24 July 2002

Mr. Steve Zappe  
New Mexico Environment Department  
Hazardous Waste Bureau  
2905 Rodeo Park Drive, Building E  
Santa Fe, NM 87505  

Dear Mr. Zappe:

This letter submits supplemental comments by the New Mexico Attorney General’s Office concerning a proposed modification to the Hazardous Waste Act permit for the Waste Isolation Pilot Plant (WIPP). The proposed modifications would establish new drum age criteria (DAC) for taking a representative headspace gas sample based on additional packaging configuration groups.

These comments are submitted in response to additional comments submitted by the U.S. Department of Energy (DOE) on June 27, 2002. In those comments DOE itself responded to the public notice from the New Mexico Environment Department (NMED), dated May 13, 2002, announcing NMED’s intent to approve a Class 3 modification to the WIPP permit. The NMED public notice announces the availability of draft permit language. DOE also filed further supplemental comments on July 19, 2002.

The DAC contained in the permit as issued in 1999 have the purpose of ensuring that headspace gases have reached 90% of steady state concentration within each layer of confinement and are 142 days after packaging for debris waste (S5000) and 225 days...
after packaging for homogeneous solids (S3000) and soil/gravel (S4000). These values are based on bounding assumptions, including five layers of confinement for debris waste and two layers of confinement for homogeneous solids and soil/gravel.

DOE has been seeking a modification to DAC since November of 2000. Throughout the process, comments have focused on the need to demonstrate that DOE can identify, in characterization of containers, the factors that would determine the DAC applicable to each container. See comments filed by this Office and by the Environmental Evaluation Group, dated Feb. 9, 2001. NMED’s initial denial of a Class 2 modification request identified the same problem. See NMED letter to DOE, March 26, 2001.

Subsequently, in its May 2, 2001 proposal, DOE requested that the permit state that radiography and/or visual examination will be used in conjunction with acceptable knowledge to determine and/or verify an appropriate packaging configuration for specifying the container-specific DAC. (A-16). In addition, DOE proposed that the permit require headspace gas sampling documents to report, as to each container, the sampling scenario from Table B1-5, associated information from Tables B1-6 and/or B1-7, the packaging configuration from Table B1-8, and associated information from Tables B1-9 or B1-10. (at A19). The cited tables call for data as to layers of confinement, filter diffusivity, and rigid liner opening diameter. (at A-22 through A-29). On August 30, 2001 NMED ruled, as to this second Class 2 proposal, that Class 3 procedures would be followed.

On May 13, 2002, NMED gave notice of its intent to approve, subject to public review and comment, a Class 3 permit modification containing changes in DAC and
released the text of draft permit changes. The draft permit language corresponded largely to the changes sought by DOE. As DOE requested, the draft would state:

“Radiography and/or visual examination will be used to examine every waste container to verify its physical form and shall be used in conjunction with acceptable knowledge to determine and/or verify an appropriate packaging configuration for specifying the container-specific drum age criterion (DAC).” (NMED May 13, 2002 draft, at B-12).

Similarly, NMED’s draft would require, as DOE had requested, that headspace gas sampling documents record individually the sampling scenario, packaging configuration, and associated information, including diameter of the rigid liner vent hole and filter diffusivity. NMED May 13, 2002 draft, at B1-2. The DAC tables, Att. B1, Tables B1-5 through B1-10, in NMED’s draft were essentially as in DOE’s proposed modification. NMED May 13, 2002 draft, at B1-37 through B1-46.

However, in answer to the draft permit, DOE filed additional comments on June 27, 2002. DOE responded to the difficulty of characterizing certain factors used to establish DAC. DOE’s comments reduced the scope of the requested modification to the following:

“Information to determine the DAC will be documented for newly generated or repackaged waste containers . . . , or waste containers vented by lid punching . . . ; otherwise, the waste containers must be assigned a default DAC.” DOE-CBFO Comments, June 27, 2002, at 1.

The implication of DOE’s June 27, 2002 comments is that, contrary to DOE’s previous contentions, radiography cannot determine the number of layers of confinement, nor the diameter of a rigid liner vent hole, nor filter diffusivity, each of which must be known to determine the correct DAC. DOE’s latest comments propose corresponding revisions in the permit language concerning the Waste Analysis Plan, Sampling Methods, Quality Assurance, and Audit and Surveillance.
The comments submitted by this Office on June 27, 2002, addressed the draft permit as it stood before these proposed modifications by DOE. Most of the comments pointed out the difficulty of determining packaging configuration, vent hole diameter, and filter diffusivity and the importance of such factors to DAC. Now DOE states that default values will be used for all such factors, except for newly generated or repackaged waste or newly vented containers. In such instances, records of the relevant operations will be relied upon to identify the necessary factors. Further, quality assurance and audit processes will be changed to ensure that the operations accurately generate data as to such factors. Certainly, if the exercise of selecting a DAC is reduced to maintaining accurate records of current waste packaging operations, a businesslike record system, together with effective audits, ought to be equal to the task.

Certain of our June 27, 2002 comments pointed out questions raised by NMED in its own letter dated March 26, 2001, which questions had not been responded to. Since that time, DOE has filed additional comments dated July 19, 2002, responding to our satisfaction.

In retrospect, DOE requested a modification that would require it to identify factors that determine the DAC but later found that its generator sites could not do so. DOE then acted appropriately in raising the problem in characterizing as would have been required. However, the episode points out the complexity of the characterization process and that it is not one about which assumptions should be made.

Further, the parties are finally, in late 2002, seeking resolution of issues initially raised in November 2000. On August 30, 2001, NMED announced that Class 3 procedures would be used and a draft permit would be issued. Eight and one-half months
later, NMED issued the draft. It seems likely that the infeasibility of characterizing as the draft required could more quickly have been identified had Class 3 procedures been used from the outset. To convert a Class 2 modification to a Class 3 modification and for NMED, acting alone, to draft permit changes does not seem to work efficiently.

Very truly yours,

LINDSAY A. LOVEJOY, JR.
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