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March 10, 1987

*Letter held by
mailing*

VIA FEDERAL EXPRESS

Mr. Jack B. Tillman
Project Manager
Waste Isolation Pilot Plant
P.O. Box 3090
Carlsbad, NM 88221

Dear Mr. Tillman:

Enclosed you will find EEG's comments on the draft "Waste Isolation Pilot Plant Compliance Plan for 40 CFR 191", DOE-WIPP 86-013. Thank you for the opportunity to comment on the draft plan. I hope you will find the comments useful. Please call me with any questions, or we can discuss the comments in person at the meeting on March 13.

Sincerely,

Robert H Neill / RHN
Robert H. Neill
Director

JRC:mik

cc: D. R. Anderson/Candis National Laboratories

AGOE 3-2-2

SARW 12 0



EEG COMMENTS ON "WASTE ISOLATION PILOT PLANT COMPLIANCE
PLAN FOR 40 CFR 191", DOE-WIPP 86-013

General Comments

Though the draft compliance plan shows a review by EEG (p. 20) at the end of the process, we are pleased that DOE has requested EEG comments and input at the beginning the process.

A. EEG does not agree with the dates proposed in the Milestone Schedule. Most importantly, compliance with Subpart B should be determined before emplacing waste in a production mode in WIPP. The length of time for determining compliance with the containment and individual protection requirements is probably an accurate estimate for this large task. The date for determining compliance with the Assurance Requirements is unnecessarily delayed. Evaluating compliance with the assurance requirements will not take as long as evaluating compliance with the containment and individual protection requirements. The DOE should make the plans and commitments necessary for the Assurance Requirements as soon as possible; a process that should not take several years to complete. The Plan should include a more detailed schedule showing the expected dates of compliance with each requirement, and details on what type of report will be prepared to document compliance with each requirement.

B. We do not agree with the interpretation of the definitions of storage and disposal as applied to WIPP in the Plan. Though during the demonstration phase waste will be stored with full capability to retrieval, it is not being emplaced with the intent to retrieve for subsequent use, processing, or disposal, therefore, the term "management and storage" does not apply to TRU waste emplaced in WIPP.

C. More detail is needed regarding documenting compliance with Subpart A. We are surprised that a separate document will not be prepared for Subpart A compliance prior to receipt of waste. Using the Safety Analysis Report (SAR) to document calculated compliance could be satisfactory, though the SAR has often been found lacking in EEG reviews (e.g., the review transmitted by letters from Neill to Cooper 12-16-86 and 1-13-87), especially in regard to updated waste inventories. The Compliance Plan should include more detail on how the Subpart A compliance evaluation will be documented in SAR, what information will be presented in the annual environmental report, and how unusual occurrences and variances will be dealt with.

D. EEG does not agree with the statements in the Plan that plugs and seals can be considered engineered barriers. EEG's interpretation of engineered barriers is also held by the Nuclear Regulatory Commission, which maintains that the engineered barrier system includes the waste

packages and underground facility,"...including openings and backfill materials, but excluding, shafts, boreholes, and their seals." (10 CFR 60.102.)

E. The roles of both the Environmental Protection Agency and EEG need to be clarified in the Plan. For instance, no mention is made in the Executive Summary of submitting the final compliance document to both EPA and EEG, in addition to DOE headquarters. The DOE organization at headquarters with the responsibility to approve compliance should be named. There should also be better commitments as to when EEG will receive reports related to compliance, as well as a commitment to provide EEG periodic briefings on the status of compliance work, equivalent to those provided to the Albuquerque Operations Office at the beginning of the third quarter of each fiscal year.

Specific Comments

1. Page iii, Paragraph 2. It should be noted that in addition to monitoring to determine compliance with Subpart A, DOE will need to demonstrate through analyses of anticipated repository performance that the dose limits of Subpart A will not be exceeded. The function of monitoring is to confirm that the limits are complied with.
2. _____, Paragraph 3. DOE has agreed to "consulting and cooperating" with the State of New Mexico, not just cooperating. Add "consulting".
3. Page iv, Paragraph 1. The roles of both EEG and EPA should be discussed.
4. _____. See General Comment C.
5. _____, Paragraph 3. Both here and elsewhere in the document, the adverb "permanently" should be removed from "dispose". The EPA definition of disposal includes the concept of permanent isolation.
6. Page 1, Paragraph 3. The storage horizon is better described as being in the lower part of a 2000 foot thick salt bed, the Salado Formation. The sentence in the draft implies an evaporite barrier 3600 feet thick, without addressing the potential problems both above and below the Salado in the forms of pressurized brine reservoirs in the Castile and fracture and karst flow in the Rustler.
7. Page 2. A more appropriate reference for the site stratigraphy should be found.
8. Page 5, Paragraph 3. Subpart A applies to DOE disposal facilities whether or not they are regulated by the NRC. The first sentence implies that only unregulated facilities are covered.

