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September 10, 2012

Trais Kliphuis
New Mexico Environment Department
2095 Rodeo Park Drive, Building 1
Santa Fe, NM 87505

RE: WIPP Class 2 Permit Modification Request – Addition of a Shielded Container

Dear Trais,

Southwest Research and Information Center (SRIC) provides the following comments on the Addition of a Shielded Container Class 2 permit modification request that was submitted by the permittees on July 5, 2012, according to their public notice.

SRIC appreciates that the permittees provided a draft of the proposed request and that representatives of the permittees as well as NMED met with SRIC and other citizen group representatives on June 7, 2012. SRIC continues to believe that such pre-submittal meetings are useful and supports continuing that "standard" practice in the future. SRIC also notes that there were some changes made in the modification request after the pre-submittal meeting, although several major changes suggested by SRIC at that meeting were not incorporated into the modification request.

1. NMED must deny the modification request

Pursuant to 20.NMAC 4.1.900 (incorporating 40 CFR §270.42(b)(7)), NMED may deny the class 2 modification request for any of three reasons. SRIC believes that denial is required because the request is deficient under each of the three criteria -- the request is not complete, the request does not meet the requirements of the Resource Conservation and Recovery Act (RCRA) and the Hazardous Waste Act (HWA), and the request does not demonstrate that the changes requested will protect human health and the environment.

A. The request is not complete. 40 CFR §270.42(b)(7)(i)

Despite the December 5, 2011 SRIC written comments, other comments on the 2011 Permit Modification Request for Shielded Containers, and the discussion at the pre-submittal meeting, the request is incomplete and does not include important information necessary for the public to adequately comment and for NMED to determine that the modification would protect public health and the environment and comply with other provisions of RCRA and the HWA.

Following are examples of important information that is missing or incomplete or inadequate and some of the questions that need to be answered.

Page 2 of the request states:

> The management and storage requirements of CH TRU mixed waste in the Permit will apply to the waste that arrives at the WIPP facility in shielded containers because the surface dose rate is less than 200 millirems/hr at the time of shipment.

That statement is incorrect. Permit Section 1.5.2. states:

> "Remote-handled transuranic mixed waste" means transuranic mixed waste with a surface dose rate of 200 millirem per hour or greater. For WIPP, the surface dose rate shall not exceed 1,000 rems per hour. [Pub. L. 102-579 (1992)]

Thus, regardless of the surface dose rate "at the time of shipment," any container at the WIPP site with a surface dose rate of 200 millirem per hour or greater is remote-handled (RH) waste and must he managed according to the RH waste requirements of the Permit. The request does not appear to recognize that requirement. Because the 30-gallon inner container has a surface dose rate of 200 millirem per hour or greater in each shielded container, there could be one, tens, hundreds, or thousands of such RH waste containers at WIPP. The request provides no technical analysis about the potential for one or more shielded containers with a surface dose rate of less than 200 millirem per hour at the time of shipment to have a surface dose rate of 200 millirem per hour at the time of arrival at WIPP or to have such a surface dose rate at any time at WIPP. Questions that should have been addressed include whether vibration or movement from rough roads could cause shifting or settling of the RH waste such that the surface dose rate changes at the time of shipment to arrival at WIPP; whether there is variation among the generator sites as to how surface dose rates are measured, as compared with how they are measured at WIPP, that give differing results; and whether handling practices at WIPP could result in shifting or settling such that the surface dose rate changes. What circumstances, including accidents and manufacturing errors or quality assurance deficiencies, could result in a shielded container having a surface dose rate of 200 millirem per hour or greater? Not only are there not answers to those questions included in the request, but the request includes no Documented Safety Analysis (DSA) for shielded containers. Thus, the request is incomplete, and is in contrast to the class 3 permit modification that approved RH waste and included a DSA for RH waste.

The modification request includes no limits on the amount of remote-handled (RH) waste in shielded containers that can be stored in the Parking Area Unit (PAU) or in the contact-handled (CH) Bay of the Waste Handling Building (WHB), even though such containers will likely have external dose rates that are more than an order-of-magnitude greater than the CH waste that is normally handled. That much higher surface dose rate is never mentioned in the request. The Permit now allows no RH waste in the CH Bay Storage Area, in the CH Bay Surge Storage Area, and in the Derived Waste Storage Area. Permit Part 3.1.1.2 and Table 3.1.1.

The request is to allow RH waste to be managed in precisely those CH areas in which RH waste is currently, and has always been, prohibited. Yet the request includes no changes regarding

Table 3.1.1 and no limits on the number of shielded containers in those areas. Thus, the entire CH Bay Storage Area could be filled with RH waste in shielded containers for up to 60 calendar days. Similarly, the request also includes no changes regarding Table 3.1.2, so the entire PAU could be filled with RH waste in shielded containers and in canisters for up to 59 days, in some cases. Such storage would be in sharp contrast to the storage time limits for the other RH waste not in canisters. Permit Section 3.1.1.10.ii. The request asserts safety, but provides no analysis to show that the 60-day storage time would be protective of public health and the environment, as compared with shorter time limits. The request omits a DSA or other technical basis to demonstrate that such additional storage time beyond 25 calendar days for uncanistered RH waste is protective of public health and the environment. Thus, the request is incomplete.

