



**STATE OF NEW MEXICO
BEFORE THE SECRETARY OF ENVIRONMENT**

**CONCERNING INTENT TO APPROVE)
A CLASS 3 MODIFICATION TO THE)
HAZARDOUS WASTE FACILITY PERMIT) HWB 02-01 (M)
FOR THE WASTE ISOLATION PILOT)
PLANT, CARLSBAD, NEW MEXICO)**

**PROPOSED FINDINGS OF FACT
AND
CONCLUSIONS OF LAW**

**OFFERED BY THE
NEW MEXICO ENVIRONMENT DEPARTMENT
HAZARDOUS WASTE BUREAU**

Pursuant to 20.1.4.501 NMAC, the New Mexico Environment Department Hazardous Waste Bureau submits the following proposed findings of fact and conclusions of law:

Statement of the Case

The United States Department of Energy (“DOE”) is the owner and operator, and Westinghouse TRU Solutions, LLC, is the co-operator of the Waste Isolation Pilot Plant (“WIPP”). The WIPP facility is located in southeastern New Mexico, approximately 26 miles east of the City of Carlsbad, N.M. The Permittees received a permit for the operation of WIPP as a hazardous waste storage and disposal facility from the New Mexico Environment Department (“NMED”) in October of 1999. In this proceeding, the Permittees (sometimes referred to as “Applicants” herein) have applied to NMED for a permit modification. According to the Applicants, the purpose of the modification is to establish a revised methodology for determining



drum age criteria (“DAC”) based upon specific packaging configurations for the waste. The DAC are minimum time periods, in days, that waste must sit in containers prior to headspace gas sampling of those containers.

A public hearing on the application was held in Santa Fe, New Mexico to consider technical testimony and non-technical public comment, on August 26, 27 and 28 of 2002. Parties to the hearing included the Applicants, the NMED Hazardous Waste Bureau, the New Mexico Attorney General, the Environmental Evaluation Group, and Southwest Research and Information Center. Technical testimony was presented by the Applicants and by the Hazardous Waste Bureau of NMED. Non-technical public testimony was presented by four individuals. Written comments of both a technical and non-technical nature were received by NMED. At hearing, the period for submission of written comment was extended to two weeks following the hearing, September 13, 2002. The parties filed Proposed Findings of Fact and Conclusions of Law pursuant to 20.1.4.502.

After consideration of the full record including post-hearing submissions, the Hearing Officer issues this report in accordance with Environment Department Permit Procedures, 20.1.4.503 and Order of the Secretary dated July 15, 2002.

PROPOSED FINDINGS OF FACT

1. The State of New Mexico is authorized by the United States Environmental Protection Agency (USEPA) to issue, enforce and modify permits for the treatment, storage and disposal of hazardous wastes within the State pursuant to criteria established under the

Resource Conservation and Recovery Act (RCRA) (42 U.S.C. 6901 et seq.) as amended.
40 CFR §272.1601.

2. Under the New Mexico Hazardous Waste Act (HWA), Sections 74-4-1 through 74-4-14 NMSA 1978, the New Mexico Environment Improvement Board (EIB) is required to adopt regulations for the management of hazardous waste as may be necessary to protect public health and the environment, that are equivalent to and no more stringent than federal regulations adopted by the federal environmental protection agency pursuant to RCRA.
3. The Environment Improvement Board (EIB) has adopted regulations promulgated by the USEPA pursuant to RCRA, including 40 CFR Part 270, related to the issuance and modification of permits for hazardous waste disposal facilities. Section 20.4.1 NMAC.
4. NMED by and through its Secretary is responsible for administering, implementing and enforcing regulations promulgated by the EIB regarding the management, treatment, storage or disposal of hazardous wastes in New Mexico. Section 74-1-7(13) NMSA 1978.
5. On October 27th, 1999, pursuant to the HWA and RCRA, and regulations promulgated thereunder by the EIB, a Permit was issued to the U.S. Department of Energy (DOE) and Westinghouse Waste Isolation Division, (Permittees), to operate the Waste Isolation Pilot Plant (WIPP) according to certain terms and conditions as set forth in the Permit (Permit #NM4890139088-TSDF). The permit was subsequently modified by a Class 1 modification received February 5, 2001, to change the operating contractor's name to Westinghouse TRU Solutions, LLC.

