

WIPP file



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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

April 29, 1997

Mr. George Dials, Manager
Carlsbad Area Office
Department of Energy
P. O. Box 3090
Carlsbad, New Mexico 88221

Mr. Joe Epstein, General Manager
Westinghouse Electric Corporation
P.O. Box 2078
Carlsbad, New Mexico 88220

Dear Messrs. Dials and Epstein:

RE: Request for WIPP modeling and parameter selection information
EPA I.D. Number NM4890139088

The New Mexico Environment Department (NMED) Hazardous and Radioactive Materials Bureau (HRMB) is developing a draft permit based upon the RCRA Part B Permit Application (DOE/WIPP 91-005, Revision 6) submitted by the Department of Energy (DOE) and Westinghouse (WID) for the Waste Isolation Pilot Plant (WIPP) on April 12, 1996. Subsequent updates were submitted May 29, 1996, editorial page changes were submitted June 3, 1996, and a revised groundwater monitoring plan was submitted on March 20, 1997. The permit will address the management of transuranic mixed waste in portions of the Waste Handling Building and the adjacent parking lot, and the disposal of this waste into an underground miscellaneous unit.

The WIPP Land Withdrawal Act Amendments (LWAA, Public Law 104-201) exempted under federal law all WIPP-designated transuranic mixed waste from treatment standards and land disposal prohibitions promulgated pursuant to the Solid Waste Disposal Act. Besides rendering the Final No-Migration Variance Petition (DOE/CAO-96-2160) superfluous, the LWAA also adversely impacted HRMB's permitting activities and, as a result, will impact the timeliness of issuing a draft permit. The RCRA Part B permit application was predicated on EPA Office of Solid Waste's (OSW) full and favorable evaluation of the No-Migration Variance Petition. In order to demonstrate compliance with 20 NMAC 4.1, Subpart V, §264.601, the applicants directly relied upon technical data and assumptions which were presumably substantiated in the Petition, but only summarized in the RCRA Part B permit application, such as Chapter E and Appendix E1. Following the exemption, OSW ceased all work on the Petition. However, as our legal staff has discussed with the applicants' legal counsel, NMED does not believe the exemption alleviates the need for DOE/WID to demonstrate "Protection of human health and the environment [including]...prevention of any releases that may have adverse effects on human health and the environment..." as required in §264.601.

As a consequence, HRMB must obtain and evaluate additional supporting technical information to determine whether the application is administratively complete and technically adequate as required by 20 NMAC

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4.1, Subpart V, §264.601. Pursuant to 20 NMAC 4.1.1103, HRMB and its technical contractor have identified specific documents needed to satisfy this requirement, as indicated in Attachment 1.

Please submit this information to HRMB as soon as possible. Furthermore, submit any other information that you determine as necessary for the administrative record prior to the issuance of the draft permit. For each item of additional information, clearly indicate whether the information "clarifies, modifies, or supplements previously submitted material," and if so, the corresponding location of the previously submitted material in the permit application. Under 20 NMAC 4.1.1103, the application is complete so long as the additional information is necessary to "clarify, modify or supplement previously submitted material." If the additional information renders the application incomplete, HRMB will rescind the June 27, 1996, completeness determination while the new information is being reviewed for technical adequacy. Following HRMB's administrative and technical review, a new completeness determination will be issued.

Please provide HRMB with three hardcopies and an electronic copy (in WordPerfect 5.2 format) of all submitted information. After receipt, HRMB will need time to review and evaluate the adequacy of the information for completeness and technical adequacy prior to issuance of the draft permit. The direct result of submitting new and additional technical information is to create a potential delay in the issuance of the draft permit for public comment. To avoid further delay, HRMB urges you to submit the requested information as soon as possible. You may coordinate shipment of the hardcopies to our office and that of our technical contractor with Mr. Steve Zappe of my staff.

Thank you for your cooperation in this permitting process. If you have any questions, please contact Mr. Zappe at (505) 827-1561.

