



SOUTHWEST RESEARCH AND INFORMATION CENTER
P.O. Box 4524 Albuquerque, NM 87106 505-262-1862 FAX: 505-262-1864

December 16, 2002

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

DEC 2002

RE: WIPP Panel Closure System Class 3 Permit Modification

Dear Steve,

Southwest Research and Information Center (SRIC) requests that NMED deny the permit modification because it is not adequately supported technically and is so incomplete as to not provide enough basis to proceed as a class 3 modification. 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 deny the modification without prejudice to the permittees submitting a more technically adequate modification in the future.

SRIC is concerned that NMED may have prematurely -- before considering public comment -- already decided how to proceed with this panel closure modification. With the Centralized Characterization Facility, Remote-Handled waste, and Data Management modifications, NMED seems to be adopting an approach of allowing class 3 modifications to proceed, no matter how flawed they are, rather than rejecting them. SRIC believes that the better regulatory approach, and also one that reduces the excessive burden on scarce resources of NMED and the public, is to reject inadequate class 3 modifications, so that the permittees know that they must submit adequate modification requests.

Denying the class 3 modification request need not delay implementation of an adequate closure because any final panel closure system (PCS) cannot be completed until it is approved by both NMED and the Environmental Protection Agency (EPA), since panel closure is required by both the WIPP permit and the EPA certification. EPA has informed DOE that it would not begin consideration of the request to modify the existing required panel closure system until at least the summer of 2004 and that the required rulemaking "will likely take a minimum of 12 months to complete." (See attachment 1, EPA letter of November 15, 2002.) Thus, SRIC believes that there is more than enough time for NMED to reject the proposed class 3 modification so that the permittees can submit a more complete, accurate, and technically supported permit modification.

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Thus, the permittees' discussion on pages 7-8 of the request regarding the need for rapid approval should be disregarded. Indeed, in its October 11, 2002 Notice of Class Determination, NMED has appropriately rejected the permittees request to consider the modification as a class 2 request and has classified the request as class 3.

If NMED does not deny the class 3 modification submittal, SRIC requests that public comment be fully considered and included in any notice of deficiency (NOD) that NMED issues. SRIC also requests that if NMED proceeds with an NOD that it require the permittees to notice the WIPP mailing list of its response and make any such response readily available to the public.

The following comments are not exhaustive of the many deficiencies with the modification request, but they indicate that the request is very substantially incomplete and should be denied, and that there must be further information provided before NMED proceeds with the request. Such information should be provided to NMED and the public. Some examples of the needed information follow.

1. The permittees must provide a full engineering analysis of at least the following:
 - * the projected performance of the existing required "Option D" PCS from a major ceiling collapse in a panel and in the event of deflagration and detonation;
 - * the projected performance of the proposed WIPP Panel Closure (WPC) from a major ceiling collapse in a panel and in the event of deflagration and detonation;
 - * the projected performance of alternate designs, especially any that are projected to provide equal or increased protection to public health and the environment as compared with the existing Option D or the proposed WPC;
 - * the projected performance of alternative panel loadings to calculate void space volume. For example, panel 1 will not have a waste capacity of 600,000 cubic feet as is specified in Attachment I1, page 3-6.

The permittees have not provided such an analysis. The analysis submitted with the request (proposed Attachment I1) is insufficient because it does not such a complete analysis, and it is not an adequate basis to approve the request. The analysis, among other things, does not include effects of detonation (Attachment I1, page 3-23). Assertions that detonation is "very unlikely" is not sufficient to demonstrate protection of public health and the environment. The permittees should model the effects of a detonation. The analysis submitted with the request also does not consider the EEG's analysis of panel closure -- *Evaluation of Proposed Panel Closure Modifications at WIPP*, EEG-82, December 2001. The permittees should consider that EEG report and provide any analysis that they have.

As they have done with previous modification requests, the permittees make other assertions without providing actual data and analysis that demonstrate the validity of the assertions. For example, on page 1 of the request, the permittees state that the WPC "is at least as protective as Option D in satisfying the environmental and closure performance standards." However, without a full engineering analysis, NMED cannot accept that assertion.

