

Fr. 9 Feb 502

**Subject: WIPP DAC permit modification comments**

**Date:** Sat, 10 Feb 2001 15:23:59 -0600

**From:** Deborah Reade <reade@nets.com>

**To:** steve\_zappe@nmenv.state.nm.us



Hi Steve--

Included here are CARD's comments on the DAC permit modification. Hard copy will follow--Deborah

February 9, 2001

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Comments on the Department of Energy's Proposed Class 2 Modification to the Waste Isolation Pilot Plant Hazardous Waste Operating Permit: DRUM AGE CRITERIA (DAC)

Currently, the WIPP operating permit requires a 142-day waiting period before headspace gas sampling of debris waste can occur. This waiting period ensures that the headspace gas has reached a 90% steady-state concentration within each layer of confinement and assumes 5 layers of plastic bags for debris waste and 2 layers for homogeneous solids and soils and gravel.

The Department of Energy (DOE) proposes to reduce this waiting period if there are fewer layers of confinement in a waste container than currently specified. In some cases this waiting period could be as short as 4 days. DOE also originally requested Temporary Authorization for this modification to allow Idaho National Engineering and Environmental Laboratory (INEEL) to employ the revised DAC so that they could ship out certain containers more quickly.

The proposed modification is not protective of human health and the environment and is also incomplete. CARD requests that the New Mexico Environment Department (NMED) deny this modification. There are two main problems with this proposed modification (and a number of smaller problems) and both are related to the problem of determining exactly how many layers of confinement, plastic bags, liners etc. exist.

I. The proposed modification is not protective of human health and the environment because DOE cannot show a true ability to determine the numbers of layers of confinement in the containers. Inability to make

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this determination could result in inaccurate headspace gas measurements which could allow unsafe levels of hazardous gases to be disposed in the repository.

DOE will rely on Visual Examination (VE) to determine the number of layers of confinement for newly generated waste but plans to rely heavily on Acceptable Knowledge (AK) to determine the numbers of layers in older waste. Repackaged waste could fall somewhere in-between, since, though it is visually examined during repackaging, depending on the packaging configuration, the number of interior layers might not be obvious to an observer.

There have always been serious questions about the quality of AK at the generator sites. This was brought up during the original permit hearings when both DOE and Environmental Evaluation Group (EEG) witnesses acknowledged that very few records exist on the hazardous content of the waste. In addition, EEG has discovered further problems with AK at several sites and we can safely assume that further problems exist probably at all the sites. For instance, according to EEG in their EEG Comments on DOE/CAOs July 21, 2000 Request for RCRA 2 Permit Modification in Accordance with 20.4.1.900 NMAC:

"...during a series of audits in 1998 and 1999 the AK information at NTS [Nevada Test Site] was never able to receive CAO [Carlsbad Area Office] approval. The CAO audit report from the last of these audits (June 7-11, 1999) states for AK....

The results of the valuation indicate that the AK documentation is missing information and that some of the provided information is incomplete. The summary report and supplemental information does not support documented conclusions ... The audit team concluded that the ...implementation of the AK process is unsatisfactory and ineffective.

EEG goes on to say that

"Acceptable knowledge (AK) was one of the areas cited as indeterminate by the auditors, and the complications that led to this evaluation may be repeated at other generator sites....the percent of combustible wastes was determined in part by "...the sound of the waste when compacted" (p.3-10); item description codes (IDCs) in databases are not the same as those found on the shipping papers to NTS; time of waste generation is not documented for 20 waste containers...at the time of generation, no information was recorded about the contents of the parcel or from which process it was generated."

