does not receive wastes that would constitute a hazard to people or the environment.

Dr. Resnikoff, RFPLC's expert, has concerns about NEWSNY's calculation of the radiation monitor alarm set point, which are outlined in a memorandum attached to RFPLC's June 30 submittal. In its June 30 submittal, DEC Staff reports that, to validate its calculation method, NEWSNY "will begin collecting samples from the waste loads for determination of NORM concentrations in the waste and will compare those values to instrument readings from those waste loads to validate their calculation method." According to DEC Staff, this direct comparison of radiation portal monitor readings to waste load concentrations, done at Staff's request, will provide the best possible approach to setting the upper alarm limit.

### "Prematurity" of Application

According to RFPLC, DEC should suspend action on the current application until the County submits a planned application for the "full build-out" of the MSW landfill at a rate of 417,000 tons per year. According to RFPLC, the current application is premature because it is an integral part of a plan to further increase the waste acceptance rate, and because the landfill has sufficient permitted disposal capacity to continue operations while the other application is completed. [Petition, pages 2 and 4.]

RULING: No suspension is warranted, nor is there any issue about segmentation of the review of this application and others that may follow.

As DEC Staff confirmed, the current application is the only one pending before DEC in relation to the County's MSW landfill. The County has submitted no application to increase waste acceptance beyond 180,000 tons per year, or to expand the landfill.

In December 2006, when the current application was filed, NEWSNY provided an environmental assessment report prepared by Barton & Loguidice. That report stated that a permit application was then being prepared "that proposes staged increases in the approved design capacity of the Chemung Landfill to 280,000 tons per year, and 417,000 tons per year, substantially above the 180,000 tons per year proposed in this modification. This future group of projects will also include expansion of the landfill cell area, development of a landfill gas to energy facility, and a related greenhouse." [See page 2-3 of the report, which is Enclosure "C" to Item No. 3 in the binder received as Exhibit No. 5.]

As lead agency, the County issued a negative declaration on April 9, 2007, for the currently proposed permit modification. That negative declaration (Exhibit No. 5, Item No. 16) said that the modification - to increase the permitted annual disposal limit to 180,000 tons per year - was "appropriately subject to segmented review under SEQRA" because while the County was conducting a separate full SEQRA review of the additional tonnage increase, along with other projects described in its lease agreement with NEWSNY, "the two increases are functionally independent of each other, each has independent utility and the increase under review is not practically determinative of the

approval of the other increase or the other projects." (See Negative Declaration, pages 3 and 4.)

At the issues conference, County counsel reported that due to a recent amendment to its contract with NEWSNY, there are now only two anticipated capacity increases: the first, to 180,000 tons per year, which is the subject of this hearing, and the second, to 417,000 tons per year, which would be combined with an expansion of the MSW landfill. The landfill expansion and the increase to 417,000 tons per year are the subject of a positive declaration, which means that an environmental impact statement will be prepared. Because of this, an application addressing the expansion and the additional tonnage increase may take several more years to reach DEC, according to counsel for NEWSNY and the County.

According to County counsel, the time has long since passed for a court challenge to the negative declaration associated with the current application. RFPLC counsel says the group did not file such a challenge because it could not afford to, having previously tried unsuccessfully to raise the segmentation issue in a challenge to the County's lease agreement with NEWSNY, which committed the parties to the series of tonnage increases.

RFPLC contends that this hearing provides its first opportunity to address DEC regarding the impacts of both the 180,000 ton increase and the 417,000 ton increase that is tied to the landfill's expansion, and the relationship between them. However, pursuant to 6 NYCRR 624.4(c)(6)(ii)(a), where another agency (in this case, the County) serves as the SEQRA lead agency, and that lead agency has determined that the proposed action does not require the preparation of a draft environmental impact statement, the ALJ will not entertain any issues related to SEQRA, which would include issues of segmentation.

RFPLC also contends that this hearing provides DEC its first opportunity to consider whether an increased waste acceptance rate is appropriate for this landfill, given its shift from a County-operated facility, for waste generated locally, to a privately-owned facility that takes waste from the wider region. According to RFPLC's petition, the landfill site has not been studied since the late 1980's, the last time an expansion was requested, and there are many reasons to question its suitability, including its close proximity to a principal aquifer and a floodplain, both associated with the Chemung River, and a high water table that could be contaminated from a breach in the landfill liner.



Siting issues would arise from an application to expand the landfill's footprint; however, no such application has reached DEC, and the current application is merely to expedite landfilling on a footprint that has been previously approved. Therefore, siting issues are not relevant to consideration of the pending request.

New Solid Waste Management Plan

According to RFPLC, DEC should suspend action on the current application until the County provides a new local SWMP in place of its existing one, dated April 1991 (Exhibit No. 7-A). [Petition, page 12.]

RFPLC argues that the County was required to provide DEC a new SWMP by August 31, 2006, under special condition No. 71 of its existing ten-year permit, which was issued on February 21, 2006.