Sincerely,


Benito J. Garcia, Chief
Hazardous and Radioactive Materials Bureau

Attachment

cc: Ed Kelley, NMED
Stu Dinwiddie, HRMB
Steve Zappe, HRMB
Susan McMichael, NMED OGC
David Neleigh, EPA Region 6
Matt Hale, EPA OSW
Frank Marcinowski, EPA ORIA
Connie Walker, A.T. Kearney
File: Red WIPP '97
Track: WIPP, 4/18/97, Dials, Garcia, RE:

Attachment 1
Modeling and Parameter Selection Information/Documents

DOE/WID must provide the following documents, and additional information not contained in those documents, for inclusion in the administrative record.

DOCUMENTS

From the *Final No-Migration Variance Petition* (DOE/CAO-96-2160):

- Chapter 8

From the *Title 40 CFR Part 191 Compliance Certification Application for the Waste Isolation Pilot Plant* (DOE/CAO-1996-2184):

- Chapter 4
- Chapter 6 (primarily Section 6.4)
- Chapter 8
- Appendix BIR
- Appendix BRAGFLO
- Appendix MASS, Attachment 8-2
- Appendix PAR
- Appendix SEAL
- Appendix WCA

References from the CCA on the BSEP program and the effects of brine injection:

- Deal and Case, 1987 (Ref. # 166)
- Deal *et. al.*, 1989 (Ref. # 167)
- Deal and Roggenthen, 1989 (Ref. # 168)
- Deal *et. al.*, 1989a (Ref. # 169)
- Deal *et. al.*, 1991a (Ref. # 170)
- Deal *et. al.*, 1991b (Ref. # 171)
- Deal *et. al.*, 1993 (Ref. # 172)
- DOE, 1995 (Ref. # 197)
- Stoezel and O'Brien, 1996 (Ref. # 611)

DOE's response to EPA ORIA Completeness Comments:

- Submission No. 3, dated February 7, 1997
- Submission No. 4, dated February 14, 1997

INFORMATION

1. Clarify whether gas generation rate assumptions in Appendix E1, Table E1-1, assume the presence of MgO in the repository.
2. Provide references to specific experimental data that support the assumption of assigning a value of 1.0 to the Anoxic Corrosion Stoichiometric Factor, as indicated Appendix E1, Table E1-1.
3. DOE/WID asserts in Appendix E1, page E1-1, lines 28 - 30, that they are "... seeking to demonstrate, to a reasonable degree of certainty, that there will be no migration of hazardous waste or hazardous constituents via groundwater for as long as the waste remains hazardous." In Appendix E1, Tables E1-3 and E1-4, Note "a" indicates that **median** values for Salado formation halite and anhydrite parameters were used in modeling calculations, based upon the data and parameter distributions contained in Appendix D16, Section D16-6. However, 20 NMAC 4.1, Section V, §264.90(b)(4) states that, "In order to provide an adequate margin of safety in the prediction of potential migration of liquid, the owner or operator must base any predictions made under this paragraph on assumptions that **maximize** the rate of liquid migration." It is not clear how the use of median values maximize the rate of liquid migration, and it appears that worst- case assumptions have not been modeled in a single realization. Section 8.1.1 of the CCA identifies Salado anhydrite interbeds as a potential pathway to the facility boundary, and demonstrates that nine out of 300 realizations indicate releases are possible. Justify how the use of median values maximize the rate of liquid migration in modeling calculations. Alternately, submit modeling results based on worst-case assumptions that maximize the rate of liquid migration.
4. Appendix E1, Figure E1-12, and text on page E1-33, lines 35-43, shows that average pressure in the waste disposal region increases with time. Comparison of the threshold values for each shaft seal component with the anticipated gas generation values indicates that approximately 50 years after shaft seal emplacement, the repository pressure will exceed the threshold pressure for seal components. Provide additional information that discusses the effects of pressure build-up in the subsurface relative to the individual and cumulative effect of shaft seals, and how this might influence contaminant migration.