Even more recent data is a problem, indicating that there could be problems even with newly generated or repackaged waste, VE notwithstanding. EEG goes on to state

"An additional problem at LLNL [Lawrence Livermore National Laboratory]

is that some of the more recent data that will likely become part of the AK package is suspect. A February 17-18, 1999, CAO surveillance of RTR performed at LLNL discovered that RTR forms were changed by the RTR operator after data packages had been finalized by the supervisor/QA officer; that non-conformance reports (NCRs) on containers had been issued, but there was no NCR process or procedure for ensuring follow-up...that the subcontractor performing the work had no QA program and that LLNL 'constantly falls outside their QA program'. With the apparent concurrence of LLNL, the surveillance team leader abbreviated the surveillance... The EEG believes that AK generated by such processes should be viewed with appropriate caution. "

A 1983 report, Characteristics of Transuranic Waste at Department of Energy Sites (RFP-3357) states that "Even on those sites that kept extensive records, examination of some of the drums indicates that the records do not always match the contents." Another DOE IG audit report notes on page 6 that "In FY, 1999, Bechtel Jacobs visually inspected the waste in 1,180 containers and determined that the physical descriptions of the waste were inaccurate for 452 of the containers."

Obviously, AK cannot be relied on to note accurately how many layers of confinement exist in any given drum. Even if it is noted, without VE, how can one be sure that an accurate count was actually made.

DOE also plans to rely on RTR to determine the layers of confinement for those containers where accurate AK is missing. They claim that they have made great improvement in RTR so that it can distinguish all the different layers. However, DOE has not actually proven that they can do this. They have also not had a great amount of experience characterizing contents of drums under the permit with RTR since they have only been doing this a relatively short time and with a relatively small number of drums. And, as is noted above, already, in this short time RTR forms are being changed by the RTR operator after the data packages have been finalized by the supervisor/QA officer. CARD believes that this combination of lack of experience, poor performance and fraud should eliminate RTR as a method of determining layers of confinement at this time. As we have stated when commenting on other DOE permit modification requests, DOE has a poor historical record of characterization and AK and too little time has passed to prove that they have consistently improved.

II. The proposed modification is incomplete because it does not include additions to the existing permit to create procedures to determine whether a container is lined, the type of liner, the number of plastic bags etc. in a container as well as Quality Control and confirmation procedures.

Considering the short list of AK problems described above, these procedures need to be spelled out in the permit, audited and reviewed. Even then, considering the potential for falsification of data and

"abbreviation" of surveillance by personnel, problems seem likely to occur. Again, DOE needs to show a consistent history of excellent characterization and QA/QC procedures at all sites before NMED should consider allowing them to lessen the requirements for Drum Age Criteria.

III. To be truly protective of human health and the environment, the DAC should be increased, not decreased.

It seems clear that DOE is proposing this modification primarily to solve a problem they have with the INEEL waste. This belief is supported by their request for Temporary Authorization to allow INEEL to use a revised DAC before NMED had ruled on the proposed modification. It is unclear whether their three scenarios included in the modification request covers all types of debris waste containers at all sites. DOE states that some debris waste containers have fewer than 5 layers of confinement but that some have more than 5 layers. If this is the case, than the 142 day waiting period should be revised up to be truly conservative?certainly until DOE can prove that they can accurately and consistently determine how many layers of confinement exist in a container.

In summary, CARD believes that DOE has not shown an ability to consistently and accurately determine the numbers of layers of confinement within a waste container. This is caused by the lack of adequate AK, and problems with RTR and QA at various sites. DOE has no history showing an ability to make this determination since they have not been characterizing waste under the permit for very long and many sites have characterized few or no containers at all?thus showing a lack of experience. Perhaps a few RTR operators might be able to count the plastic bags accurately, but it has not been shown that DOE has the ability to do this across all sites and over time. Allowing a decrease in the standards at this time could allow an underestimation of the amounts of hazardous gasses disposed at WIPP which would not be protective of human health and the environment. In addition, the modification does not include procedures for determining the number of layers of confinement in a container or QA/QC and confirmation of these determinations. Finally, CARD believes that if this part of the permit is modified, the DAC should only be revised up since DOE itself admits that drums exist that have more than 5 layers of confinement.

Sincerely,

Deborah Reade  
for CARD