Special condition No. 71, addressing "future submissions," reads as follows:

"The following documents must be updated to accurately reflect current landfill operation and/or solid waste management practices. These documents shall be submitted by the Permittee no later than August 31, 2006.

a. Operation and Maintenance manual in accordance with 6 NYCRR Part 360-2.9.

b. Contingency plan in accordance with 6 NYCRR Part 360-2.10.

c. Local Solid Waste Management Plan (LSWMP)."

RULING: No suspension is warranted.

As DEC Staff explained, special condition No. 71 did not require the submittal of a new local SWMP, only the updating of the existing one. In fact, as the County points out, an August 2006 update (Exhibit No. 18) was provided specifically to satisfy the permit condition, and additional updates have been provided in December 2008 (Exhibit No. 19) and April 2009 (Exhibit No. 20). Staff counsel said DEC asked for the updates so that its record would be transparent about changes that occurred at the landfill, and that DEC approved the submittals

that it was given. (T: 306). (The August 6, 2009, approval letter for the April 2009 update is Exhibit No. 21.)

At the issues conference, County counsel said that the County had begun the process of creating a new local SWMP to replace the existing one, which expires in 2011, and would submit a draft for DEC's review by September 2010. He said that members of the public, including RFPLC, would have an opportunity to participate in the SWMP's development. Development of a new SWMP may occur while the hearing proceeds on the pending request for permit modification.

#### Modification of Solid Waste Management Plan

According to RFPLC, DEC should suspend action on the current application until the County undertakes a modification of its local SWMP pursuant to 6 NYCRR 360-15.11. [Petition, pages 13 to 15.]

RFPLC contends that the County has not submitted a modification since its SWMP was approved in 1991, although several changes requiring a modification have occurred.

According to 6 NYCRR 360-15.11(b), a plan modification is required if there is:

- (1) a significant change in the method of managing all or any significant portion of the solid waste generated within the planning unit;
- (2) a significant change in the management or administration of the planning unit; or
- (3) a change of more than one year to any significant component of the SWMP implementation schedule.

RFPLC states that, as required by the County's 2005 lease with NEWSNY:

- (1) Waste management facilities that were previously operated by the County have all been privatized;
- (2) The County has repealed a crucial element of its SWMP that prohibited importation of waste into the County and prohibited exportation of county waste to outside facilities; and
- (3) The County has rescinded its scale of disposal charges for its waste management facilities, giving NEWSNY the power to set such charges [see Exhibit 7-I, the Chemung County

Legislature resolution (No. 05-317) rescinding the scale of charges].

Furthermore, RFPLC states that there has been no meaningful progress in meeting the County's 1991 SWMP implementation schedule for achieving a 40 percent recycling rate. According to RFPLC, the percentage of materials recycled by the County has not risen above single digits, the same recycling rate that the County had in 1991, while the landfill has been converted from a local to a regional facility, with an interstate service area.

According to RFPLC, each of these changes should have been addressed in a formal plan modification, and this hearing should not move forward until each of these modifications is submitted and reviewed by DEC.

With regard to recycling, RFPLC also says that the County is not complying with special conditions Nos. 66 - 68 of its existing landfill permit, which read as follows:

66. The Permittee shall assure that the recyclables recovery program is implemented in accordance with the time frames indicated within Chemung County's Comprehensive Recycling Analysis (CRA). Any revisions made to the program and/or the schedule, shall be submitted to the Department for review and approval.

67. The Permittee shall ensure that the recyclable recovery program is implemented in accordance with the time frames indicated in the Department approved Chemung County Comprehensive Recycling Analysis and any Department approved revisions or updates to this document. Any significant revisions made to the program and/or the schedule shall be submitted to the Department for review and approval.

68. Annual reports shall be submitted on the effectiveness of the recycling program. This report should provide the total solid waste produced by the County, a breakdown of the solid waste by percentages, and the actual percentages/tonnages of recyclables removed. These numbers should be compared to those estimates found in the CRA. If the CRA estimates are not met, an explanation should be provided with a plan of action to correct this shortfall.

More particularly, RFPLC says that the County has failed to meet the time frames for implementing the recyclable recovery

program, and has not submitted a plan for correcting its failure to meet the recycling goal of its CRA.

RULING: No hearing suspension is warranted.

RFPLC has not demonstrated that a modification of the SWMP is required, and no modification has been requested by DEC Staff. Information that RFPLC says should have been addressed by a SWMP modification has been provided by other means. Even if the County should have provided this information by a SWMP modification, its failure to do so would not affect the processing of this application to modify the landfill permit. Finally, issues about recycling, including the County's failure to meet the recycling goal in its SWMP, are not adjudicable in this proceeding.

According to RFPLC, various modifications of the County's SWMP are required before this application may proceed. However, as the County argues, it is up to DEC Staff in the first instance to determine whether a modification is necessary. DEC Technical Administrative Guidance Document ("TAGM") SW-96-08 states that to determine when a modification to a local SWMP is required, the planning unit should consult with the appropriate DEC regional solid and hazardous materials engineer, who will determine whether the proposed change is significant and if a modification to the local SWMP is necessary. Significant changes under the TAGM include but are not limited to "privatization of solid waste management within the planning unit, a change in the method of managing one-third or more of the planning unit's waste and/or a modification of an implementation schedule that would change the start-up date of any major component of the solid waste management systems by one year or more." [See TAGM SW-96-08, "Review of Local Solid Waste Management Plans," effective May 3, 2001, page 4 of 5.]