The request does not include the amounts of RH waste that would be managed at WIPP in shielded containers, nor the amount of RH waste that would be managed at WIPP in canisters, nor whether the amount of waste in shielded containers would reduce the number of RH canisters or would allow additional RH waste to be managed. Thus, the public and NMED cannot determine, among other things, the types and amounts of RH waste that would be managed in the CH Bay Storage Area, in the CH Bay Surge Storage Area, and in the Derived Waste Storage Area. The public and NMED cannot determine how much RH waste in shielded containers would be emplaced in the Underground Hazardous Waste Disposal Units (HWDUs) and how much RH waste in canisters would be in Panels 6, 7, and 8. The request omits a DSA or other technical basis to demonstrate that the requested storage and disposal is protective of public health and the environment. Therefore, the request is incomplete.

The public and NMED cannot determine how much remaining capacity would be available for CH waste in the Underground HWDUs if shielded containers were emplaced. The request Figure 3 (which is not proposed for inclusion in the permit) shows some shielded containers being "randomly placed." However, the request does not describe how "random emplacement" would be accomplished and why shielded containers would be not emplaced if they are received in three three-packs at a time in a shipment with three HalfPACTs. That "normal" operation would result in three-packs being emplaced in locations other than "interstitial" spaces. The request omits a DSA or other technical basis to demonstrate that such "random emplacement" is protective of workers, public health, and the environment. The request includes no information about shielded containers emplaced randomly (or in any other configuration) would make the most efficient use of Underground HWDU capacity. Some CH waste emplacement space will be displaced for RH waste in shielded containers, but there is no analysis of how much that might be. The number (17,473 shielded containers) stated on page 3 of the request cannot be considered reliable, as it was done 5 years ago and the RH inventory has changed since that time. Moreover, that estimated amount does not account for dunnage containers, which could up to triple the amount of space taken by shielded containers, if each three-pack contains two dunnage containers. Using the estimated amount and adding dunnage containers, therefore, up to 18 percent of the floor space in panels 7-10 could be taken by shielded containers. There is no analysis provided about whether displacing up to that amount of the remaining CH waste in the WIPP Inventory could result in reduction of the permitted amounts of CH waste in panels 7 and 8. Therefore, the request is incomplete.

Despite extensive discussion in SRIC's December 5, 2011 comments and questions at the June 7, 2012 pre-submittal meeting by SRIC and others, the permittees continue to not discuss a major need for the modification request, despite the requirement that the request explains why the modification is needed. 40 CFR §270.42(b)(1)(iii). That need is to address the permittees' management of WIPP over the past 13+ years in such a way that there is not enough available capacity in the Underground HWDUs for a significant portion of the RH waste in the WIPP Inventory. In Panels 1-5, there are 462 RH canisters emplaced, with a volume of 411.18 cubic meters (462 x 0.89). Panels 6, 7, and 8 have a total capacity of 2,060 canisters (600+730+730), or 1,834 cubic meters, according to Table 4.1.1. Since the permittees have stated that they intend to request a permit modification for panels 9 and 10 to be the same size as panels 1-8, the presumed RH capacity of those two panels would be 1,460 canisters or 1,300 cubic meters. Thus, the total available capacity for RH waste is 3,545.18 cubic meters (411.18+1,834+1,300). That is approximately half of the RH waste legal capacity of 7,079 cubic meters and approximately 2,000 cubic meters less than the amount of RH waste described in the 2011 WIPP Inventory (DOE/TRU-11-3425). (Attachment 1). The actual RH capacity is being further limited by the fact that canister emplacement in Panel 6 will be less than half of the 600 cubic meter limit.

The fact that there is no enough space for the RH waste in the current WIPP inventory using the current configuration and permit requirements has not been contested by the permittees.[1] How shielded containers relate to meeting the need for capacity for RH waste in the Underground HWDUs must be addressed in an adequate permit modification request. That this major need and the above data are not even mentioned clearly show that the request is grossly incomplete.

Page 4 of the request states:

> RH TRU mixed waste emplaced at the WIPP facility in shielded containers will remain designated as RH TRU mixed waste in the WIPP Waste Information System (**WWIS**). The emplaced volume will be counted against the RH TRU mixed waste volume limits specified in the Permit.

