



**Department of Energy**  
Carlsbad Field Office  
P. O. Box 3090  
Carlsbad, New Mexico 88221  
May 13, 2003

Dear Stakeholders:

Please find enclosed the responses to questions raised at the pre-submittal meeting on April 29, 2003. Responses are also on the WIPP web page [http://www.wipp.ws/rcradox/rfc/com\\_menu.htm](http://www.wipp.ws/rcradox/rfc/com_menu.htm).

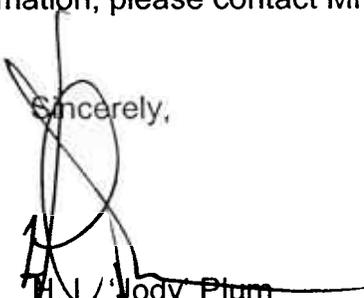
The six permit modification requests (PMRs) will be submitted to the New Mexico Environment Department (NMED) the week of May 12, 2003. A final version of all the PMRs will also be sent to you the week of May 12, 2003.

We anticipate a public notification being posted on May 16, 2003. In this case, the public comment period would be from May 16 through July 14, 2003. During this time comments may be submitted to the NMED for their consideration.

The public meetings have been scheduled for June 3, 2003 in Carlsbad, New Mexico and for June 5, 2003 in Santa Fe, New Mexico. A copy of the public notice, which states the location, and times of the meeting is also enclosed.

On behalf of the Department of Energy and Washington TRU Solutions I would like to thank you for your interest in the permit modification process.

If you have any questions on this information, please contact Mr. Bobby St. John at (505) 234-7348.

Sincerely,  
  
H. L. 'Bobby' Plum  
RCRA Permit Manager

Enclosure

Outlined below are the responses to questions which were raised during the permit modification stakeholder workshop held on April 29, 2003 in Santa Fe. Questions are not meant to be stated verbatim but have been paraphrased. The questions are segregated by modification and the questions are indicated in italics.

The final permit modification requests (PMR) were submitted to the New Mexico Environment Department (NMED) on Tuesday, May 13, 2003.

## Packaging Specific Drum Age Criteria (DAC) for New Approved Containers

- 1. Can you state what the DAC is for these containers when they are direct loaded as proposed?*

Tables B1-9 and B1-10 have been revised to indicate the appropriate DACs for these new containers.

- 2. Can you state which sites will use these containers as proposed?*

The modification is written to allow any site within the Department of Energy (DOE) complex to employ these new DAC values. Because of this no site-specific information is proposed in this modification.

- 3. I am concerned that the layers of confinement for compacted waste cannot be clearly defined or understood with the information provided, and believe that additional clarification of this matter is required.*

Please see the response to question # 4.

- 4. How will a demonstration be made that the supercompacted waste will meet equilibrium?*

This DAC modification is simply adding values for approved containers. Resolution of packaging concerns similar to the one raised by the commentor is not a topic that is associated with establishing the new DAC values. Instead, it is handled through the provisions of the existing permit requiring the generator to document packaging configurations in order to use non-default values (Section B1-1a(3)). For example, generators of supercompacted waste will be required to provide evidence with their Waste Stream Profile Form regarding the layers of confinement.

Attachment C to the PMR entitled "Determination of Drum Age Criteria Values for Ten-Drum Overpacks, 85-Gallon Drums and 100-

Gallon Drums” states the following: “In some cases 55-gallon drums may be supercompacted and packaged as “pucks” directly into 100-gallon drums. Compacted 55-gallon drums containing rigid drum liners placed inside the 100-gallon drum must meet the appropriate 55-gallon drum DAC value established by the Permit prior to compaction. This ensures that the volatile organic compounds (VOC) solubility associated with the presence of the 55-gallon rigid drum liner does not impact the calculated DAC for a 100-gallon drum.”

The PMR Sections B1-1a(1) and B1-1a(2) have been revised to incorporate the following statement: “If a 100-gallon drum (i.e. Packaging Configuration Group 7) contains a compacted 55-gallon drum containing a rigid liner, the 55-gallon drum must meet the appropriate 55-gallon drum DAC listed in either Table B1-6, B1-7 or B1-10 to ensure that VOC solubility associated with the presence of the 55-gallon drum rigid drum liner does not impact the DAC for the 100-gallon drum.” This ensures the proposed DAC values are sufficient. Other aspects of supercompaction as a treatment process will be addressed in the audit and waste profiling activities.

5. *Will we have time to submit written comments before the state renders a decision on these PMRs?*

Yes. There will be a 60 day comment period that will begin on May 16, 2003 and continue through July 14, 2003. Comments may be submitted to the NMED at anytime during that period.