At the issues conference, DEC Staff counsel referenced each of the changes for which a plan modification is required under 360-15.11(b), arguing that none of them applied. I agree. The method by which most of the county's waste is managed - landfilling - has not changed, regardless of the fact that a portion of the waste is now disposed outside the county. There has been no significant change in the management or administration of the planning unit - which is the County - regardless of the lease agreement under which NEWSNY now operates the landfill. Finally, the failure to achieve the SWMP's recycling goal - 40 percent waste recycling by 1997, consistent with the goal of the state SWMP - does not constitute

a change to the schedule under which components of the local SWMP were to be implemented.

While Chemung County has not submitted a formal modification of its SWMP, the County has disclosed information through other reporting mechanisms mandated by DEC regulation. The County documented its lease agreement with NEWSNY in an August 2006 SWMP update (Exhibit No. 18). At the issues conference, County counsel characterized the arrangement not as a privatization of solid waste management, but as the provision of such services under a public-private partnership, where the County still holds the landfill permit and its approval is required for everything that happens. (T: 346) In February 2005, the County provided a SWMP compliance report (Exhibit No. 7-H) that indicated which particular components of its 1991 SWMP had been implemented, explained obstacles and deviations from the implementation schedule, and set out a revised schedule for various activities. The report acknowledged that the 40 percent recycling goal had never been reached "due to a combination of economic market factors and private recycling activities." (Exhibit No. 7H, SWMP compliance report, page 5.) Finally, the County provides annual reports that document the extension of the landfill's service area beyond Chemung County, and how much waste is received from these other counties. (See Exhibits 7-F and 7-G, the annual reports for 2008 and 2009.)

According to 6 NYCRR 360-1.8(g), a permit application made by or on behalf of a municipality in a planning unit for the construction of a solid waste management facility shall not be complete until a local SWMP, including any required plan modifications or updates, is in effect for the municipality. However, this is not an application to construct; the landfill's construction was previously approved, and the application would merely allow the constructed facility to fill more quickly.

Because this is an application to modify the landfill permit, there must be a demonstration under 6 NYCRR 360-1.9(c)(4) that, as modified, the facility will be capable of compliance with the applicable requirements of the ECL and Part 360. However, this is a demonstration applicable to the facility and not to the planning unit. As such, this provision does not open the door to consideration of the planning unit's obligations with regard to its SWMP.

At the issues conference, County counsel acknowledged that in its 1991 SWMP, the County set a goal of recycling 40 percent of its waste, and that it is lagging in reaching that goal,

despite the efforts it has undertaken. However, in connection with its permit, the County claims it has met requirements to report on recycling and explain and offer alternative schedules (T: 320), an assertion that was not disputed by DEC Staff.

In its April 2009 SWMP update (Exhibit No. 20), the County said that one reason the 40 percent recycling goal had not been achieved "is that there are a number of recycling streams, mainly industrial, which do not pass through the Chemung County facilities and are not included in the totals contained in the recycling reports." The County wrote that the true recycling totals for Chemung County are higher than the reports show, but all the information is not available to calculate the total amount of material recycled. Finally, the County wrote that with the introduction of single stream recycling in January 2006, the percentage of materials recycled or recovered has increased dramatically and will continue to increase." [April 2009 SWMP update, page 5.]

According to DEC Staff, the County accepts recyclables free of charge at its transfer stations, and has a "pay as you throw" approach for garbage, which provides a recycling incentive. Also, DEC Staff reports that the County has a new voucher program for the recycling of televisions, and programs for recycling florescent bulbs and computers, both for a fee. Staff contends that the County has implemented a recycling program, as required, that approval of this pending application would not in any way hinder the County's efforts to meet its recycling goal, and that, at any rate, meeting that goal is not a regulatory requirement enforceable by DEC. RFPLC disagrees, saying that application approval would be a recycling disincentive because "you make more money from dumping waste, you have to pay money or make less money for managing recyclables." (T: 354).

Recycling was proposed as an issue by an opponent of Sullivan County's application for permits to build the Phase II expansion of its landfill. In claims similar to those raised here, opponent Mountain Lodge Estates ("MLE") argued that Sullivan County had failed to meet the recycling goals established under its SWMP, and that the expansion would serve to exacerbate the situation.

In an interim decision addressing my ruling excluding recycling as an issue for adjudication, the Commissioner acknowledged that DEC seeks to encourage resource recovery from solid waste, and that Sullivan County had not attained the

recycling goal in its SWMP. However, he said these factors did not warrant reversing my ruling, and then added:

"Landfilling remains a component of the County SWMP. This also is true of recycling. The fact that the County has not achieved the recycling rate it established in its SWMP does not, by itself, create an issue for adjudication. A proposed issue must engender "sufficient doubt about the applicant's ability to meet statutory or regulatory criteria applicable to the project, such that a reasonable person would require further inquiry" (6 NYCRR 624.4[c][2]). However, MLE has not cited any statute or regulation that mandates a specific recycling rate . . . Accordingly, this does not present an issue that is "substantive" as defined by 6 NYCRR 624.4(c)(2)." [Matter of Sullivan County Division of Solid Waste, Interim Decision of the Commissioner, March 28, 2008, page 11.]