6. The WIPP Permit, with few exceptions, requires that waste containers must be sampled for hazardous volatile organic compounds in the headspace (or void space) of the container before they can be accepted at WIPP. In order to ensure that these samples are representative of gases within the entire container, the Permit specifies a minimum number of days a container must sit after packaging before it can be sampled. This time period is known as the drum age criteria (DAC) and is a function of the physical form of the waste and the number of layers of packaging in the container. The DAC values currently in the Permit conservatively assume that there are five layers of plastic bags in debris waste containers and two layers in homogeneous solids and soil/gravel containers. The Permit does not currently consider other specific packaging configurations that might occur in waste containers. Tr. 8-26-02, pp. 37-42; Fact Sheet, May 13, 2002.
7. The current WIPP permit establishes a DAC of 142 days for debris waste (S5000) and 225 days for homogenous solid waste (S3000 and S4000). Tr. 8-26-02, pp. 43-44.
8. The Applicants are seeking a change to the DAC so that the waste generator can specify the DAC based upon specific packaging characteristics, depending on the number of layers of inner confinement layers and the size of the hole in the rigid drum liner. Tr. 8-26-02, pp. 44-45.
9. On November 13, 2000, the Permittees submitted a Class 1 modification to NMED to establish new DAC for taking a representative headspace gas sample based on actual packaging configurations. Administrative Record, Index #001115; Tr. 8-27-02, p.350; Fact Sheet, May 13, 2002.

10. NMED received the Class 1 modification request on May 18, 2000. Upon review of the filing, the Hazardous Waste Bureau informally notified the Permittees that the filing did not meet the standards for a Class 1 modification and that it would likely be rejected. Tr. 8-27-02, p.350.
11. On December 7, 2000, the Permittees submitted the same permit modification request to NMED as a Class 2 request. The Permittees also requested a temporary authorization to proceed with the new proposed DAC pending public comment and final agency action. Tr. 8-27-02, pp.350-351.
12. On December 13, 2000, NMED approved the requested temporary authorization. Administrative Record, Index #001213.5. However, based upon public comment, NMED rescinded the temporary authorization on December 22, 2000. Administrative Index #001230; Tr. 8-27-02, p.351.
13. On March 26, 2001, following a 60 day public comment period, the Class 2 permit modification request was denied. The primary reason was because the Permittees had failed to include a mechanism to ensure that the generator sites were keeping records that would allow them to document that they had chosen an appropriate DAC, and the record was insufficient to allow NMED to develop such a mechanism. Tr. 8-27-02, pp.352-353.
14. On May 1, 2001 the Permittees submitted a revised Class 2 modification request, that included responses to the public comment received in the previous Class 2 request and that addressed the issues raised in the previous request. Tr. 8-27-02, pp.353-354.
15. On July 26, 2001, NMED issued a Notice of Administrative Completeness and extended the Class 2 decision-making period by 30 days. Administrative Record, Index #010767.

16. On August 30, 2001, following public comment, the Class 2 request was elevated by NMED to a Class 3 modification request. Administrative Index #010840. NMED believed at that time that the record was sufficient for it to develop an appropriate mechanism to address issues raised in the previous Class 2 modification request, through the procedures available for Class 3 modification requests. Tr. 8-27-02, p.354.
17. On May 13, 2002 the Hazardous Waste Bureau issued a draft permit for public comment (Administrative Record, Volume III), a notice of public hearing and comment period (Administrative Record, May 13, 2002) and a fact sheet (Administrative Record, May 13, 2002).
18. The Notice of Public Comment Period and Public Hearing were published in the Carlsbad Current-Argus (Administrative Record, affidavit of publication, May 14, 2002), the Santa Fe New Mexican (Administrative Record, affidavit of publication, May 13, 2002) and the Albuquerque Journal (Administrative Record, affidavit of publication May 13, 2002).
19. Written comments on the May 1, 2001 Class 2 permit modification request were filed by Dierdre Lennihan (Administrative Record, Index #010512.5), Marina Day (Administrative Record, Index # 010706), Deborah Read on behalf of Citizens Against Radioactive Dumping (CARD)(Administrative Index #010714), Joni Arends on behalf of Concerned Citizens for Nuclear Safety (CCNS) (Administrative Index # 010715), the Permittees (Administrative Record, Index #010716), Don Hancock on behalf of Southwest Research and Information Center (SRIC) (Administrative Record, Index # 010717), the New Mexico Attorney General (Administrative Record, Index #010718),

and Penny McMullen on behalf of the Loretto Community of Sisters (Administrative Record, Index #010720).

