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June 27, 2002

Steve Zappe
New Mexico Environment Department
2905 Rodeo Park Drive, Building 1
Santa Fe, NM 87505

RE: WIPP Drum Age Criteria (DAC) Draft Permit Modification

Dear Steve,

Southwest Research and Information Center (SRIC) requests that NMED deny the permit modification because it is unnecessary and not adequately supported technically. Regulations under the New Mexico Hazardous Waste Act (20 NMAC 4.1.900, incorporating 40 CFR 270.42(c)(6)) provide that NMED may deny a Class 3 modification. SRIC requests that NMED revise its position and deny the modification.

If NMED does not deny the modification, SRIC requests a public hearing on the matter. However, SRIC further requests that any public hearing be postponed from the currently announced date of August 26 for several reasons:

1. As the following comments indicate, there is a need for further information to be provided before the hearing. Such information cannot be provided sufficiently in advance to allow adequate time for review before July 29, when notices of intent for technical testimony are due. Thus, the date for submission of notices of intent must be delayed, and consequently, the hearing date must also be postponed.
2. During the next two months extensive preparations for the hearing would be required. However, during the same time, the permittees are planning to submit numerous Class 1, 2, and 3 permit modifications, which SRIC and other interested persons will need to comment on, thereby imposing a huge, and unnecessary burden on SRIC and other members of the public. The large number of modifications and the volume of material related to the requests cannot be adequately analyzed while preparing for the hearing. The problem is created by the permittees, and they should choose their priorities. If it is the DAC, then the other modifications should be delayed until after the hearing process on the DAC is completed. If the permittees' priorities are other modifications, they should agree to a delay in the hearing on the DAC.

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3. As NMED is well aware, SRIC has long maintained that for reasons of public health and safety, interrelationships of various proposed modifications, and efficient use of resources that public hearings on Class 3 modifications be consolidated so that there are not separate hearings on various modifications every few months. Given that there are other pending Class 3 modifications -- the Centralized Confirmation Facility (CCF) and the Remote-Handled Waste modification -- any public hearing on the DAC should be delayed and consolidated with the hearings on those other modifications. The CCF modification, especially, is directly related to the DAC since at least some of the activities, such a radiography included in the DAC modification, could be conducted at WIPP if the proposed CCF is allowed.

The permit modification is unnecessary.

The New Mexico Hazardous Waste Act regulations (20 NMAC 4.1.900, incorporating 40 CFR 270.42(c)(1)(iii)) require that the request "[e]xplains why the modification is needed." The request does not do so, and thus, the modification request should be denied, and it should be deemed to be unnecessary.

Since November 13, 2000, when the permittees first proposed changing the DAC as a Class 1 modification, the major reason for the modification was to facilitate waste characterization at that the Idaho National Engineering and Environmental Laboratory in order to meet a deadline of shipping 3,100 cubic meters of waste to WIPP by December 31, 2002. Since a final decision on the modification cannot be made in time to assist in that effort, that INEEL situation certainly cannot provide the need for the modification.

SRIC strongly raised this issue of need in our letter to Greg Lewis of December 12, 2000, which contributed to NMED reversing its decision to grant a temporary authorization for the DAC. The most detailed discussion of the need, of which SRIC is aware, is the letter of December 28, 2000 from Dr. Inés Triay to Greg Lewis that focused on the then supposed problems caused by not having the DAC revisions. Given the fact that the need for this modification has been at issue for more than 18 months, it is unacceptable that a detailed basis for the need has not been provided and that the only stated rationale is 18 months old and was inadequate at that time and is irrelevant to the existing situation.

The permit modification is not adequately supported technically

1. The underlying technical basis for the modification is not presented in the permittees' request or in the draft modification.

A. Modeling. The modeling done to support the various scenarios is different and to some extent inconsistent between the two studies -- Lockheed Idaho Technologies Company, 1995 and BWXT, 2000. In NMED General Comments of March 26, 2001 on the DAC modification submitted on December 7, 2000 there were numerous discrepancies identified between the two studies. Differences included the term used for calculating VOC accumulation in the rigid liner, equations to define the rate of change of the VOC concentration in each layer of confinement, VOC diffusivity in air, filters and filter diffusivities used, variation of liner types and sizes, consideration of hydrogen generation, and VOC multipliers. These discrepancies

have not been adequately explained by the permittees. And they are not addressed at all in the draft permit modification. Thus, SRIC believes that there is not an adequate technical basis for any of the proposed changes to the DAC.

Neither of the two studies included the range of almost two dozen types of filters allowed by the WPPP Waste Acceptance Criteria. Further, SRIC is unaware of any data on the actual performance of each of those types of filters.

The permittees must provide additional information on the modeling, including all studies done to verify the modeling results, including sensitivity and uncertainty analyses, in both the 1995 and 2000 studies, and any subsequent memoranda, studies, or analyses done of the modeling. Such information must be produced well in advance (at least 30 days) of the time for any notice of intent to present technical testimony. If that information is voluminous, as it should be, additional time will be needed to analyze the information.

NMED must present all of its analysis of modeling results and provide witness(es) at the public hearing to discuss its modeling analysis.

B. Survey of generator/storage sites. In its modification request (p. A-6), the permittees refer to a survey of generator/storage sites, but they did not include the results of the survey nor provide it as a reference document. SRIC and other commentors have previously requested the survey, and, to provide adequate time for review, it must be provided at least 30 days in advance of the time for any notice of intent to present technical testimony.