At the issues conference, County counsel said that recycling would be a major subject of the new SWMP that the County is developing, and NEWSNY counsel said that the tools to increase recycling can be discussed in the context of its development. Because the deadline is looming for a new SWMP, issues about the existing SWMP are particularly unsuitable for adjudication in this hearing.

#### Comment Opportunity

According to RFPLC, this application should have been the subject of a formal comment period as a "major project" under Parts 360 and 621 of DEC's regulations. [Petition, page 5.]

RULING: No issue exists, as two opportunities for comment have been provided, one in response to DEC Staff's notice of complete application, dated May 23, 2007, and a second in response to my office's notice of legislative hearing and issues conference, dated March 5, 2010.

In Staff's notice of complete application, the application was considered as one for a "minor" permit modification in accordance with 6 NYCRR 360-1.8(e)(1)(ii). Staff's notice said that "[a]lthough a public notice is not normally issued for a minor permit modification, the Department is exercising its discretion pursuant to 6 NYCRR 621.7(g) and 621.11(h)(3) to require a public notice and comment period for this proposed tonnage increase due to the known public interest in this project."

According to 6 NYCRR 621.11(h)(3), DEC may determine that any application for permit modification will be treated as a new application for a permit if an opportunity for public comment or hearing or both is required by law or is deemed necessary to by DEC. RFPLC argues that pursuant to 6 NYCRR 360-1.8(e)(1)(ii), the application to modify the permit must be treated as a new application, a point of disagreement with DEC Staff. However, because for purposes of public comment, DEC treated the application as if it were a new application, this point need not be pursued.

Likewise, there is no point in pursuing whether this is a major or minor project under Part 621, because it has been treated as a major project, as evidenced by the public hearing that has been conducted. According to 6 NYCRR 621.8(e), DEC normally does not require public hearings in connection with minor projects, but if a public hearing is required for a minor project, the application shall be treated as a major project for purposes of Part 621.

At the issues conference, I pointed out that notice of the application was given and that public comment was received, to which RFPLC's counsel responded, "That's right and we certainly appreciate what the Department did." I then inquired as to what else would be required for treating this as a major project that DEC did not do, and RFPLC's counsel said, "I don't think there would be anything else." (T: 303.)

In sum, no issue exists for adjudication, and there is no basis for suspending action on this application based on some perceived flaw in how it was categorized or processed.

#### **ISSUES RULING SUMMARY**

An issue exists as to whether noise from Cell IV-B landfill operations under the higher maximum waste acceptance rate proposed by the County would exceed the allowable limit at 6 NYCRR 360-1.14(p) for properties along Roberts Hollow Road. None of the other issues proposed by RFPLC in its petition warrant adjudication or a suspension of action on the County's application.

A ruling is reserved on RFPLC's late-raised claim that the sound level of the compactor used at the landfill exceeds the limit set at 6 NYCRR 360-1.14(p)(4).



## **RULING ON PARTY STATUS**

According to 6 NYCRR 624.5(d) (1), to secure full party status, a prospective intervenor must:

- (1) file an acceptable petition pursuant to 6 NYCRR 624.5(b) (1) and (2);
- (2) raise a substantive and significant issue or be able to make a meaningful contribution to the record regarding a substantive and significant issue raised by another party; and
- (3) demonstrate adequate environmental interest.

Each of these elements is discussed below in relation to the petition filed on behalf of RFPLC.

### Acceptable Petition

RFPLC filed a petition addressing all the elements contemplated by the regulations.

### Substantive and Significant Issue

RFPLC has raised a substantive and significant issue as to whether noise from Cell IV-B landfill operations under the higher maximum waste acceptance rate proposed by the County would exceed the allowable limit at 6 NYCRR 360-1.14(p) at properties along Roberts Hollow Road.

### Adequate Environmental Interest

RFPLC's environmental interest was not challenged by the County, NEWSNY, or DEC Staff (T: 356 - 357).

According to its petition, RFPLC is a not-for-profit, charitable corporation with the mission of advocating for sound solid waste management in Chemung County. It was formed in response to the County's decision to privatize the operation of County-owned waste management facilities, including the landfill in question. All of its members are county residents, including ones who live, work, attend school and travel near the landfill. Fifteen members live in close proximity to the landfill on Roberts Hollow Road, and another fifteen live in close proximity to the landfill on County Route 60.

RULING: Having filed an acceptable petition, raised a substantive and significant issue in relation to the pending

application, and demonstrated an uncontested environmental interest in this proceeding, RFPLC's petition for full party status is granted.