20. On June 26, 2002, the Permittees filed a Request for Public Hearing and an Entry of Appearance.
21. On or before June 27, 2002, written comments on the May 13, 2002 Draft Permit were filed by the Permittees, Don Hancock on behalf of SRIC, Geoffrey Petrie on behalf of Nuclear Watch of New Mexico (NWNM), Coila Ash on behalf of New Mexico Toxics Coalition (NMTC), Joni Arends, on behalf of CCNS, Ray and Barbara Stevens, Matthew Silva on behalf of Environmental Evaluation Group (EEG), the New Mexico Attorney General. In addition, the NWNM, SRIC, NMTC and CCNS requested a public hearing.
22. On July 15, 2002, the Secretary of Environment issued a Hearing Determination, Appointment of Hearing Officer and Delegation of Authority. The hearing scheduled for August 26, 2002, as had been previously noticed, was confirmed. Felicia Orth was designated as Hearing Officer. Greg Lewis, Director of the Water and Wastewater Management Division of NMED was designated the final decision-making authority in this proceeding.
23. On July 17, 2002, an Entry of Appearance was filed on behalf of the NMED Hazardous Waste Bureau.
24. On July 19, 2002, the Permittees filed a Notice of Filing, giving notice of Permittees Responses to Comments.
25. On July 25, 2002, the New Mexico Attorney General entered her appearance on behalf of the State of New Mexico through Assistant Attorney General Lindsay A. Lovejoy, Jr.

The Attorney General also filed Supplemental Comments responding to the Permittees Comments of June 27.

26. On July 26, 2002, Don Hancock entered his appearance on behalf of Southwest Research and Information Center.
27. On July 29, 2002, EEG filed an Entry of Appearance and also Supplemental Comments responding to the Permittees Comments of June 27.
28. On July 29, 2002, the Permittees filed their Notice of Intent to Present Technical Testimony, in conformance with the Public Notice issued May 13, 2002.
29. On July 29, 2002, the NMED Hazardous Waste Bureau filed its Notice of Intent to Present Technical Testimony, in conformance with the Public Notice issued May 13, 2002.
30. On August 19, 2002, the NMED Hazardous Waste Bureau sent a letter comment to the Permittees requesting additional information.
31. On August 20, 2002, the Permittees provided a response to the letter comment from the NMED Hazardous Waste Bureau, by which additional information was provided.
32. On August 21, 2002, the NMED Hazardous Waste Bureau filed a Notice of Filing of Administrative Record.
33. On August 26, 2002, a Public Hearing commenced as scheduled and publicly noticed, at 9:00 a.m. in the Harold Runnels Building Auditorium, 1190 St. Francis Drive, Santa Fe, New Mexico, the Honorable Felica Orth, Hearing Officer, presiding.
34. Mr. Steve Zappe testified on behalf of the NMED Hazardous Waste Bureau. Tr. 8-27-02, p. 349.