Proposed revised Permit Section A1-1b(2) states that "Each 30-gallon inner container has a gross internal volume of 4.0 ft3 (0.11 m3)." Since each shipment could contain a single 3-pack of shielded containers, each shipment could have 0.33 cubic meters. Each RH canister holds 0.89 cubic meters. Thus, 100 cubic meters of RH waste in canisters can be handled in 113 shipments, whereas 100 cubic meters of RH waste in shielded containers is handled in a minimum of 304 3-packs, and could require that number of shipments. Therefore, use of shielded containers would substantially increase the number of packages containing RH waste being handled at WIPP, and substantially increase the number of containers arriving at the site and being stored in the PAU, WHB, and Underground HWDUs. However, those matters are not discussed in the request, and the request is inadequate and incomplete.

[1] The SRIC analysis, attachment 1, was provided to the permittees on January 26, 2012 (Attachment 2). They have never contested its accuracy, and have agreed with the factual statement that the current configuration does not provide enough actual capacity on more than one occasion.

Since the permit request provides for no prohibition on dunnage drums, one or two of the 30-gallon inner containers in the shielded container three-pack, the number of containers to be transported to and managed at WIPP could be two or three times the amounts provided in the preceeding paragraph. The impact of dunnage drums on the number of shielded containers that could be emplaced, and the amount of space shielded containers could occupy in the PAU, WHB, and Underground SWDU is not discussed in the request. Thus, the amounts described in the request are not accurate and complete, and the request is incomplete.

Instead, the request asserts, but provides no technical analysis, (page 9) for the proposition:

> Shielded containers are expected to reduce the time and personnel necessary for the packaging of RH TRU mixed waste at generator sites and the management, storage, and disposal of that waste at the WIPP facility.

Absent any analysis to support the assertion, NMED cannot accept the assertion as stating a need for the modification. Such a proposition could only be true if shielded containers eliminate some RH canisters, for if the same number of canisters are packaged at the generator sites and shipped to WIPP, there are no such reductions.

The second "need" discussed in the request (page 9) is:

> The Permittees believe the use of shielded containers will be beneficial because the shipment of RH TRU mixed waste in shielded containers in the HalfPACT may be more efficient than shipment in canisters using the RH 72-B Cask.

What the permittees "believe" is not adequate documentation, and it is not an adequate statement of need for the modification. Indeed, shielded containers appear not to be beneficial, especially since shielded containers will compete with use of the storage facilities for CH waste, thereby potentially slowing handling of CH waste. Shielded containers also will displace some actual CH waste capacity in the Underground HWDUs. Of course, use of shielded containers would be extremely detrimental if those containers result in accidents, releases or contamination of the PAU, CH Bay, or Underground HWDUs that disrupt other operations at WIPP. Moreover, there could only be more efficiency if the use of shielded containers reduces the number of RH canisters. But the request does not mention that possibility. Instead, what the Permittees apparently desire is to bring as many RH canisters as possible and additional RH waste in shielded containers. As already discussed, the reality is that shielded containers would increase the amount of RH waste being stored and disposed at WIPP.

The request includes a new section in Attachment A1, A1-1d(4) Handling Waste in Shielded Containers, which states, among other things:

> If a primary waste container is not in good condition, the Permittees will overpack the container, repair/patch the container in accordance with 49 CFR §173 and §178 (e.g., 49 CFR §173.28), or return the container to the generator.

The request also includes a new section in Part 3, 3.3.1.8. Shielded Container, which states, among other things:

> Shielded containers may be overpacked into a standard waste box or [sic] ten drum overpack.

Those provisions are not valid and cannot be incorporated into the permit. First, a three-pack of shielded containers could not be overpacked into either a standard waste box (SWB) or a ten-drum overpack (TDOP). According to Table A1-2 of the request, a three-pack of shielded containers weighs 7,000 pounds. However, that same table shows that weight exceeds the maximum gross weights of a SWB or a TDOP. Thus, it would be a violation of the permit (and endanger public health and the environment) to allow a three-pack of shielded containers to be overpacked in the proposed containers. Second, a shielded container that is damaged such that in any location its surface dose exceeds 200 millirem per hour should not be overpacked in either a SWB or TDOP because those containers are solely for CH waste. Therefore, overpacking may not be possible for shielded containers. Repair and patching may not be possible for shielded containers. Returning a shielded container not in good condition to the generator site may not be possible, if the damage precludes the HalfPACT from being returned to the generator site. Thus, shielded containers that are not in good condition could be "stranded" at WIPP. The request is incomplete in not fully analyzing those possibilities and describing how the situations could be addressed.

If the permittees intend to overpack a single 30-gallon inner container, the request must then discuss how such a situation would comply with the limitations on SWBs and TDOPs and another new proposed provision:

4.3.1.8. Shielded Container
Shielded containers are configured as a three-pack.

A single overpacked shielded container is not consistent with that proposed provision. Nor would the remaining two containers that were not overpacked be consistent with the proposed provision without a dunnage drum.