### **APPEALS**

A ruling of the ALJ to include or exclude any issue for adjudication, a ruling on the merits of any legal issue made as part of an issues ruling, or a ruling affecting party status may be appealed to the Commissioner on an expedited basis [6 NYCRR 624.8(d)(2)]. Ordinarily, such appeals must be filed in writing within five days of the disputed ruling [6 NYCRR 624.6(e)(1)]. Allowing extra time due to the length of these rulings, any appeals must be received no later than 4 p.m. on September 22, 2010. Any responses to appeals must be received no later than 4 p.m. on October 6, 2010.

The original and three copies of each appeal and response thereto must be filed with Commissioner Alexander B. Grannis (attn: Louis A. Alexander, Assistant Commissioner for Hearings and Mediation Services), at the New York State Department of Environmental Conservation, 625 Broadway (14<sup>th</sup> Floor), Albany, New York 12233-1010. The copies will be forwarded to me and Chief ALJ James T. McClymonds. One copy of each submittal must be sent to all others on the service list at the same time and in the same manner that the submittal is sent to the Commissioner. Service of papers by facsimile transmission (FAX) or e-mail is not permitted, and any such service will not be accepted.

Appeals should address my rulings directly, rather than merely restate a party's contentions. To the extent practicable, submittals should include citations to transcript pages and exhibit numbers. A list of the marked conference exhibits is attached to these rulings. The record also includes all the aforementioned post-conference submittals and all other correspondence between me and the conference participants, which I have retained in a separate folder.

### **ORDER OF DISPOSITION**

DEC's permit hearing procedures state that there will be no adjournment of the hearing during appeal except by permission of the ALJ [6 NYCRR 624.8(d)(7)]. Recognizing the County's interest in securing a timely decision on its application, adjudication of the noise issue shall not be stayed pending resolution of appeals to these rulings, unless a stay is

requested from and ordered by the Commissioner. NEWSNY counsel shall arrange a conference call to be held with me and the other parties' counsel after the September 22 deadline for appeals of these rulings. The call will discuss future proceedings, including scheduling of the adjudicatory hearing on the noise issue identified in these rulings, and scheduling of written submittals addressing compliance with 6 NYCRR 360-1.14(p)(4), in relation to compactor noise.

/s/

Albany, New York  
September 3, 2010

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Edward Buhrmaster  
Administrative Law Judge

## ISSUES CONFERENCE EXHIBIT LIST

CHEMUNG COUNTY LANDFILL PERMIT MODIFICATION  
DEC Project No. 8-0728-00004/00013

1. Notice of Legislative Hearing and Issues Conference (3/5/10), with transmittal letter to counsel (3/5/10)
2. Notice of Legislative Hearing and Issues Conference, as published in DEC's on-line Environmental Notice Bulletin
3. Confirmation of publication of hearing notice in Broader View Weekly (3/11/10) and Elmira Star-Gazette (3/12/10)
4. Hearing notice distribution list (3/5/10)
5. Documents relating to capacity increase at Chemung County Landfill (binder prepared 3/3/10 by the West Firm (List of binder contents attached)
6. Draft permit provided by DEC Staff at issues conference, with proposed new language highlighted in red ink
7. Petition for full party status filed by Gary A. Abraham, Esq., on behalf of Residents for the Preservation of Lowman and Chemung (with attached Exhibits A, B and C)
  - 7-A. Integrated Solid Waste Management Plan for Chemung County (4/91) (cited at petition footnote 47)
  - 7-B. Update to the Integrated Solid Waste Management Plan for Chemung County (4/09) (petition footnote 13)
  - 7-C. 2005 annual report for Chemung County Sanitary Landfill (cited at petition footnote 5)
  - 7-D. 2006 annual report for Chemung County Sanitary Landfill (cited at petition footnote 5)
  - 7-E. 2007 annual report for Chemung County Sanitary Landfill
  - 7-F. 2008 annual report for Chemung County Sanitary Landfill
  - 7-G. 2009 annual report for Chemung County Sanitary Landfill
  - 7-H. Chemung County Solid Waste Management Plan Compliance Report for 2003 and 2004 (2/25/05) (cited at petition footnotes 1 and 4)
  - 7-I. Chemung County Legislature Resolutions No. 05-317 (2 pages) and 05-316 (2 pages) (cited at petition footnote 44)
  - 7-J. Operation, Management and Lease Agreement between Chemung County and New England Waste Services of NY, Inc., and Casella Waste Systems, Inc. (9/19/05) (pages 1 to 19, as cited at petition footnote 43)
  - 7-K. Letter from Frank E. Shattuck, P.E. (for DEC) to Dennis Fagan (for Chemung County), with attachment (8/1/86) (cited at petition footnote 6)

7-L. Letter from Frank E. Shattuck, P.E. (for DEC) to Robert Roller (for Chemung County) (cited at petition footnote 6)

7-M. DEC memorandum from Mr. Barolo to Mr. Nosenchuck (1/30/89)

7-N. Mapping of Unconsolidated Aquifers in Upstate New York (Finger Lakes Sheet) by Todd S. Miller (1998)

7-O. Excerpt from Hydrogeology of the Waverly-Sayre area in Tioga and Chemung counties, NY, and Bradford County, Pa. (Richard Reynolds, 2002)