35. Following review of the May 1, 2001 Class 2 permit modification request for new DAC submitted by the Permittees, and comments received from the public, the Hazardous Waste Bureau issued a Draft Permit, dated May 13, 2002. The Draft Permit, as issued on May 13, 2002, proposed modifications to the permit that would allow new DAC as requested by the applicants, with two exceptions. Those exceptions were that the May 13 Draft Permit did not include DAC for direct loading of 10-drum overpacks, because direct loading of 10-drum overpacks is not allowed by the permit. Second, the Draft Permit did not include modifications for Waste Material Type II.2. In addition, the May 13 Draft Permit added several conditions for use of the new DAC. The Draft Permit included a condition that radiography and/or visual examination be used in conjunction with acceptable knowledge to determine and/or verify the appropriate packaging configurations and sampling scenario that would be used, and if that information was not available or was undocumented, the Permittees would be required to make the most conservative assumptions in selecting a DAC. The May 13 Draft Permit also added requirements of training; that the radiography and visual examination operators had to be trained to identify various size vent hole diameters and packaging configurations that would be expected for the type of waste that the Permittees were seeking certification for. Tr. 8-27-02, pp. 355-357. In addition, the May 13 Draft Permit added checklist items to Permit Attachment B6 that are used during audits to ensure compliance, as well as various editorial changes, such as new subtitles and clarifications. Tr. 8-27-02, p. 357.
36. After issuance of the May 13 Draft Permit, the Hazardous Waste Bureau received public comment, including comment from the Applicants. Tr. 8-27-02, p. 357.

37. Based upon the Applicants comments, as well as public comments, the Hazardous Waste Bureau developed its “Proposed Final Hazardous Waste Permit” dated August 26, 2002, that generally incorporated the requests reflected in the Applicants’ comments. In particular, the August 26 proposed permit allowed the selection of a variable DAC for newly generated waste, repackaged waste, or waste originally packaged in an unvented state that has the lid punched so that the size of the liner vent hole can be documented. Tr. 8-27-02, pp. 362-363.
38. A redline-strikeout version of the Hazardous Waste Bureau’s “Proposed Final Hazardous Waste Permit” dated August 26 is found in Volume IV of the Administrative Record. That version shows the original permit, with redline strikeout showing the changes proposed in the May 13 Draft Permit; yellow highlighting showing the Applicants’ proposed changes to the May 13 Draft Permit, as were contained in their comments filed on June 27, 2002 comments; and blue highlighting showing the changes that were then proposed by the Hazardous Waste Bureau in its August 26 proposed permit. Tr. 8-27-02, pp. 364-365. The redline-strikeout version of the August 26 proposed permit was e-mailed to the parties in this proceeding on August 19, 2002. Tr. 8-27-02, p. 364. DOE Exhibit 11 is the same version, but includes only those sections with changes. Tr. 8-26-02, pp. 23-24, 31.
39. The Applicants agreed with the “Proposed Final Hazardous Waste Permit” dated August 26, 2002 as of the date of the hearing. Tr. 8-26-02, pp. 23-24.
40. Mr. Robert F. Kehrman testified on behalf of the Applicants in support of the proposed permit modification. Tr. 8-26-02, p. 32.

41. Currently, under the existing permit, there are two requirements specified for DAC. One is that a 90 percent steady-state value be met in all cases of sampling. The second is that debris waste and homogenous solids meet the respective DAC values specified in the permit. DOE Ex. B, Summary of Direct Testimony, p.1.
42. One of the changes resulting from the modification is that it defines three specific sampling scenarios. These sampling scenarios are shown in DOE Ex. 11, at Tab 11, proposed Table B1-5 entitled, "Headspace Gas Drum Age Criteria Sampling Scenarios." Scenario 1 is for unvented drums. These are drums that are in storage and have not been vented and must be vented prior to shipment to WIPP. When these drums are vented, if they are sampled at the time of venting, the sample can be taken beneath the rigid liner (unvented or vented drums with unvented rigid liners) or under the drum lid (unlined drums or unvented drums with vented rigid liners). Scenario 2 also applies to unvented drums, and are not sampled at the time of venting, but are sampled after the appropriate DAC from the headspace of the drum. Scenario 3 are drums that are vented when they are newly generated or re-packaged. Tr. 8-26-02, pp.46-47.
43. Another of the proposed changes resulting from the modification is that there will be look-up tables, beginning with Table B1-6 through Table B1-10. Tr. 8-26-02, p. 47; DOE Ex. 11, Tab 11. These look-up tables specify the specific DAC to be used for each scenario, depending upon the waste type, the packaging configuration, the filter diffusivity and the drum liner vent hole size. Tr. 8-26-02, pp. 48-51.

