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July 6, 2001

Steve Zappe
NMED
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RE: Class 2 Modifications of May 2, 2001

Dear Steve,

Southwest Research and Information Center (SRIC) provides the following comments on the May 2, 2001 class 2 modifications to the WIPP Hazardous Waste Act (HWA) Permit related to the 10-drum overpack storage and Drum Age Criteria .

SRIC believes that the requested class 2 modifications for 10-drum overpack (TDOP) storage and Drum Age Criteria must be denied because they do not meet the requirements for such modifications. In addition, the TDOP request raises substantial questions about the July 20, 2000 class 1 modification, which is used to attempt to justify the requested TDOP modification.

1. The class 2 modification for the 10-drum overpack must be denied.
Regulations under the New Mexico Hazardous Waste Act (20 NMAC 4.1.900, incorporating 40 CFR 270.42(b)(7)) provide that NMED may deny any Class 2 modification for any of the following reasons:

(1) the modification request is incomplete;

(2) the modification does not comply with other regulations covering the operating standards for hazardous waste storage and disposal facilities; or

(3) the conditions of the modification fail to protect human health and the environment.

DOE's requested modification fails to meet any of those standards, so NMED should deny the request.

A. The modification request is incomplete for several reasons. The request does not provide any adequate basis for the increase in storage capacity being proposed. The "basis" in the request is that the three storage areas "do not have sufficient capacity to accommodate the situation when all facility pallet location[sic] contain TDOP containers." (p. A-2).

In the permit as issued on October 27, 1999, the three storage areas did accommodate such a situation. As issued, the permit stated that "A TDOP may contain up to ten standard 55-gal (208-L) drums or one SWB." (p. M1-3) Ten drums may contain up to 73 cubic feet or 2.1

cubic meters (Module III.C.1.a), so that would be the maximum capacity of a TDOP. Thus, the capacity limits in Table III.A.1 accommodated a situation in which only TDOPs were being stored, and there is no basis for the modification.

DOE is, in essence, trying to fabricate a basis as a result of the class 1 modification submitted on July 20, 2000 that was never noticed to the public as changing the TDOP capacity. See attachment 1, the DOE public notification regarding the July 20 (and other modifications). Such a significant change -- doubling storage container capacity -- cannot be a class 1 modification. Such substantial change should also not be used as the basis for a class 2 modification -- which itself should be a class 3 modification and included in the proposed class 3 modification for centralized waste confirmation.

SRIC would also note that the modification request is incomplete in that the July 20, 2000 class 1 modification is not attached, nor can SRIC locate that July 20, 2000 modification submission on the WIPP website. Thus, the public is being provided with an incomplete request, since that July 20, 2000 modification is integral to the TDOP request. On its face, the July 20, 2000 modification apparently more than doubled the capacity of a TDOP, from 73 cubic feet (10 55-gallon drums each with a gross volume of 7.3 cubic feet as specified in Section III.C.1.a) to 160 cubic feet (as provided in the permit modification).

In addition to denying the requested class 2 modification, SRIC requests that NMED inform the permittees that item 2.d of the class 1 modification of July 20, 2000, which relates to the TDOP and other containers, is not in effect (see SRIC letter to Secretary Maggiore of June 25, 2001). That modification clearly could not have been correctly submitted as a class 1 modification, since it doubled the container storage capacity, which requires a class 3 modification, according to 40 CFR 270.42, Appendix I, F.1.a.

Further, the request is incomplete because DOE has not provided any basis for why WIPP would ever need to operate in a manner in which all shipments to WIPP were directly loaded TDOPs, as the request suggests would occur. The WWIS does not show any TDOPs at WIPP during the first 27 months of WIPP's operations. Thus, the TDOP is not a container that is even being used at WIPP, let alone being the sole storage container as the modification request suggests.

The request calculates that the additional volume is a 12% percent increase (p. A-2) or a 12.21% increase (p. A-3). Such a calculation is misleading since the request is for a 20% increase in maximum storage capacity in the TRUDOCK storage area, a 20% increase in the maximum storage capacity in the NE storage area, and a 20% increase in the maximum storage capacity in the SE (Shielded) storage area.

Given what the permittees have done with previous modifications, such as the July 20, 2000 class 1 modification, SRIC is concerned that if this modification were approved, the permittees could next argue that they could do another class 1 modification to increase the capacity of some other container so that it could be stored up to the increased maximum storage level for which the TDOP is being used as the justification.