Moreover, the Permit provides that SWBs and TDOPs are for CH waste. To allow shielded containers to be overpacked in those containers requires changes in various other provisions of the Permit, which have not been requested. For example, Permit Section 3.3.1.3, provides that TDOPs may be used to overpack "CH TRU mixed waste." But a damaged shielded container could have a surface dose rate of 200 millirem per hour and could not then be considered to be CH TRU waste. Permit Section A1-1b(1) includes SWBs and TDOPs as CH TRU mixed waste, so those provisions would have to be changed to allow overpacking of shielded containers, which are not CH TRU waste. But such a change would be inconsistent with Section A1-1b(2), which relates to RH TRU mixed waste containers, including shielded containers.

Co-permittee U.S. Department of Energy (DOE) has stated another need for shielded containers. Its *Draft Environmental Impact Statement for the Disposal of Greater-Than-Class-C (GTCC) Low-Level Radioactive Waste and GTCC-Like Waste* (DOE/EIS-0375-D), February 2011, states:

> Consistent with this planned change request, this EIS assumes that all activated metal waste and Other Waste - RH would be packaged in shielded containers that would be emplaced on the floor of the mined panel rooms in a manner similar to that used for the emplacement of CH waste. at 2-4.

That need is not discussed in the request, nor is there any discussion of whether, if the request were approved, any further modification in the shielded container provisions would be required. Therefore, the request is incomplete.

SRIC would also note that its comments on the *GTCC DEIS* strongly criticized the document for many legal and technical deficiencies.

Thus, regarding several different essential matters, the request is incomplete and denial of the request is required.

B. The request does not meet the requirements of the HWA and RCRA. 40 CFR §270.42(b)(7)(ii)

The request includes numerous changes to the Permit in how RH waste is packaged (using the shielded container), stored in the PAU, opened in the CH Bay of the WHB, examined for contamination and damaged containers, placed on the facility pallet, and emplaced underground. As already noted above, aspects of handling of shielded containers are not completely and adequately described in the request, as required by the HWA and RCRA.

20.NMAC 4.1.900 (incorporating 40 CFR §270.42(b)(1)(iii)) requires that the request explain why the modification is needed. The request fails to discuss, let alone adequately explain, that a major need is to expand the available disposal capacity for RH waste in the Underground HWDUs (see discussion on pages 3-4 above). It is clearly a violation of the HWA and RCRA to not fully explain the need, and the request should be denied. Moreover, the discussion of need in the request is clearly inadequate or erroneous, and does not adequately explain the need.

As will be further discussed in #2 below, the request also does not meet the requirements for a class 2 modification request. Consequently, the request does not meet the requirements of RCRA and the HWA.

Thus, the request does not meet the requirements of RCRA and the HWA and denial of the request is appropriate.

C. The request does not demonstrate that use of shielded containers will protect public health and the environment. 40 CFR §270.42(b)(7)(iii); §74-4-4 NMSA.

The modification request does not discuss the characteristics of RH waste, including that it can have a surface dose rate of up to 1,000 Rem per hour and is highly dangerous to workers and the public. Because of the difficulties of safely permitting RH waste at WIPP, RH waste was not allowed until a Class 3 modification was approved on October 16, 2006, effective November 16, 2006.

As discussed on pages 4-5 above, the use of shielded containers substantially increases the number of packages containing RH waste being handled at WIPP, substantially increases the number of containers arriving at the site and being stored in the PAU, WHB, and Underground HWDUs. In addition to significantly increasing the operations at the site, those increases pose dangers and increased risk to public health and the environment that are not discussed in the request. The request does not demonstrate that such an increase in the number of packages with

RH waste would not endanger public health and the environment. On the contrary, increasing the actual number of RH waste packages could endanger public health and the environment by requiring additional handling of RH waste, thereby increasing exposures and the likelihood of accidents and releases.

The request (p. 5) states:

> Upon arrival at the WIPP facility, the shielded containers will be processed as CH TRU mixed waste using CH TRU mixed waste handling equipment and operating procedures.

SRIC objects to shielded containers being handled identically to CH waste because RH waste and CH waste are significantly different. Shielded containers will have much higher surface dose rates (an order of magnitude or more) than most CH waste containers. The higher radiation dose in a container could generate gases at a higher rate. The higher radiation dose and different waste characteristics could also generate different gases than CH containers. The higher radiation doses can pose an increased risk of releases to the environment and threat of worker exposures. The permittees should have performed a time motion study for each waste handling step for shielded containers and calculated expected radiation doses and included such study in the request. Such a study could demonstrate that certain procedures should be adopted for shielded containers to minimize personnel exposures, both for workers directly handling shielded containers and for other workers in the PAU, CH Bay, and Underground HWDU. For example, additional worker protective equipment, such as a respirator, may be indicated for personnel doing radiological surveys required by Permit Attachment G3. Specifying additional minimum distances in aisle spaces and limiting the number of shielded containers in the PAU and CH Bay could minimize personnel exposures. Specifying emplacement locations and distances and limiting the number of shielded containers in the Underground HWDU could minimize personnel exposures. Thus, if shielded containers are to be used, revised procedures should be discussed and analyzed to determine the need for changed permit requirements. The permittees reluctance to discuss such requirements may be because they do not want to be subject to class 3 procesees. Regardless, technical analysis of these matters should be required to protect public health and the environment.