8. Letter from Gary Maslanka (for DEC) to Joseph Boyles (for Casella) and Michael Krusen (for Chemung County) requesting additional information for two waste streams (4/27/10)

9. Sound Level Monitoring Summary Report for Chemung County Landfill, prepared by Barton & Loguidice (4/10)

10. Radiological Survey Report for Marcellus Shale Drilling Cuttings, prepared by Theodore E. Rahon of CoPhysics Corp. (4/26/10)

11. Comments of NYS Department of Health Bureau of Environmental Radiation Protection on Supplemental Generic Environmental Impact Statement addressing horizontal drilling and high-volume hydraulic fracturing in the Marcellus Shale (7/21/09)

12. Chemung County Legislature Resolution No. 06-275, and Legislature's Positive Declaration (6/12/06) for actions including proposed landfill expansion and tonnage increase at Chemung County Landfill

13. Draft radiation monitoring protocol for inclusion in landfill operations and maintenance manual

14. Technical manual for Ludlum Model 375P-336 & 375P-1000 Radiation Detector Systems, prepared by Ludlum Measurements, Inc. (9/06)

15. U.S. District Court decision in Finestone vs. Fla. Power & Light Co. (1/5/06) (2006 U.S. Dist. LEXIS 7743)

16. Review of the Radioactive Waste Campaign's report, Living Without Landfills, by the National Council on Radiation Protection and Measurements (2/15/89)

17. Confirmation of County's acquisition of Henrich (formerly Call) property, including copy of the recorded deed (Exhibit No. 17-A) and Purchase and Sale Agreement (Exhibit No. 17-B)

18. Update to the Integrated Solid Waste Management Plan for Chemung County, prepared by Barton & Loguidice, P.C. (8/06)

19. Update to the Integrated Solid Waste Management Plan for Chemung County, prepared by New England Waste Services of N.Y., Inc. (12/08)

20. Update to the Integrated Solid Waste Management Plan for Chemung County, prepared by New England Waste Services of N.Y., Inc. (4/09)

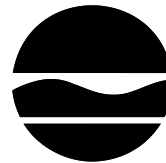
21. Letter from Gary Maslanka (for DEC Staff) to Carla Canjar (for Chemung County Landfill) indicating approval of 4/09 Update to County's Integrated Solid Waste Management Plan (8/6/09)

New York State Department of Environmental Conservation  
Office of Hearings and Mediation Services, 1<sup>st</sup> Floor

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Alexander B. Grannis  
Commissioner

**M E M O R A N D U M**

June 3, 2010

TO: Attached Service List

FROM: Edward Buhrmaster, Administrative Law Judge

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

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This confirms the conference call held on June 1 with counsel for the issues conference participants. The call was held primarily to address NEWSNY's request that I strike submittals made on behalf of RFPLC in response to the following April 2010 reports received at the issues conference on April 28: (1) the Barton & Loguidice sound level monitoring summary report (Exhibit No. 9) and (2) the CoPhysics radiological survey report on Marcellus shale drill cuttings (Exhibit No. 10). Because these reports were not part of the application materials available prior to the petition deadline, and were not available for careful review prior to the issues conference, I set a May 19 deadline for RFPLC and DEC Staff to make submittals responding to the information contained in the reports. As confirmed in a memorandum of May 6, I set the same deadline for RFPLC and DEC Staff to provide their positions as to how use of radiation detectors, discussed in Exhibits No. 13 and 14, may address RFPLC's concern about the disposal of potentially highly radioactive Marcellus shale gas drilling wastes (Item No. 1 in RFPLC's petition, Exhibit No. 7.)

DEC Staff responded in a letter of May 18, 2010, from counsel Lisa Schwartz, as to which there is no objection. RFPLC responded in a letter of May 18, 2010, from counsel Gary Abraham, which was accompanied by letter from RFPLC's noise expert, Stephen Szulecki; a report by Dr. Marvin Resnikoff, RFPLC's previously identified expert on radioactive waste management; and a letter from Dr. Anthony Ingraffea, a newly identified engineering expert. An additional letter, from Dr.

Conrad Volz, an environmental health expert, was provided by RFPLC under separate cover.

In its May 21 letter, NEWSNY objects to RFPLC's submittals as going above and beyond a response to Exhibits No. 9 and 10. According to NEWSNY, the submittals evidence a blatant attempt to bolster RFPLC's petition by raising new arguments not previously advanced, rearguing arguments previously made and offering further information (which NEWSNY says preexisted the issues conference) in an attempt to bolster such arguments, while offering two proposed expert witnesses (Dr. Ingraffea and Dr. Volz) not previously disclosed. NEWSNY moves to strike the aforementioned submittals and, to the extent they are not stricken, requests an opportunity to respond to them. During our conference call, DEC Staff said that it joins NEWSNY's motion, noting that I had restricted Staff's and RFPLC's responses to the information in the two reports, and that addressing additional information in RFPLC's papers would be a drain on Staff resources.

I hereby strike portions of RFPLC's submittals, as discussed below, and afford NEWSNY and DEC Staff an opportunity to respond to the material not stricken.