The permit, in section I-1e(1) states: "the NMED and EPA determined that only the most robust design option (D) would be approved." SRIC agrees that a major criterion for panel closure is that the most robust design should be used so as to provide maximum protection to public health and the environment.

2. The permittees' existing engineering analysis -- *Detailed Design Report for an Operational Phase Panel-Closure System*, DOE/WIPP-96-2150, (submitted to NMED in the Part B Permit Application (DOE/WIPP 91-005, Rev. 6, Vol. XII, Appendix I1)) -- concluded that removal of the disturbed rock zone (DRZ) and use of a fully enlarged barrier were possible and provided better protection to public health and the environment than not providing such an enlarged barrier. The permittees have not provided an engineering analysis of how the proposed WPC, which would not include DRZ removal and an enlarged barrier, would function to prevent releases through marker beds or other fracturing, especially in instances of severe ground conditions. The permittees must submit a revised engineering analysis that fully examines those issues.

3. The permittees must provide the report of the "design review committee" mentioned in Attachment I1 at ES-3 and 2-2. Such report is especially important to determining if there are other more protective panel closure systems. The permittees should also explain why the proposed WPC is superior to other alternate designs.

4. The permittees must also provide a more definitive declaration as to whether the existing required PCS can be successfully accomplished and the basis of that conclusion. The statement on the top of page 4 of the modification request regarding the permittees' current ambivalence about the feasibility of carrying out the PCS is not sufficient basis to not comply with the requirement of the existing permit. The permittees should also provide specific details about future testing that they are planning to do with SMC, in addition to the information included on page 3 of the request about past and current testing.

Further, given the permittees' concern about the ability to use Salado Mass Concrete (SMC) in the panel closure system, the permittees should provide a detailed report as to why SMC will work in final facility closure, including shaft seals.

5. The permittees have not described how the PCS and the WPC will be affected by the decision to change the location of future panels 3, 4, 5, and 9 by about two meters so that the roof of the panel is at the Clay Seam G unit. The permittees must describe this change and their engineering analysis of the PCS and WPC should include performance of those systems both with the existing panel location (since panels 1 and 2 are at those elevations) and with the modified panel location (since some future panels will be at a different elevation).

6. SRIC strongly objects to the proposed panel closure schedule in new Table I-1a and revised Figure I-2. Under the proposal, actual construction would not begin until at least 289 days after the last receipt of waste. Such a delay is contrary to the 180-day requirement of 40 CFR

264.113(b), is not protective of public health and the environment, and is totally unnecessary. Given that the permittees know what the design of the PCS or WPC will be years in advance of the closure of panels 2 and following panels, there is no reason that the request for proposal and the award and the mobilizing of materials and preparation for construction should not occur before the last receipt of waste at the panel. Thus, those steps should be done by the time of the last receipt of waste. Such a practice would also eliminate the need for the initial 30-day time period to perform the radiation survey, since that survey would be accomplished as part of the 149-day period to conduct the survey and construct the panel closure system. Thus, the actual construction should be completed within 180 days, as required by the regulations.

The permittees must fully explain why they cannot meet the 180-day requirement and must fully explain why the measures advocated by SRIC cannot be done. Based on the existing information, SRIC believes that no change should be approved to Figure I-2. Further, the closure end dates in Table I-1 should reflect a 180-day schedule, rather than the much longer time periods (467 days in proposed revised note 3) included in proposed revised Table I-1. Of course, SRIC does not agree with the 482-day schedule in proposed Table I-1a.

7. NMED must reject the proposed change on page I-6 that would allow Panel 1 closure to follow the schedule proposed on Tables I-1 and I-1a. Given the permittees' inability to meet the panel closure schedule for Panel 1 in the existing permit, SRIC agrees that some modification will be required. But SRIC does not agree with either the schedule in this modification request or that included in the Class 1* modification request submitted on November 21. SRIC appreciates the fact that the permittees and NMED have involved in the public in discussions about panel closure and expects that process to continue before any decisions are made about the timing and specific methods of partial or final closure of Panel 1.