While the justification is for a hypothetical situation in which all TDOPs are being stored, the increased maximum capacities would apparently apply to all containers, not just TDOPs. Thus, the request is also incomplete in that it does not describe the increased number of other containers that could be allowed.

B. The modification doesn't meet the operational standards regulations (40 CFR 264).

The request provides no analysis of the increased dangers to workers and the public of having larger amounts of hazardous constituents that could result from the larger maximum capacity levels. The 20% increase in maximum capacity of each of the specified storage areas increases the amount of waste that can be in the storage areas, and increases the amount of hazardous constituents that can be in each storage area, but the request provides no technical analysis of the increased risks to workers and the public from the increased storage amounts.

C. The increased maximum storage capacities would not protect public health and the environment. As already noted, the request does not provide any analysis of the health and environmental impacts of the increases in maximum capacity limits.

2. The modification requested to change the Drum Age Criteria must be denied.

Regulations under the New Mexico Hazardous Waste Act (20 NMAC 4.1.900, incorporating 40 CFR 270.42(b)(7)) provide that NMED may deny any Class 2 modification for any of the following reasons:

(1) the modification request is incomplete;

(2) the modification does not comply with other regulations covering the operating standards for hazardous waste storage and disposal facilities; or

(3) the conditions of the modification fail to protect human health and the environment.

DOE's requested modification fails to meet any of those standards, so NMED should deny the request.

A. The modification is incomplete. While acknowledging some of NMED's concerns expressed in the denial of March 26, 2001 for the previous Drum Age Criteria (DAC) modification request (p. A-2), the current request does not respond to all of those concerns. For example, NMED stated that additional studies and experiments were required to justify alternative values. The permittees have produced no new studies or experiments. NMED had a number of comments regarding the BWTX 2000 report and its relationship with the 1995 Lockheed Report which was used in the permit application and the permit. Several of those comments have not apparently been adequately responded to in the pending modification request. For example, comment 1 regarding how the sampling would be done is not addressed. In addition, SRIC believes that DOE must provide actual results of such sampling, including how frequently the particular sampling technique fails (i.e., how frequently VOCs are lost without being correctly sampled), because the proposed technique could have a high failure rate. Such sampling should be from a statistically significant number of actual drums from several representative sites.

A major concern during the permit hearing, raised by SRIC and others, was the issue of drum venting and filters. This concern was included in NMED's comment on the original DAC proposal (Item 10). The revised DAC continues to include in scenario 1 for unvented drums, without adequately responding to the concerns included in the NMED comments and those of other commentors.

Further, the request does not even include the survey of generator/storage sites that SRIC

and other commentors specifically requested in comments regarding the initial DAC. (e.g. SRIC comments of February 8, 2001 at 3.) The request again mentions such a survey (p. A-6) but it does not provide the results or include any reference. Without the survey, neither the public nor NMED can determine whether the packaging configurations are appropriate, inclusive, or bounding.

These deficiencies are unacceptable in any modification request, but particularly so in this case when NMED specifically stated in its denial letter that "NMED expects that the Permittees will address all comments provided in Attachment 1, as well as evaluating the comments in Attachment 2, prior to submitting a revised permit modification." (p. 3) Thus, NMED has already put the permittees on notice that if they did not adequately address the comments that the revised permit modification would be denied. NMED must now follow through on its requirement.

The modification is also incomplete because it does not address all parts of the permit that would be affected by the modification. For example, permittees request includes no changes in Attachment B4 regarding use of acceptable knowledge. Since acceptable knowledge apparently remains the primary means to determine packaging configurations (as also stated in proposed revision to Section B-3c which provides that radiography and visual examination "may" be used), Attachment B4 must be modified to ensure that DAC requirements are documented by AK. Such changes are especially needed with respect to drum-by-drum acceptable knowledge documentation regarding the DAC because the AK requirements emphasize waste stream requirements, rather than those for individual drums.

SRIC continues to object to reliance on AK for such essential information because those records are frequently inaccurate, as was demonstrated at the permit hearing in which DOE submitted not one accurate example of AK. During the permitting process, NMED concluded that AK itself was not acceptable or sufficient characterization. Relying on AK to determine the Drum Age Criteria is inconsistent with basic principles and requirements of the permit, and is certainly not justified by the modification request.