C. Data. The permittees have not provided the data on actual results of sampling. SRIC pointed out the lack of this data in its July 6, 2001 comments (page 3), but such results have not been provided. In addition, the permittees must present data on the actual effectiveness of drum venting and filters, including information about failure of filters, filter diffusivity values, the amounts of VOCs "lost" from various sized filter vents and using various "air tight" sampling techniques. Data on hydrogen gas generation in drums should be provided. Such data should be provided for all container sizes and types, including pipe overpacks. Such results must be provided at least 30 days in advance of the time for any notice of intent to present technical testimony.

The permittees have not provided data on all actual vent hole sizes and types and sizes of liners. There are more sizes of filters than specified and more types and sizes of liners than those specified in the modification. The permittees should provide a comprehensive list of sizes and types of filters and vents and a demonstration that the modeling done is actually bounding for the entire range of filters, vents, and liners. Such data should be provided at least 30 days in advance of the time for any notice of intent to present technical testimony.

The modeling, information from generator/storage sites, and actual data provide the essential basis for the DAC modification. Without that information, SRIC contends that there is no adequate technical basis for any changes in the DAC, let alone the dramatically reduced requirements included in the request and draft permit modification.

In addition, the permittees have made no showing that the existing DAC have produced erroneous results or that those procedures have endangered public health and the environment. Further, they have not shown that the proposed DAC are more protective of human health and

the environment than the existing DAC. On the contrary, the proposed DAC appear to be less protective of public health and the environment than the existing requirements.

2. Additional data are needed.

SRIC does not believe that the three scenarios for packaging configuration groups necessarily encompass all such configurations. For example, liner bags and inner bags can be of different types and sizes, containers can be of different sizes than those used. Yet, the draft modification does not provide for a conservative DAC in such situations. Data should be provided that demonstrate that the proposed DAC are conservative for all other packaging configurations. Such data should be provided and to provide adequate time for review, they must be provided at least 30 days in advance of the time for any notice of intent to present technical testimony.

In the absence of such actual data, the modification should be denied or the modification changed to provide that in any other packaging configurations, the existing DAC must be used -- a minimum of 142 days for debris waste (Summary Category S5000) and a minimum of 225 days for homogeneous solids and soil/gravel (Summary Category S3000/S4000).

The permit modification does not include necessary requirements.

Permit Attachment B, Page 12 of 57, provides that Acceptable Knowledge (AK) will be used to establish drum age criteria scenarios and packaging configurations. While SRIC agrees that accurate data is needed on each drum in order to establish such scenarios and packaging configurations, there have been problems at sites in meeting existing AK requirements. Thus, rather than improving waste characterization, SRIC believes that the DAC will not produce better headspace gas sampling results and it is likely to reduce the effectiveness of AK, since it will put further burdens on AK documentation, which is demonstrably suspect. The problems that exist in accurately determining the scenarios and packaging configurations are additional reasons to deny the DAC and maintain the existing, simple DAC requirements. If the new DAC scenarios and packaging configurations are to be used, SRIC believes that they must be determined through radiography and visual examination, not through AK.

Thus, SRIC believes the provision in Attachment B, Page 12 of 57, line 25¹³, must be changed to state that radiography and/or visual examination shall be used "in addition to" (rather than "in conjunction with") AK. SRIC does not believe that AK can accurately determine scenarios and packaging configurations, so they have to be determined by actual examination of each drum. If the modification is approved, a similar change should be made throughout the permit.

Permit Attachment B1, Page 3 of 55, provides that the sampling device form an airtight seal when sampling the rigid drum liner under Scenario 1. The modification should provide (or refer to another area of the permit) for what happens to a drum when the airtight seal is not achieved. SRIC believes that if adequate sampling is not done, the drum must be prohibited since it has not meet all permit requirements.

Permit Attachment B1, Page 3 of 55, ²¹²⁺ provides that if additional packaging configurations are identified, additional modification requests may be submitted. SRIC asks that this provision be deleted. Permittees may submit permit modifications, consistent with Hazardous Waste Act regulations, so such a statement need not be included in the permit. SRIC further believes that the range of packaging configurations should be known and reported as the basis for this modification. Thus, if NMED or the permittees believe that there are other packaging configurations, they should have been included in this modification request, rather than requiring NMED and the public to go through another DAC process (in addition to the three previous ones). Moreover, if there are other packaging configurations, they should comply with the existing DAC requirements.

Attachment B1, Page 8 of 55, ²⁴⁺ B1-1a(6)(i), specifies several times the sampling procedures regarding a 90-mil rigid poly liner. SRIC is unaware of a requirement that each drum have a 90-mil rigid poly liner, and we are also unaware of any data from DOE that specifies that every drum that could come to WIPP has a 90-mil rigid poly liner. On the contrary, SRIC believes that there may be drums that have other than 90-mil rigid poly liners, and if so, the modification does not address those containers. The modification must be revised to either prohibit drums without a 90-mil rigid poly liner or requirements for other liner types must be developed. Of course, specifying requirements for drums with other types of liners should be supported by modeling and data from the permittees to support any proposed DAC. As already discussed above, the permittees should be required to provide this data before the hearing process proceeds.

The permit modification contains various typographical errors

Among the errors are the following: ³³

1. In Attachment B, page ¹⁴ 12, line ⁷ 7, "three" should have been changed to "four."
2. In Attachment B4, page 1, line 19, "three" should have been changed to "four."
3. In Attachment B6, there are blank requirements – specifically numbers 49, 54, and 57 are assigned, but the fields are then blank.

Thank you for your careful consideration of these comments.



Don Hancock

NOTE: Citizens for Alternatives to Radioactive Dumping (CARD) endorses and signs on to these comments.

Deborah Reade, Research Director