44. Mr. Kehrman testified that Table B1-7 footnote “a” would be applied so that if a filter diffusivity was unknown, it would be replaced with a filter of known diffusivity before the DAC for the container was established. Tr. 8-27-02, p. 278.
45. The permit would still use default DAC for retrievably stored waste. Tr. 8-26-02, pp. 51-52.
46. The proposed permit modification does not change the permit requirement to assure that the headspace gas sample is representative. It does not change the permit requirement that the headspace gas be at 90% of the steady-state value for the area being sampled. It does not change the requirement that the sample be used to determine the type and concentration for the volatile organic compounds that are in the container. It does not change the methodologies that are proposed for taking the samples from the containers. Tr. 8-26-02, pp.47-48.
47. The current DAC values in the permit, of 142 days for debris waste and 225 days for homogenous solid waste, were based on a 1995 study performed by the Idaho National Engineering and Environmental Laboratory (INEEL). DOE Ex. 1. That study looked at and constructed a numerical model for calculating the time that it would take for the headspace of the drum to reach 90 percent of the steady-state value. That particular model recommended the two values that are in the current permit. Tr. 8-26-02, p. 53.
48. In 2000, INEEL revisited the model and evaluated how it applied to repackaging. A new study was conducted that used the same numerical methodology, but instead of outputting two specific values, one for debris waste and one for homogeneous solids, they chose to output values that had as variables rigid liner, vent hole diameter, filter

diffusivity and packaging configuration group. DOE Ex. 5. That resulted in a series of tables shown in DOE Ex. 5 that became the basis for Tables B1-6 through B1-10 in the proposed permit modification. Tr. 8-26-02, pp.54-55; DOE Ex. 11, Tab 11; DOE Ex. 5.

49. Dr. Devarakonda testified on behalf of the Applicants. Dr. Devarakonda is one of the co-authors of the 2000 INEEL study. Tr. 8-27-02, p. 294.

50. Dr. Devaradonda testified that the output files from the 2000 study do not exactly match the DAC values contained in the DAC tables shown in DOE Ex. 5 and in the proposed permit modification. Tr. 8-27-02, pp. 295-296. Specific engineering judgments were made to adjust the DAC values in certain instances. The adjustments resulted in more conservative values in all but two cases. Tr. 8-27-02, p. 297. One case was in table 4 of DOE Ex. 5, the value 197 days actually had a model output of 199 days. Dr. Devarakonda could not explain the basis for the change and agreed that it should be 199 days. Tr. 8-27-02, p. 298. The change should be reflected in the permit modification on Table B1-9, Packaging Configuration Group 3, so that the value of 197 days is changed to 199 days. The second case of a less conservative value was for table 2 of DOE Ex. 5. For waste type S5000, column 0.375, row 3.7×10^{-5} , the actual output value was 15 days instead of the 6 days shown. Dr. Devarakonda testified that the value in the table should in fact be 6 days, because the value of 15 days was a 100 percent steady state value rather than a 90 percent steady state value. Tr. 8-27-02, p. 299. A DAC value of 6 days is appropriate for those specific variables. The other values in Tables B1-6 through B1-10 should remain as shown in the August 26 Proposed Final Permit because they are either equal to or more conservative than the actual model output values.

51. With this change, the DAC values proposed for the various packaging configurations in the August 26 Proposed Final Permit will allow the VOCs to reach 90 percent steady-state value. The DAC values proposed for the various packaging configurations will allow the taking of a representative sample as required by the Resource Conservation Recovery Act. Tr. 8-26-02, pp. 47-48.
52. Dr. Devarakonda testified that footnote “a” of Table B1-7 could be appropriately modified by adding language that if a filter diffusivity is unknown or lower than that which falls within the range shown in the table, the filter must be replaced with a filter of known diffusivity that is within or greater than the range of filter diffusivities contained in the table before the DAC periods are initiated. Tr. 8-27-02, p. 318-319.
53. Mr. Steven Zappe testified on behalf of the NMED hazardous Waste Bureau in support of the August 26 Proposed Final Permit. Specifically, Mr. Zappe testified regarding the elements of the Applicant’s modification request that were incorporated into the May 13 Draft Permit, and the conditions that were placed on the applicants. Tr. 8-27-02, p.354-357. Mr. Zappe also testified about the comments that were received regarding the May 13 Draft Permit, and the changes he incorporated from those comments to develop the August 26 Proposed Final Permit. Tr. 8-27-02, p.357-373.
54. Mr. Zappe testified as to additional changes that should be made to the August 26 proposed Final Permit, based upon evidence brought out at the hearing. Mr. Zappe agreed that a change to the August 26 Proposed Final Permit, Table B1-9 should be made, changing 197 days to 199 days. Tr. 8-27-02, p. 373-374. This suggestion is reasonable.