### Radioactivity Issue

As noted above, the submittals of Dr. Resnikoff, Dr. Ingraffea and Dr. Volz bear on the proposed radioactivity issue, where RFPLC offers to prove that disposal of Marcellus shale gas waste streams in the Chemung County landfill does not comply with Part 360, and argues that the permit should be modified to specifically prohibit acceptance of these waste streams. RFPLC's claims were raised in its petition on the basis of Dr. Resnikoff's analysis and proffered testimony. NEWSNY responded with the CoPhysics report, which involved a screening analysis of confirmed Marcellus shale samples collected at rig sites in the northern tier of Pennsylvania, and drill cuttings as delivered to three of NEWSNY's landfills. After analysis for total radioactivity levels, the report concluded that the rock cuttings from the Marcellus shale gas drilling operations have radionuclide levels so low that they do not pose any environmental health problem and are acceptable for disposal at NEWSNY's Part 360 landfills, particularly with the installation of portal radiation monitors at the truck scales. The CoPhysics report did not include an evaluation of pipe scale, brine filtrates and associated sludges, and the report said that the detection system is to ensure that only acceptable drilling cut



rock is received at the landfills, and that pipe scale, filtrates or sludges, which the report said are known to contain elevated levels of naturally occurring radioactive material, are not inadvertently disposed.

RFPLC has offered three submittals in response to the information in the CoPhysics report, each of which is discussed below.

- - Resnikoff report of May 19, 2010

Dr. Resnikoff's report contains sections that address NEWSNY's proposed use of radiation detectors (Section 5.3) and alleged mistakes in the methodology employed in the CoPhysics report (Section 6.0). During the conference call, NEWSNY and DEC Staff acknowledged no objection to these sections, and, since they clearly respond to NEWSNY's submittals offered at the issues conference, I shall receive them as part of the conference record. The remainder of Dr. Resnikoff's report is not a response to NEWSNY's submittals and contains information that could have been provided in his initial memorandum. Also, that memorandum already contains an overview of the drilling and production processes, which were discussed at the issues conference as well. Therefore, except for the two sections identified above, I hereby strike the May 19 report, and it will not be considered in my issues rulings.

- - Ingraffea letter of May 17, 2010

Dr. Ingraffea writes that whether the CoPhysics report is accurate is less important than whether it is relevant to this matter, as he claims there is no information in the CoPhysics report that allows the reader to determine whether the waste sampled and tested, as reported, originates from Marcellus shale. During our call, NEWSNY counsel said that the rig site samples were derived from horizontal drilling, citing references in the report to data having been collected about the lateral distance into the formation from which cuttings were taken. To the extent that the Ingraffea letter challenges the relevance of the CoPhysics report, I am receiving it as responsive to my directive, and allowing NEWSNY the opportunity to provide whatever additional information it has about where the samples were taken. However, the rest of the report purports to be a characterization of the process by which drill cuttings are generated at a Marcellus shale gas well, the nature of cuttings waste, and the processes that explain how the waste becomes concentrated with natural radioactivity in the shale. This

discussion and an overview of Dr. Ingraffea's observations at a drilling pad last month are not responsive to the information in the CoPhysics report, and are hereby stricken.

- - Volz letter of May 19, 2010

Like Dr. Ingraffea, Dr. Volz writes that it is not clear from the CoPhysics report that samples were taken from and are scientifically representative of waste that originates from the horizontal portion of a Marcellus shale drilling operation, which he says is known to be enriched in various naturally occurring radionuclides in the uranium-238 decay chain. These claims are responsive to the information in the CoPhysics report, and the letter shall be received as confirmation of them, with an allowance for NEWSNY to respond. On the other hand, the letter also claims that drill cuttings should be assessed for radon activity prior to a determination whether to accept the cuttings at the landfill. This claim, included at the end of the letter, goes beyond a response to the analysis actually contained in the CoPhysics report; for that reason it is hereby stricken.

NEWSNY objects to any consideration of the Volz and Ingraffea submittals because these experts were not identified in RFPLC's petition. However, my allowance for a response to the information in the CoPhysics report was not limited in terms of who could respond; it was limited only in terms of scope.

NEWSNY also objects to any consideration of RFPLC's submittals responding to the CoPhysics report, on the ground that the radioactivity issue proposed by RFPLC is not properly before me. As I confirmed during our conference call, while I maintain reservations about whether this issue is relevant to consideration of the proposed permit modification (which is to raise the landfill's maximum waste acceptance limit) I have not yet ruled on that point. I appreciate that NEWSNY is requesting summary dismissal of any issue relating to the particular wastes that are currently being received at the landfill, including wastes containing naturally occurring radioactive material.