Changes being made in Attachment B3 are insufficient and incomplete. The modification request includes a changed Attachment B3, Section B3-11a and Table B3-12. Those are insufficient modifications to Attachment B3. Section B3-11a applies to waste stream characterization, however the DAC applies to each drum, since all drums must have headspace gas sampling.

Table B3-12 is listed as an affected permit section (Table 1) and is provided on page A-31. But the rationale for modifying the table is not explained in the request. How to use Table B3-12 is not being changed in the permit narrative as submitted with the DAC modification. The only reference in the permit narrative in Attachment B3 to Table B3-12 is on page B3-20, line 1 of the WIPP Permit posted on the DOE WIPP website.

Moreover, Table B3-12 was incorporated in the permit on July 21, 2000, according to the WIPP permit posted on the DOE WIPP Home Page, and is entitled "Sampling Batch Data Report Contents," and consists of two pages and 33 separate pieces of "required information." The modification request Table B3-12 has the same headings and consists of four separate pieces of "required information," three of which are in the existing Table in the permit as modified and one new element -- "packaging configuration." Because no explanation is included in the

request, the most reasonable interpretation is that the existing Table B3-12 is being replaced by the revised Table B3-12 included in the request. Such a change would be inappropriate since it would delete 30 pieces of "required information" without explanation and would severely lessen the contents of Sampling Batch Data Reports. Perhaps the permittees intend to add a 34th piece of "required information" to Table B3-12, but that cannot be determined from the permit request. In addition, because the "class 1 permit modification of July 21, 2000" is not included as a reference, nor is it on the DOE WIPP website, SRIC does not know whether than permit modification was appropriate, or whether it is not appropriate. Thus, this is another example of the pending DAC modification being incomplete.

Training needs to be changed to ensure that operators can accurately identify the drum with the packaging configuration tables, a much more complicated activity than the 142-day waiting period for debris waste and 225 days for solids and soils and gravels in the permit.

SRIC continues to be concerned about the overall complexity of the three scenarios, the look-up tables, and the large number of possible days that workers could chose among. For packaging configurations 1, 2, and 3, the number of days ranges from 4 to 131 for packaging configuration 1, from 10 to 213 days for packaging configuration 2, and from 13 to 283 days of packaging configuration 3. Such a wide variety of time periods will inevitably lead to confusion, misapplication of the tables, and inaccurate headspace gas sampling results. Moreover, the modification request does not include clear requirements to document that the proper waiting period was used and that there are clear records that document exactly how long a waiting period was used for each drum.

The complexity of the DAC, especially in comparison to the clear and simple requirements of the permit, would be confusing and complicated for workers to carry out and subject to substantial errors. Reviewing the procedure could be difficult for NMED to audit, and would be extremely complicated for the public to understand.

The lack of specificity in the permit modification could lead to situations in which the permittees would say that a waste stream is adequately characterized even if a large number of drums in the waste stream did not use the correct packaging configuration. Any modification to the DAC should require that inaccurate headspace gas sampling of any drum would result in the entire waste stream being deemed to not have met headspace gas sampling requirements. In addition, SRIC does not believe that the modification includes enough specificity and clarity as to what data requirements for packaging configuration and drum age are required.

Further, SRIC continues to question the entire scientific basis for the permit modification. Despite SRIC's comments regarding the permittees' science contained in our comments of February 8, 2001 on page 3, the pending modification still does not adequately address those issues.

B. The modification doesn't meet the operational standards regulations (40 CFR 264). As one example, the waste analysis requirements mandate adequate and accurate information about the hazardous waste constituents in any facility (40 CFR 264.13). The WIPP permit requires that to determine the amount of volatile organic compounds (VOCs) each drum must undergo headspace gas sampling to ensure that the amount of VOCs that could be released from WIPP would not endanger public health and the environment. If drums are not sampled, or if

the sampling results are inaccurate and underestimate the amounts of VOCs, the waste analysis requirements are not met. Under the DOE permit modification, there could be large underestimates of the amounts of VOCs disposed at WIPP, since the headspace gas sampling might not capture amounts of VOCs contained in bags inside a drum which take several weeks to accumulate in the headspace. There could be many thousands of drums that have such inaccurate sampling.

C. The modified headspace gas sampling would not protect public health and the environment. Because of the likelihood of inaccurate sampling, larger amounts of VOCs could be brought to WIPP than estimated. That increased amount of VOCs could endanger public health and the environment.

Thank you for your consideration.

Sincerely,

Don Hancock