55. Mr. Zappe testified that the sentence appearing in blue highlight in the August 26 Proposed Final Permit at page B3-22 should be moved to page B3-26 under the requirements for signature release of the site project manager. Mr. Zappe also testified that the requirement should also be included in the B6 checklist, item 40. Tr. Tr. 8-27-02, p. 374. These suggestions are reasonable and should be incorporated into the final permit.
56. Mr. Zappe also testified that footnote “a” in Tables B1-7, B1-9 and B1-10 should be modified to incorporate language that if a filter diffusivity is unknown, a filter of known diffusivity will be placed on the container before DAC periods begin. Tr. 8-27-02, p. 374-375. This change is reasonable. The last sentence of footnote “a” in Tables B1-7, B1-9 and B1-10 should be stricken and the following sentence should be added in its place: “If a filter H₂ diffusivity for a container is undocumented or unknown or is less than 1.9 x 10⁻⁶ filter H₂ diffusivity, a filter of known H₂ diffusivity that is greater than or equal to 1.9 x 10⁻⁶ filter H₂ diffusivity must be installed prior to initiation of the relevant DAC period.”
57. Mr. Zappe testified that it would be appropriate to place an explicit condition in the permit modification to preclude the shipment of containers to WIPP that cannot be assigned one of the packaging configurations identified in the permit. Tr. 8-27-02, pp. 393, 394. Mr. Zappe further testified that retrievably stored waste would be presumed to fall under packaging configuration 3, and assume a conservative default. Tr 8-27-02, p. 441. Mr. Kehrman testified that he believes that the permit, throughout Section B1-1a basically states that packaging configurations have to fall within the definitions of the permit. Tr. 8-26-02, p. 211. It is reasonable to add the following language to Permit

Attachment B1, Section B1-1a(3), following the sentence ending on line 36 of page B1-3 of the August 26 Proposed Final Permit: “Consistent with footnote “a” in Table B1-8, any waste container that cannot be assigned a packaging configuration specified in Table B1-8 shall not be shipped to, or accepted for disposal at WIPP.”

58. Mr. Zappe was asked on cross-examination whether DOE Exhibit 12, which lists current filter numbers and correlating diffusivity values could be incorporated into the permit. Mr. Zappe testified that it was a possibility, but “that we would be better off by identifying what the diffusivity limits are and leave it at that.” Tr. 8-27-02, pp. 382-383. The change to footnote “a” in Tables B1-7, B1-9 and B1-10 will assure that appropriate filters are used. DOE Ex. 12 should not be incorporated into the permit at this time.
59. Mr. Zappe testified that it would be appropriate to provide a definition in the permit for the properties or a description of what constitutes an inner bag and what constitutes a liner bag, consistent with the assumptions that were made in the DAC modeling. Tr. 8-27-02, p. 402. It is reasonable to include such a definition in the permit modification. The 1995 INEEL study, “Position for Determining Gas Phase Volatile Organic Compound Concentrations in Transuranic Waste Containers, Appendix F, indicates that the study used polymer bag thicknesses of approximately 5 mils for inner bags and 11 mils for liner bags. DOE Ex. 1. The following language should be added to the August 26 Proposed Final Permit, Table B1-8, Scenario 3 Packaging Configuration Groups, following the footnotes:

“Definitions:

Liner Bags: One or more optional plastic bags that are used to control radiological contamination. Liner bags for drums have a thickness of approximately 11 mils. SWB

liner bags have a thickness of approximately 14 mils. Liner bags are typically similar in size to the container.

Inner Bags: One or more optional plastic bags that are used to control radiological contamination. Inner bags have a thickness of approximately 5 mils and are typically smaller than liner bags.”