8. The request proposes changing section I-1e(1) to limit volatile organic compounds (VOCs) to those specified in Table IV.F.2.c of the permit (at I-9). Such a change is unacceptable because that Table places limits of VOCs at Drift E-300, which is appropriate for the three panels included in the permit. But a compliance point at that drift is not appropriate for panels 5-10.

SRIC also does not agree with the deletion of the permit requirement that "compliance is achieved by at least one order of magnitude." Such a requirement should be maintained in the permit.

9. In the modification request, the permittees also request a change in the maximum waste inventory in a panel (section I-1c). SRIC objects to the proposed change. It is true that there are inconsistencies in the permit in regards to the capacity of a panel. SRIC believes that until and unless other evidence is submitted, the inventory limits should be based on the testimony at the permit hearing. In that testimony, the permittees agreed that the capacity of a panel was 600,880 cubic feet. (Transcript, pages 159-160). Thus, the existing limits in sections I-1c and M2-2b are consistent with that testimony and the higher capacity limits in Table IV.A.1 are not supported and should be changed. Further, since panel 1 will be deemed filled when it contains far less

that 600,000 cubic feet of waste, the permittees have not demonstrated a need for the higher capacity limits in the request.

Thank you for your careful consideration of all of these comments.

Sincerely,

A handwritten signature in cursive script, appearing to read "Don Hancock".

Don Hancock



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

November 15, 2002

OFFICE OF
AIR AND RADIATION

Dr. Inés R. Triay, Manager
Carlsbad Field Office
U.S. Department of Energy
P.O. Box 3090
Carlsbad, NM 99221-3090

Dear Dr. Triay:

Thank you for your letter dated October 7, 2002, requesting that the Environmental Protection Agency (EPA) approve a proposed change to the 40 CFR Part 194 Certification of the Waste Isolation Pilot Plan (WIPP) with regard to the required panel closure system.

Approval of the proposed change to the required panel closure system would require EPA to conduct a modification rulemaking in accordance with 40 CFR 194.65, which requires such a rulemaking for any changes in activities or conditions pertaining to the WIPP disposal system that depart significantly from the information and materials on which the current certification is based. Condition 1 of EPA's certification decision [40 CFR 194, Appendix A] specifies that the Department of Energy (DOE) must install panel closures that conform to design Option D described in the Compliance Certification Application. Departing from the approved design, as proposed in your letter, would require changing Condition 1 of the WIPP Certification decision. This would constitute a significant deviation and thus require a modification.

A modification rulemaking will likely take a minimum of 12 months to complete from receipt of "complete" information on the requested change. It is our intention to refrain from conducting modification rulemakings during the period in which, by statute, we are required to consider the WIPP recertification application. Since the rulemaking likely would not be completed before we receive the WIPP compliance recertification application (expected to be submitted to EPA in November 2003), we are deferring review of this proposal until after we have issued our recertification decision. We notified you of our intent in this regard in our December 2000 Recertification Guidance to DOE and again in letters to you dated April 24, 2002, and August 6, 2002. Between now and November 2003, we will continue to work with the Carlsbad Field Office on significant WIPP recertification issues.



Without EPA's approval of the change to the panel closure design system, DOE should ensure that Condition 1 of the WIPP Certification Decision is reflected in the WIPP compliance recertification application.

If you have any questions please call Betsy Forinash at (202) 564-9310.

Sincerely,

A handwritten signature in black ink, appearing to read "Frank Marcinowski". The signature is written in a cursive style with a large initial "F".

Frank Marcinowski, Director
Radiation Protection Division

cc: Lynne Smith, DOE/HQ
Cindy Zvonar, DOE/CBFO
Russ Patterson, DOE/CBFO
Matthew Silva, EEG
Steve Zappe, NMED