It is not exceeding NMED's authority to recognize the radioactivity in the mixed waste, and addressing radioactivity does not regulate radionuclides. NMED, the permittees, and the public have recognized during the past 20 years since the original draft WIPP permit was submitted that radiation monitoring was an essential part of WIPP's operations and is appropriate and necesssary under the HWA. Such monitoring and radiological survey is necessary, and has always been part of the Permit, under the principle of co-detection, to determine whether a potential release of hazardous constituents has occurred. The permittees also have recognized that NMED has authority to include, or not include, RH waste in the WIPP permit. Indeed, the original Permit issued on October 27, 1999 included a prohibition on RH waste. Permit Condition II.C.3.h. The class 3 permit modification, approved on October 16, 2006, removed the RH waste prohibition, but included other provisions that limited RH waste, which were supported by the permittees. Thus, there is both state and federal legal and regulatory authority and historic practice that provide that NMED may not approve, or may put various limitations on, RH waste in shielded containers.

Because the request does not demonstrate that use of shielded containers will protect public health and the environment, denial of the request is appropriate.

2. If NMED does not deny the request, it must process the request as a class 3 permit modification under 40 CFR §270.42(c).

Pursuant to 20.NMAC 4.1.900 (incorporating 40 CFR §270.42(b)(6)(i)(C)), NMED may determine that the modification request must follow the procedures for a class 3 modification because there is substantial public concern about the proposed modification or the complex nature requires the more extensive procedures of class 3. Both requirements are met regarding shielded containers. There is substantial public concern about shielded containers, and there is very substantial public interest in WIPP and RH waste, as has been demonstrated repeatedly over the past 15 years with the WIPP permitting process in which hundreds of people have participated in addition to several organizations, including SRIC, that represent hundreds of other people.

The complex nature of using shielded containers also has been demonstrated by the above comments regarding matters that are not adequately discussed in the request. Handling RH waste at WIPP is demonstrably complex and was subject to class 3 modification procedures in 2005 and 2006. Shielded containers would continue the complexity of the existing RH operations and add new procedures. Thus, shielded containers would multiply the complexity of managing RH waste at WIPP.

Also, as noted above on page 3, the permittees previously requested that some RH waste not in canisters be handled at WIPP. As a result of the class 3 permit modification – HWB 06-01 (M) - Permit Section 3.1.1.10.ii was approved to allow RH waste not in canisters to be handled in 55-gallon drums in the Hot Cell. But shorter time limits were established on such RH waste, as compared with CH waste or RH waste in canisters. As part of the class 3 process, more detailed information would be provided as to what time limits should apply if shielded containers are included in the Permit. This complexity requires class 3 processes.

That class 3 modification for RH waste also imposed volume limits on the amounts of RH waste not in canisters that could be in the Hot Cell. Permit Section 3.1.1.11. As part of the class 3 process, more detailed information would be provided as to what volume limits should apply if shielded containers are included in the Permit. This complex situation also requires class 3 processes.

To incorporate shielded containers also requires additional changes to the permit that the permittees have not included in the request. The need for such additional changes also shows the complexity of the request.

Moreover, on October 24, 2011, NMED Secretary David Martin made a determination that the Los Alamos National Laboratory (LANL) class 2 permit modification request for TA-63 Transuranic Waste Facility would be processed as a class 3 modification (which is ongoing) because of a "long history of substantial public concern regarding the management of hazardous waste at LANL." (Page 2). The NMED Secretary also determined that the modification "would require complex changes to the facility and its operations." (Page 2). There is an even longer

history of substantial public concern regarding the management of hazardous waste at WIPP, dating back at least 20 years. That public concern has been manifested repeatedly in the original permitting process, including the public hearing that lasted 19 days in 1999; and in public involvement in numerous permit modification requests over the past 13 years, including the request that allowed RH waste to be managed at WIPP. As already discussed, the use of shielded containers would require complex changes to many aspects of RH management at WIPP.

Additionally, other regulations require shielded containers to be a class 3 modification. 40 CFR §270.42, Appendix I.F.1.a requires that a modification "resulting in greater than 25% increase in the facility's container storage capacity…" is a class 3 modification. Also noted above, there are no limits on the amount of RH waste that could be stored in shielded containers in the PAU and CH Waste Bay, so the amount of RH waste allowed in those areas is certainly more than a 25% increase and the amount of RH waste in the WHB can increase by more than 25%.