## Remove Formaldehyde as a Required Analytical Parameter at LANL

1. *There has been no use of formaldehyde at Los Alamos National Laboratory (LANL)?*

Formaldehyde has been used at LANL, but no formaldehyde was disposed in a manner such that it would be associated with TRU waste.

2. *So, you have supplied information to NMED that formaldehyde is not present in the waste in question?*

As part of the PMR we included an explanation of where formaldehyde has been used and disposed at LANL. This information shows that formaldehyde is not an appropriate analyte for LANL TRU homogenous solids and soils/gravels, since it was not disposed with those TRU wastes.

3. *Has LANL provided the information on the use of formaldehyde to you and where/how it was used and waste was generated?*

Yes, LANL has a record of its use and disposal of formaldehyde. This information becomes part of their acceptable knowledge package that supports waste stream characterization and is reviewed by WIPP as part of LANL's Waste Stream Profile Form submittal.

## Removal of Booster Fans

1. What is MSHA?

It is the Mine Safety and Health Administration, part of the U.S. Department of Labor. MSHA is authorized to inspect WIPP on a quarterly basis.

2. *How often does the New Mexico Bureau of Mine Inspection (NMBMI) perform inspections?*

Inspections by NMBMI are performed on an annual basis. WIPP has been the NMBMI "Mine Operator of the Year" for 16 consecutive years.

## Construction And Use of Hazardous Waste Disposal Units

1. *How will you prevent a panel from being open for a long period as was the case of Panel 1?*

Panels are to be mined sequentially as they are needed to accept waste. It takes approximately 16 to 18 months to mine and configure a panel for use. It takes slightly less time to fill a panel to capacity.

2. *I am still concerned that a completed panel may be open for 6 or 7 years without being used and we will have the same issues as Panel 1 and not be able to use all of the rooms as planned.*

If shipment schedules and forecasts change, the mining schedule is adjusted accordingly so that panels are ready "just in time". WIPP utilizes the "just in time" mining approach so that panels do not need extensive remedial ground control prior to use (like Panel 1). Additionally, the Permittees recognize that Panel 1 was unique in the sense that it was open for an extended period of time due to the lengthy permitting process and the time required to begin full-scale operations. Such extended periods of time for future panels is not anticipated.

3. *You state that you are relying heavily on the Performance Management Plans (PMPs) for scheduling the construction and fill rate of the new panels but these are DRAFT documents. I am therefore concerned that constraints are needed to ensure that panels aren't constructed and left open for 10-15 years like Panel 1.*

The panel use timeframes described in the PMR are based on official DOE documents known as the Baseline Shipping Schedule (BSS) and the Transuranic Waste Performance Management Plan (PMP). The BSS and PMP are “living” documents which are updated as needed to meet the waste management needs of the DOE.

The close integration of shipping projections and mining activities ensures that panels ready to receive waste are available when needed..

## Los Alamos National Laboratory Sealed Sources Waste Stream Headspace Gas Sampling and Analysis Requirements

1. *How do you ensure these are defense generated waste only? Do you have a list?*

The mission of the Off-Site Source Recovery Program at LANL as defined by Congress is to collect and secure all non-essential sealed sources from across the United States. LANL personnel will determine whether each source is defense at the time of packaging.

Only defense-related waste is acceptable at WIPP. The Waste Stream Profile Form must state that any sealed sources sent to WIPP meet this criterion. WIPP will review the acceptable knowledge package and the evidence that the source is defense at the time the Waste Stream Profile Form is submitted for approval.

2. *How and what are the DOE shipping requirements for these wastes?*

In Attachment D of the PMR the section entitled “Drum Preparation” describes the packaging of a sealed source container. They are packaged to comply with applicable Department of Transportation requirements for a special form. Special form certification (written documentation) can occur in a variety of fashions. The most common is a specific certificate issued by the US DOT for a particular model source and this certificate covers all sources of that model manufactured by a particular source manufacturer. For older sources a laboratory analysis from the manufacturer’s records showing the specific testing that was done on a source is needed. If the source was tested to meet the ANSI qualification and that testing covered all requirements of the special form testing published in 49 CFR Part 173

then that information is included in the AK record and LANL will certify that the source meets the requirements by reference to the AK package. In the case that LANL is required to re-encapsulate the source into one of the special form capsules LANL will have completed all of the testing, quality assurance, reporting and record keeping and that record is made part of the AK report. In this case LANL certifies the special form. This information will become part of the AK package as indicated in Section B-3a(1)(iii). The AK package will be reviewed by the Permittees when the WSPF is submitted for approval.