60. An issue was raised at hearing whether the permit needed an amendment stating that if the liner vent hole is less than .3 inch, it would need to be made bigger prior to beginning the DAC period. Such a change is unnecessary. Footnote “b” on Tables B1-7, -9, and -10 all state, "The documented rigid liner vent hole diameter must be greater than or equal to the listed value to use the DAC for the listed rigid liner vent hole diameter..."
61. Mr. Robert Thielke testified on behalf of the NMED Hazardous Waste Bureau. Mr. Thielke testified that the equations used to derive the DACs in the 2000 INEEL Study were equivalent to the equations used in the 1995 study that were the basis for the DACs used in the original WIPP Permit. Tr. 8-28-02, pp. 515-516. Mr. Thielke also agreed that where the DAC values in Tables B1-7 and B1-9 differed from actual model outputs, the values in the table were appropriate, with one exception. That exception was that the value of 197 days in Table B1-9 for packaging configuration 3 should be 199 days. Tr. 8-28-02, p. 519.
62. Mr. Zappe was asked whether the proposed DAC would apply to 85 or 100 gallon drums that could result from the Advanced Mixed Waste Treatment Facility. Mr. Zappe testified that the current permit allows 55 gallon drums and standard waste boxes to be used for storage and disposal, ten-drum overpacks that can be used to overpack drums or waste boxes, and an 85 gallon drum overpack that can be used to overpack a 55 gallon drum. He also testified that if the modeling for the DAC was limited to 55 gallon drums,

the Department would consider clarifying language regarding the applicability of the DAC to larger drums. Tr. 8-27-02 pp. 452-454. Mr. Robert Theilke testified that the modeling for packaging groups 1, 2 and 3 was based on 55 gallon drums. Clarification language showing that the drums referred to in Table B1-8 for packaging configuration groups 1,2 and 3 is reasonable and should be incorporated into the final permit. The words “55 gal.” should precede the word “drums” where it is used in Table B1-8.

63. The permit modifications and conditions proposed in the August 26 Proposed Final Permit, with amendments discussed in these findings of fact, are protective of human health and the environment. Tr. 8-27-02, p.375.

PROPOSED CONCLUSIONS OF LAW

1. On October 27th, 1999, pursuant to the HWA and RCRA, and regulations promulgated thereunder by the EIB, a Permit was issued to the U.S. Department of Energy (DOE) and Westinghouse Waste Isolation Division (now Westinghouse TRU Solutions, LLC), (Permittees), to operate the Waste Isolation Pilot Plant (WIPP) according to certain terms and conditions as set forth in the Permit. (Permit #NM4890139088-TSDF)
2. The State of New Mexico is authorized by the United States Environmental Protection Agency (USEPA) to issue, enforce and modify permits for the treatment, storage and disposal of hazardous wastes within the State pursuant to criteria established under the Resource Conservation and Recovery Act (RCRA) (42 U.S.C. 6901 et seq.) as amended. 40 CFR §272.1601.

3. Under the New Mexico Hazardous Waste Act (HWA), Sections 74-4-1 through 74-4-14 NMSA 1978, the New Mexico Environment Improvement Board (EIB) is required to adopt regulations for the management of hazardous waste as may be necessary to protect public health and the environment, that are equivalent to and no more stringent than federal regulations adopted by the federal environmental protection agency pursuant to the federal Resource Conservation and Recovery Act of 1976.
4. The Environment Improvement Board (EIB) has adopted regulations promulgated by the USEPA pursuant to RCRA, including 40 CFR Part 270, related to the issuance and modification of permits for hazardous waste disposal facilities. Section 20.4.1 NMAC.
5. NMED by and through its Secretary is responsible for administering, implementing and enforcing regulations promulgated by the EIB regarding the management, treatment, storage or disposal of hazardous wastes in New Mexico. Section 74-1-7(13) NMSA 1978.
6. The Secretary of NMED has jurisdiction to modify permits for just cause under Section 74-4-4.2G NMSA 1978.
7. The permit modification requested by Applicants is a Class 3 modification pursuant to 40 CFR §270.42.
8. A draft permit, showing proposed modifications was duly prepared pursuant to 20.4.1.901B(5).
9. A fact sheet was duly prepared pursuant to 20.4.1.901D.