Regarding the Underground HWDUs, the request (p. 3) states:

> According to Crawford, et.al., 2007[1], 1,922 m3 of RH TRU mixed waste could potentially qualify for shipment in a shielded container.

The existing permitted Underground HWDU capacity for RH waste is 2,635 m3. Table 4.1.1. The amount of RH waste that could potentially be in shielded containers is much more than a 25 percent increase in that storage capacity. Moreover, as described on page 4 and in Attachment 1, even assuming that panels 9 and 10 would be permitted for the maximum number of RH canisters, the capacity would be about 3,545 m3. The amount of RH waste that could potentially be in shielded containers is much greater than a 25 percent increase of that RH container storage capacity.

40 CFR 270.42, Appendix I F.3.a requires that modifications "[t]hat require additional or different management practices than those authorized in the permit" are class 3. The purpose of shielded containers is to require additional and different management practices for RH waste than those in the Permit. As also discussed on page 8, there should be some different management practices for shielded containers as compared with CH containers. Here again, shielded containers require a class 3 modification.

Thus, based on the HWA and RCRA regulations and because of current NMED practices, shielded containers must be processed as a class 3 modification, if the modification request is not denied.

3. <u>The request includes other inadequacies</u>.

A. The request on page 5 states:

> In order to meet the stacking stability requirements of Permit Attachment A2, Section A2-2b, shielded containers will not be stacked more than two high, and no other waste assemblies or backfill MgO sacks will be placed on top of three-pack assemblies of shielded containers.

However, those stacking requirements are not proposed for inclusion as permit language.

Permit Section A2-1 provides:

> The CH TRU mixed waste containers may be stacked up to three high across the width of the room.

Since the request includes no change in that provision and states that shielded containers would be handled as CH waste, other CH waste containers could be placed on top of a 3-pack assembly or a 3-pack assembly could be placed on top of CH TRU mixed waste containers. The request does not demonstrate that such stacking would protect workers or public health and the environment, and indeed the request states that such stacking is not appropriate. SRIC objects to allowing 3-packs of shielded containers to be stacked on top of CH TRU waste containers or to CH TRU waste containers being stacked on top of shielded containers. The Permit should include specific provisions related to handling and stacking of shielded containers. Again, the request does not include a DSA or other technical analysis that stacking of shielded containers in like manner as CH waste is protective of public health and the environment.

B. The request proposes to revise Permit Part 4, Table 4.1.1 to remove the container equivalent column. SRIC strongly objects to such a revision. The limit on the number of RH TRU canisters, which is indicated in the column, was supported by public comment and technical testimony in the class 3 modification process that added RH waste to the Permit. The information proposed to be stricken is accurate and would remain so if shielded containers were approved. In the request, the permittees have provided no adequate technical basis to remove the column and the limits. The request states that "this column is not used to meet any compliance requirement." (Page 6). There are many parts of the Permit that do not state a "compliance requirement," so that is not a basis to remove the column.

Further, Permit Part 4, Table 4.1.1 as included in the request is not consistent with the current Permit regarding Panel 5 Final Waste Volume, so it could not be included in the Permit.

C. The permittees included in the request Appendix D "Why the Shielded Container Modification is not a Class 3 Modification." At best, the permittees discussion is incomplete. For example, in Part 1 there is no mention that Permit Section 3.3.1 includes seven acceptable storage containers, not solely the four containers included on page D-5 (and pages 8-9 of the request). Thus, three of the permitted storage containers were not included as class 2 modifications. 55-gallon drums and SWBs were part of the original permit application and approved in the 1999 Permit. The RH TRU canister was approved as part of the class 3 modification to permit RH waste.

In the Part 1 discussion, there is no mention of the requirement that increasing facility container storage capacity by more than 25 percent is a class 3 modification. There also is no mention that 40 CFR 270.42(d)(1) specifically allows the permittee to submit a class 3 request even if not sure of the proper classification.

There also is no mention of the HWA requirement for a public hearing "on a minor permit modification if the secretary determines that there is significant public interest in the minor modification." Section 74-4-4.2.I NMSA 1978. The permittees should have saved themselves,

NMED, and the public the time, resources, and inconvenience of twice debating the classification by submitting the request as a class 3 modification.

As regards the Part 2 discussion of stakeholders concerns, it does not fully reflect SRIC's comments of December 5, 2011 or those at the June 7, 2012 pre-submittal meeting. Moreover, the discussion does not reflect the WIPP permit record, which clearly shows substantial public concern regarding the dangers of RH waste and impacts on public health and the environment and that permit requirements regarding RH waste have always included public hearings. There was substantial public concern about RH waste, and support for the RH waste prohibition, during the several year process for issuance of the Permit. There was very substantial public concern about the RH waste permit modification, which was submitted as a class 3 modification request. There was significant public interest in the 2011 shielded containers request, and there is even more significant public concern, and more people commenting, on the current request.