Finally, NEWSNY objects to the argument in Mr. Abraham's letter of May 18, noting that it should have been part of RFPLC's petition. To the extent that Mr. Abraham's letter questions whether the CoPhysics report addresses wastes originating from horizontal drilling in the Marcellus shale (as these wastes are understood to be more radioactive than wastes from the vertical drilling leg) I shall receive at as responsive

to the CoPhysics report. On the other hand, I hereby strike the portion of the letter that continues the argument from the petition and issues conference as to whether cutting wastes are processed and concentrated and therefore inappropriate for disposal in a Part 360 landfill. The conference participants' positions on this point are already known, and additional elaboration is not necessary. I shall allow and will consider Mr. Abraham's argument defending Dr. Resnikoff's expert credentials in light of NEWSNY's criticism based on the Finestone matter, as I do not think Mr. Abraham had an adequate opportunity to offer such argument at the issues conference. I hereby strike the excerpt from the hazardous waste permit (referenced in Abraham footnote 3) and the Scientific American article (referenced in Abraham footnote 6) as beyond the scope of the response I solicited and irrelevant to the particular issues proposed in the petition.

Noise Issue - - Szulecki letter of May 18

I shall receive the Szulecki letter in its entirety as responsive to the Barton & Loguidice sound level monitoring report of April 2010. The letter includes both a critical review of the report as well as additional straight line modeling to confirm RFPLC's contention that landfill operations will create an exceedance of the rural residential noise limit established at 6 NYCRR 360-1.14(p). The letter also claims that the Caterpillar D6R bulldozer, identified in the Barton & Loguidice report as one of the working face equipment pieces, exceeds the sound level allowed for it pursuant to 6 NYCRR 360-1.14(p)(4). No issue was proposed as to 6 NYCRR 360-1.14(p)(4) in the petition; however, it shall be considered as a possible issue for adjudication in conjunction with the broader proposed issue of noise from the entire landfill, given the identification of the bulldozer in the Barton & Loguidice report.

NEWSNY objects to the additional modeling in Mr. Szulecki's May 18 letter as a new offer of proof by RFPLC as opposed to an analysis and critique of the work done by Barton & Loguidice. However, I view the modeling as intended to show that a real question remains as to whether compliance with the Part 360 standard can be maintained [see definition of "substantive" issue at 6 NYCRR 624.4(c)(2)], and that Mr. Szulecki's criticisms are therefore meaningful.

During our conference call, NEWSNY proposed the possibility of real-time monitoring of noise throughout landfill operations, with a requirement that operations be throttled back

(accomplished by a temporary shutdown, with trucks kept from the working face) if any noise exceedance is projected. NEWSNY proposed that monitoring could be accomplished with a calibrated monitoring station, with data recorder and warning system, located on property controlled by the landfill and facing in the direction of the most sensitive off-site receptors. Though RFPLC would prefer modeling in the first instance to provide a reasonable assurance that noise would be kept within regulatory limits, RFPLC said it would be willing to discuss monitoring options with NEWSNY and DEC Staff. As I am not striking Mr. Szulecki's May 18 submittal, NEWSNY's response may include a real-time monitoring proposal as a basis for perhaps eliminating any issue that might be identified for adjudication under 6 NYCRR 360-1.14(p).

As discussed during our conference call, the schedule for additional submittals is as follows:

(1) NEWSNY shall have until June 9 to respond to any portions of RFPLC's submittals that have not been stricken.

(2) RFPLC shall have until June 30 to respond to any additional submittal that NEWSNY makes.

(3) DEC Staff shall have until June 30 to respond both to RFPLC's submittals to the extent not stricken, and any response to them by NEWSNY. This would include any response DEC Staff chooses to make in relation to Mr. Szulecki's May 18 letter.

#### DEC Staff Information Request

DEC Staff issued a letter (Exhibit No. 8) dated April 27, 2010, requesting that NEWSNY and the County provide additional information about two particular waste streams received at the landfill, both from producing natural gas well facilities. After our conference call, under a cover letter of June 1, NEWSNY provided its response to the April 27 letter, as well as a copy of a procedure that has been submitted to DEC relative to the operation of the radioactivity detectors installed at the landfill and a protocol to be followed if radioactivity is detected beyond a certain threshold. During our conference call, NEWSNY said it was experimenting with the detectors but that they would not be operational until Staff approves a protocol for them.

At the issues conference, DEC Staff said that the information provided in response to its April 27 letter could

affect Staff's position on NEWSNY's proposed permit modification and cause Staff to reassess the structure of its draft permit. To the extent DEC Staff adjusts its position, I and the other issues conference participants need to be notified. DEC Staff said it would respond by June 30 to the information provided by NEWSNY in response to its April 27 letter. I am not soliciting a response from RFPLC; I directed that NEWSNY provide the information to RFPLC at the same time it was transmitted to DEC Staff because RFPLC could request the information from DEC under the Freedom of Information Law (FOIL), and because transmittal from NEWSNY directly would be more expeditious.

If DEC Staff and NEWSNY agree on a detector protocol and the detectors begin operating, NEWSNY shall advise us. Should any truck carrying a Marcellus shale waste stream set off the detector alarm, NEWSNY shall advise us as to how the incident was handled, including any involvement by DEC Staff.

At this point I am reviewing the transcripts of the legislative hearing and issues conference, with the expectation that I will make one set of rulings on issues and party status. Once my transcript review is completed, I will circulate a list of proposed transcript corrections, and an opportunity will be provided to you to state any objections to my corrections, and to propose others of your own.

Thank you for your attention to this matter.