9. Page 7, Paragraph 5. The site definition raises an important question. The EPA definition says the "site" must be under the "effective control" of the persons possessing the waste (DOE). The meaning of "effective" could be taken to mean within the controlled fenced area around WIPP, not the sixteen square miles withdrawn by DOE. The question is pertinent because by using the sixteen square miles, where people can enter for hunting or other activities, it is possible that the person receiving the maximum dose from routine releases could be within the "site". In other words, someone could be outside the cattle fence but within the 16 square mile area.

10. _____, Paragraph 6. Not all of the terms given here are interpreted fully with respect to WIPP. For instance, the general environment should state "...environment outside the sixteen square mile site", if that is what is intended. The following definition of 'member of the public' is not WIPP-specific in any way.

11. Page 8, Paragraph 1. The "Management" definition must include not only the preparation of DHLW for storage, but the emplacement in WIPP. The last line should be amended to read, "activities associated with emplacing TRU waste and DHLW in the WIPP."

12. Page 8, Paragraph 6. The term "storage" does not apply to WIPP during the demonstration phase because the TRU wastes will not be emplaced and stored with the intent to retrieve for subsequent use, processing, or disposal (see the EPA definition quoted in Paragraph 3, same page). To be consistent with the EPA Standards' definition of storage, there needs to be both the intent and capability to retrieve. See general comment B.

13. Page 9, Paragraph 1. The WIPP is designed as a disposal system (presumably equal to "disposal facility", as used in line 8) and therefore no decision is necessary to make it one. Note that in the definition of "Management" on page 6, the term "WIPP" has been used in place of the wording "disposal system", used in the EPA Standard. Again, there is also no intent of recovery of any TRU waste.

14. _____, Paragraph 2. The first sentence of this paragraph should be amended to read: "The term "storage" also applies to the WIPP DHLW activity during that time that...", in order to clarify that this sentence does not apply to TRU waste.

15. _____, Paragraph 2. The last sentence in this paragraph assumes that DOE will be able to retrieve the DHLW. No evidence has been presented to EEG to justify this assumption. The sentence should be amended to read: "These DHLW wastes will be stored onsite if the ability to retrieve has been demonstrated and will be retrieved prior to the end of the operational life of the facility."

16. _____. Paragraph 6 (Last Paragraph). The word "associated" should be struck from the first sentence. Subpart B contains four separate requirements (containment, assurance, individual protection, and groundwater protection). The assurance requirements are not "associated" with the containment requirement, but are "...an equally important element of Subpart B designed to provide adequate confidence that the containment requirements will be met" (40 CFR 191, Summary).

17. Page 10, Paragraph 2. We do not understand the term "in the EPA concept" in this sentence. The WIPP is designed as a disposal system and the EPA has not defined "disposal facility" in 40 CFR 191.

18. Page 11, paragraph 3. The relationship between the "site" and the "controlled area" as defined for WIPP is not clear. Are they one and the same? Just being under U.S. government administrative control would not qualify the sixteen square miles as the "controlled area". It must also be identified by passive institutional controls which have not been described here.

19. _____. Paragraph 6. EEG follows the NRC interpretation in 10 CFR 60 and does not accept plugs and seals as engineered barriers. See General Comment D.

20. Page 12, Paragraph 3. In the last sentence, explanation is needed as to why uncertainties in scenario development and probability assignment are being excluded from the determination of the uncertainty in the predicted behavior. These are areas of large uncertainty that should be included.

21. Page 12, Paragraph 4. Again, the Assurance Requirements do not "complement the containment requirements". They are a separate, equally important, part of the Standard.

22. _____. The Assurance Requirements should be stated as they are in the EPA Standard, not paraphrased. In particular, (e) is presented in the Plan as simply a consideration of resources, whereas EPA states that sites with resources "...shall not be used for disposal of the wastes..."

23. Page 16. There are new wells which should be included on this table, e.g. DOE-1, DOE-2, and H-11.

24. Page 19, Paragraph 2. This paragraph on the WIPP approach to 40 CFR 191 compliance should mention the possibility of acquiring new data if the need arises.

25. Page 21, Paragraph 2. EEG believes that calculations of expected performance provide the basis for determining compliance with Subpart A, with monitoring acting as a verification program. See General Comment C.