D. As described in the request, shielded container three-pack assemblies include items not in CH waste containers. Figure 2 of the request includes a "stiffener," upper and lower "axial dunnage," "radial dunnage," and "pallet," which is also described as a "triangular pallet" (page 5). Figure 2 also shows a "bottom slipsheet." Page 5 of the request also mentions a "plastic reinforcing plate." None of those items are described or incorporated into the Permit, and they may need to be. At a minimum, the request should describe why they should not be incorporated into the Permit.

Slipsheets are typically used with CH waste and are discussed in Permit Section A2-2a(1). The request should clarify whether the shielded container "bottom slipsheet" serves the same purpose as it does for CH waste and whether the "bottom slipsheet" can be used with the forklifts with a push-pull attachment. Page 5 of the request states: "The three-pack assembly will be placed singly on the floor using the slipsheet." However, the request in other places states that shielded containers may also be stacked, so that narrative description is not complete and accurate as regards where the assembly will be emplaced or as to how the slipsheet is used for stacking.

E. The proposed changes to Permit Section E-1b(1) are not appropriate. RH waste in shielded containers is to be counted toward the RH waste volume limits. The inspection requirements for shielded containers should be separatedly described in this section, rather than changing the container inspection requirements for CH and RH waste. Changes proposed for "off-site waste" should not be approved. "Off-site" is the term used in the Permit to distinguish it from "on-site" derived waste. There should be no derived RH waste at WIPP.

4. SRIC requests a public hearing on any shielded containers modification request.
RH waste and shielded containers are a matter of significant interest and concern to SRIC and the public. As demonstrated by these comments, the use of shielded containers would be complex, and stringent measures are required to protect public health and the environment. The complexity of the matters and the incompleteness of the request require a public hearing so that the matters may be adequately examined and questions answered, and the required determinations regarding protecting public health and the environment can be adequately made. Therefore, any permit modification to allow use of shielded containers is a major modification,

and SRIC requests a public hearing on the current, or any other, shielded containers permit modification request.

Thank you very much for your careful consideration of, and your response to, these and all other comments.

Sincerely,

Don Hancock

cc: John Kieling

WIPP DISPOSAL VOLUMES (cubic meters)											
(as of January 14, 2012)											
	Panel 1	Panel 2	Panel 3	Panel 4	Panel 5	Panel 6	Panel 7	Panel 8	Panel 9	Panel 10	Totals
55-gal. Drums	38,139	23,865	8,394	12,858	21,255	6,339					110,850
Volume	8,009.19	5,011.65	1,762.74	2,700.18	4,463.55	1,331.19					23,278.50
SWB	1,239	3,176	1,730	1,405	2,200	741					10,491
Volume	2,329.32	5,970.88	3,252.40	2,641.40	4,136.00	1,393.08					19,723.08
TDOPS	35	1,451	2,227	1,048	788	131					5,680
Volume	157.50	6,529.50	10,021.50	4,716.00	3,546.00	589.50					25,560.00
85-gal drums	2	0	0	3	0	0					5
Volume	0.64	0.00	0.00	0.96	0.00	0.00					1.60
100-gal. Drums	0	1,278	5,409	11,050	9,951	1,218					28,906
Volume	0.00	485.64	2,055.42	4,199.00	3,781.38	462.84					10,984.28
SLB2s	0	0	0	0	0	5					5
Volume	0.00	0.00	0.00	0.00	0.00	36.95					36.95
R-Lid 72-Bs	0	0	0	198	246	74					518
Volume	0.00	0.00	0.00	176.22	218.94	65.86					461.02
F-Lid 72 Bs	0	0	0	0	18	0					18
Volume	0.00	0.00	0.00	0.00	16.02	0.00					16.02
CH volume	10,496.65	17,997.67	17,092.06	14,257.54	15,926.93	3,813.56					79,584.41
RH volume	0.00	0.00	0.00	176.22	234.96	65.86					477.04
Sources: Container numbers: http://www.wipp.energy.gov/general/GenerateWippStatusReport.pdf											
Container volumes: http://www.nmenv.state.nm.us/wipp/documents/Part3.pdf											
RH legal limit											***7,079***
RH canister capacity				176.22	234.96	534	650	650	650	650	3,545.18
CH legal limit											***168,485***
CH capacity	10,496.65	17,997.67	17,092.06	14,257.54	15,926.93	18,750.00	18,750.00	18,750.00	18,750.00	18,750.00	169,520.85
Cumulative	10,496.65	28,494.32	45,586.38	59,843.92	75,770.85						
2011 Inventory remaining (DOE/TRU-11-3425, pages 426-427)											
CH						76,561					
RH (undercounted)						*3,459*					
RH (per Patterson - 1/26/2012)						*5,336*					
Note: Numbers in red are based on WIPP permit volumes and differ from the volumes in the source document, which undercounts the volumes..											
Compiled by: Don Hancock, Southwest Research and Information Center; 505/262-1862; sricdon@earthlink.net											