3. *The report in the back has no author, no report number, etc. Neither did the report on formaldehyde. I would like to know who did the work.*

The report in Attachment D on the sealed sources PMR as well as the report in Attachment C on the formaldehyde PMR have now been revised to list author(s).

4. *How many shipments will be needed for the 1000 sources? Is there a limit for the radionuclide content of each shipment?*

Since sealed sources come in various sizes and radiation levels it is not possible to project in advance of packaging exactly how many sources will go in each drum to meet all of the WIPP waste acceptance criteria (WAC) and transportation requirements and regulations. The radiological requirements for shipments to WIPP are contained in Section 3.3 of the WAC.

The 1000 sources is an estimate, from planning done at LANL. The 1000 sources would probably consolidate down to about 150 55-gallon drums. (Currently, 21 defense-related sealed source drums are packaged). Since sealed source waste stream drums might be co-mingled with other non-sealed source drums in a TRUPACT-II for transportation efficiency, it is not possible to predict at this time exactly how many shipments would contain sealed source drums.

5. *There was a concern during the hearing on WIPP regarding the radiolysis issues for packaging materials. I would like to have that report available to review, with data and information on all of the packaging material to determine if there are similar issues this time.*

Attachment D11 of the Permit Application entitled "Gas Generation Information" is available for review at

[http://www.wipp.ws/rcradox/rfc/com\\_menu.htm](http://www.wipp.ws/rcradox/rfc/com_menu.htm)

Section B-3d of the permit indicates that VOCs which result from radiolysis are not to be assigned hazardous waste numbers.

Attachment D of the PMR, in the section entitled “Potential VOCs From Radiolysis” discusses this issue.

6. *What happens to leaking sealed sources?*

A sealed source certified as a DOT special form in accordance with 49 CFR § 173.403 is certified as leak-tight. LANL will contain sources that do not meet these requirements in special form capsules. This process restores the full integrity of the original sealed source and ensures that radiolysis from alpha decay is not possible in a drum containing sealed sources.

7. *You state in Attachment C that there is a well-defined list of the waste to be shipped to WIPP, but such a list is not included. I would like to review the list of these sealed sources, the information, and the pedigree.*

The LANL Sealed Sources Waste Streams Acceptable Knowledge Documentation (Attachment C of the PMR) states “Such information exists for sealed sources because they are manufactured as precision tools with a well-defined pedigree.” It does not indicate that there is a “well defined list.” The Headspace Gas Sampling and Analysis Evaluation For LANL Sealed Sources (Attachment D of the PMR) states “There is an existing backlog of sealed sources in known locations that are not secure.” The PMR simply states what criteria must exist for a sealed source to qualify for assignment of VOC concentrations in lieu of headspace gas sampling and analysis.

8. *What is the regulatory status of Americium 241?*

Americium-241 is managed like other defense related transuranic isotopes and must conform to all requirements of a certified WIPP waste stream.

9. *You state there are tamper indication devices on the containers. How do these work? What is the genesis of their use?*

A Tamper Indicating Device (TID) is a seal used to determine if a package has been opened or tampered with after being sealed. A TID for a standard drum consists of a braided wire passed through the hole in the compression bolt which holds the lid ring. The free ends of the wire are wrapped several times around the bolt and captured in a crimped copper cup. If someone opened the drum the wire would be

broken showing evidence of tamper. The TID on the Pipe Component is a mylar tape seal which is placed over two of the flange bolt heads after the pipe is closed. Since most drums containing sealed sources are packaged and then held under DOE safeguards in a secure area prior to being readied for shipment to WIPP, they all are sealed with numbered TID's issued by LANL security.

10. *On page 5 of the LANL report there is a table about applicable standards for analytes resulting from packaging material. Can you provide further clarification on this table?*

Table 3 of the report (page 5) shows the concentration of analytes that have resulted from packaging materials only. These are the values that will be assigned as headspace gas concentrations to containers of sealed sources from LANL.

The concentration of significance is the Program Required Quantitation Limit (PRQL) which is indicated in the permit in Attachment B3, Table B3-2. When concentrations exceed these levels the generator must address whether or not a hazardous waste number is to be applied (Section B4-3d). In all cases the measured values are less than one-tenth the PRQL and in most cases they are less than one-hundredth of the PRQL. The PMR has been modified to reflect this information.

11. *On page 6 where radiolysis is discussed, what are the residual materials from radiolysis? What are the inconsequential numbers referred to?*

The values obtained for VOCs from the packaging material are shown in Attachment D on Table 5. The values for hydrogen generation from the packaging material are shown in Attachment D in Table 4.

#### ADDITIONAL QUESTIONS

1. *How do the tax cuts affect safe operations and safety when handling waste at WIPP?*

Safety is of highest importance. This will not be affected by any proposed cuts.