26. Page 21, Paragraph 3. The SAR has not been updated in a timely manner to reflect changing waste characteristic information, and of course the FEIS is not updated.

27. Page 22, Paragraph 3. How has the Woolfolk report, published in 1982, been used in the designing of WIPP? Woolfolk's report (prepared after EEG-11, Channell, 1982, and EEG-15, Bard, 1982, examined the brine reservoir scenario) took credit for room seals. Has the design of WIPP been changed to incorporate room seals?

28. Page 24, Paragraph 5. Again, the term "associated" should be deleted from in front of "assurance requirements". All four requirements of Subpart B stand on their own and carry equal weight in determining compliance with Subpart B.

29. Page 25, Paragraph 5. A figure should be included showing the interpreted repository area in relation to the site and workings.

30. Page 26, Paragraph 3. Explanation is needed as to why only one scenario is considered for the 1000 year period.

31. _____. Paragraph 4. The first sentence implies a focus solely upon liquid transport. Non-groundwater transport phenomena should also be mentioned, such as in the terrestrial and atmospheric environments. For example, air transport and resuspension could result from intercepting a pressurized repository.

32. Page 28, Paragraph 3. Plans for satisfying the assurance requirements should be included in the Compliance Plan (DOE-WIPP 86-013). The Assurance Requirements are part of 40 CFR 191 and the Compliance Plan cannot be complete without including plans for compliance with all six assurances.

33. _____. In reference to the Assurance Requirement for institutional controls, EEG believes that these controls must include a ban on mining above WIPP. The State of New Mexico's position on this issue was laid out in the First Modification to the C&C Agreement (11-30-84): "...the DOE should take measures to prevent any non-WIPP mining or drilling from the surface down to 6000 feet within the 16 section (4 mile x 4 mile) "WIPP Site" and the DOE should devise ways to protect the site by enforcing this policy for the longest time possible after the site is decommissioned."

34. _____. In reference to the Assurance Requirement regarding not using sites with natural resources for disposal of wastes, something more than a "summarized" discussion will be needed. To EEG's knowledge, this analysis has not been performed, though all the information needed to prepare such a report is available. EEG expects a detailed report analyzing the valuable and rare resources available at WIPP compared to any favorable characteristics.

35. Page 29, Paragraph 2. DOE has also committed to develop a post-closure management plan in the First Modification to the C&C Agreement, and has agreed to consult and cooperate with the State about those plans.
36. _____, Paragraph 3. Non-invasive monitoring will need to be planned well in advance in order to avoid room closure limiting future options.
37. _____, Paragraph 4. What engineered barriers are part of the WIPP disposal system design?
38. _____, Paragraph 5. Again, more than a "summary discussion" will be needed to show compliance with this assurance requirement.
39. Page 30, Paragraph 1. Performance assessment and probabilities of disturbance due to natural resources have no bearing on this assurance requirement. The last sentence of this paragraph should be deleted.
40. Page 31, Paragraph 3. Some discussion on the method of reporting unusual release should be included here.
41. Page 31, Paragraph 4. This discussion of topical reports is too general. Specific report titles and target dates should be included.
42. Page 32. The title should be changed to read "Consultation and Cooperation with the State".
43. _____. More detailed plans and commitments as to when EEG will receive interim and technical reports are needed here. We would also like a commitment to the same annual status briefing that will be provided to the Albuquerque Operations Office at the beginning of the third quarter of each fiscal year.
44. Page 38. See General Comment A regarding determining compliance after waste arrives at WIPP. Not enough detail is provided in this section on expected dates of determining compliance with each part of Subpart B (including each Assurance Requirement). Additional details are also needed on the titles and expected completion dates of topical reports.
45. Page 40, Paragraph 1. Certainly changes can be made after the uncertainty analyses are performed if important errors or additions are found. This possibility should not be ruled out.
46. _____, Paragraph 2. We would like some explanation of why review and acceptance of the final report could take several years. Does this mean the end of FY94 or even FY95? How will this affect

the retrieval decision which is due under the present schedule prior to the end of FY93? More frequent (than annual) briefings to ALO might speed up policy decisions, corrective actions, and provision of additional resources, if necessary. A schedule of only annual review suggests a lack of urgency in the time of program completion.

47. _____, Paragraph 3. Where are the "program plans" mentioned in the last sentence and when will EEG receive them?

48. Page 41. We are disturbed by the lack of any references to EEG reports, especially those related to evaluating radiation releases from various scenarios.