Attachment 1

Attachment 2

Subject: Re: RH Inventory
From: Don Hancock <sricdon@earthlink.net>
Date: Thu, 26 Jan 2012 18:42:32 -0700
To: "Patterson, Russ - DOE" <Russ.Patterson@wipp.ws>
CC: "McInroy, Bill" <wmcinroy@lanl.gov>, "McCauslin, Susan - DOE" <susan.mccauslin@wipp.ws>, "Basabilvazo, George - DOE" <George.Basabilvazo@wipp.ws>, "Nelson, Roger - DOE" <Roger.Nelson@wipp.ws>

Russ:

Thanks very much for the helpful response.

Hopefully, we can now agree about two things:
1. The two ways of counting RH volumes result in significant differences. Using the WDS volumes in the ATWIR, the inventory of WIPP-bound and emplaced RH waste is 3,459 cubic meters. Using the outer container volumes you provided, the WIPP-bound and emplaced RH waste is 5,336 cubic meters or about a 35 percent larger amount. Both volumes are under the legal limit for RH waste at WIPP.

2. The actual underground available space using one RH canister per borehole is substantially less than the 5,336 cubic meters. A conservative calculation (attached) is with that configuration, the available capacity is 3,545 cubic meters. That number is conservative because it assumes that 534 cubic meters of RH waste allowed by the permit will be emplaced in panel 6, which we already know will not occur, since a substantial number of boreholes have not been filled in rooms 6 and 7. Of course, I'm aware that the actual configuration of panels 9 and 10 is proposed to change, but I'm not aware that the new configuration would have more boreholes than are provided in panels 7 and 8.

However, we do not seem to agree on some other matters.
1. While I have no objection to WDS tracking the RH volumes using both methods, I don't understand why the outer container volumes should not be the ones used in all "public" forums - which include the permit and its table 4.1.1, the public WDS and ATWIR, and Budget and NEPA documents. That would result in consistent numbers being used, which track with the permit and other legal requirements, and can be clearly understood. If you are not going to use that approach, it seems to me that in each case you need to provide an explanation of why the alternative number is being used and how it differs from the calculation for the permit. I think the latter approach is more cumbersome for DOE and more confusing to the public. As Susan knows, there was some discussion about this matter at the Quarterly Meeting today.

2. While I think there should be public acknowledgment and discussion of the RH volume "shortage," and how to address it, DOE seems to want to avoid either acknowledging or discussing it. I don't believe that there's been any generally available DOE document that discusses the matter. Please point such document(s) out, if I've missed them. And the matter wasn't discussed in the EPA planned change request for shielded containers or in the class 2 permit modification request for shielded containers. I'd like to understand why such acknowledgment hasn't not happened and how and when DOE intends to have a public discussion about it.

I'd appreciate your further response on these matters. Of course, I'm also glad to

have further discussions about these matters and any others of mutual interest.

Thanks.

Don Hancock
Southwest Research and Information Center
505/262-1862

On 1/26/2012 2:49 PM, Patterson, Russ - DOE wrote:

> Don:
>
> In response to your telephone message earlier this week,IdirectedLANL-CO last year,to start reporting RH inner container volume in the annual report to be in line with the WDS RH reporting. The WDS is the"official"volume of record used to show compliance with theHazardousWaste Facility Permit requirements. To keep from undue confusion for the reported volumeof RH waste emplaced I thought, and still do think,it was best if the WDS andATWIRmatched.Of course the outsideRHcontainer volume and materialparameters arestill tracked andused for performance assessment calculations.
>
> Ialsoasked LANL-CO if the outside container volume was used for RH wouldwe exceed the 7,080 m3 volume limit for RH waste or ifWIPP physicallywould nothave enough space to emplace all the RH waste being reportedin the 2011 ATWIR. LANL-COcalculated RH volumes using the outer container volume of .89 to addressthisquestion. Below are the recalculated volumes using the .89 m3.
>
> As of 12/31/2010
>
> RH volume remaining at site (WIPP-bound) = 4,939 m3
>
> RH volume emplaced at WIPP = 397 m3
>
> Total = 5,336 m3
>
> RH volume remaining at site (Potential) = 1,853m3
>
> Total = 7,189m3
>
> As you can see using the RH outer container volume of .89 we are 1,744 m3 under the RH 7,080 m3 volume limit; for WIPP bound and emplaced. If you include the waste designated as Potential you exceed the 7,080 m3 by 109 m3. As you know not all RH waste designated as Potential will end up being shipped to WIPP. Ifyou have any additional questionsplease let me know.
>
> Thank you,
>
> Russ

Container numbers-volumes011412.xls	**Content-Type:** application/vnd.ms-excel **Content-Encoding:** base64