10. Public Notice of the draft permit, fact sheet and public hearing was duly issued on May 13, 2002. The public notice was duly published in the Albuquerque Journal, the Santa Fe New Mexican and the Carlsbad Current-Argus.
11. Public comment was duly noticed and taken, until September 13, 2002.
12. A public hearing was duly held beginning on August 26, 2002.
13. The Applicants have the burden of proof to show that the permit modification should be approved. The NMED Hazardous Waste Bureau has the burden of proof to show that any challenged condition it imposed to the proposed modification should be approved. Any person who contends that a permit condition is inadequate, improper, or invalid, or who proposes to include a permit condition shall have the burden of going forward to present an affirmative case on the challenged condition. 20.1.4.401.
14. The Applicants and the NMED Hazardous Waste Bureau agreed that the Proposed Final Permit dated August 26 should be approved, subject to any further information produced at hearing or in public comment. The Applicants therefore have the burden of proof to support the August 26 Proposed Final Permit.
15. The Applicants provided sufficient evidence to support the August 26 Proposed Final Permit, with certain changes as indicated below.
 - a. Table B1-9, Packaging Configuration Group 3, should be changed so that the value of 197 days is changed to 199 days.
 - b. The sentence appearing in blue highlight in the August 26 Proposed Final Permit at page B3-22 should be moved to page B3-26 under the requirements for

signature release of the site project manager. The requirement should also be included in the B6 checklist, item 40. Tr. Tr. 8-27-02, p. 374.

- c. The last sentence of footnote “a” in Tables B1-7, B1-9 and B1-10 should be stricken and the following sentence should be added in its place: “If a filter H₂ diffusivity for a container is undocumented or unknown or is less than 1.9×10^{-6} filter H₂ diffusivity, a filter of known H₂ diffusivity that is greater than or equal to 1.9×10^{-6} filter H₂ diffusivity must be installed prior to initiation of the relevant DAC period.”
- d. The following language should be added to Permit Attachment B1, Section B1-1a(3), following the sentence ending on line 36 of page B1-3 of the August 26 Proposed Final Permit: “Consistent with footnote “a” in Table B1-8, any waste container that cannot be assigned a packaging configuration specified in Table B1-8 shall not be shipped to, or accepted for disposal at WIPP.”
- e. The following language should be added to the August 26 Proposed Final Permit, Table B1-8, Scenario 3 Packaging Configuration Groups, following the footnotes:
“Definitions:

Liner Bags: One or more optional plastic bags that are used to control radiological contamination. Liner bags for drums have a thickness of approximately 11 mils. SWB liner bags have a thickness of approximately 14 mils. Liner bags are typically similar in size to the container.

Inner Bags: One or more optional plastic bags that are used to control radiological contamination. Inner bags have a thickness of approximately 5 mils and are typically smaller than liner bags.”
- f. Table B1-8 should be amended to assure that the drums referred to in packaging configuration groups 1, 2 and 3 are 55 gallon drums. Table B1-8 should be

amended such that the words “55 gal.” precede the word “drums” where it is used in Table B1-8.

16. No party or commentor in opposition to the proposed permit modification as contained in the August 16 Proposed Final Permit has met its burden to show that the modification or any condition should not be approved.
17. The permit modifications and conditions proposed in the August 26 Proposed Final Permit, with amendments discussed in these findings of fact and conclusions of law, are protective of human health and the environment.

PROPOSED ORDERING PARAGRAPHS:

IT IS HEREBY ORDERED:

1. The August 26 Proposed Final Permit, with certain changes as indicated below, is hereby approved, effective _____.
 - a. Table B1-9, Packaging Configuration Group 3, should be changed so that the value of 197 days is changed to 199 days.
 - b. The sentence appearing in blue highlight in the August 26 Proposed Final Permit at page B3-22 should be moved to page B3-26 under the requirements for signature release of the site project manager. The requirement should also be included in the B6 checklist, item 40. Tr. Tr. 8-27-02, p. 374.
 - c. The last sentence of footnote “a” in Tables B1-7, B1-9 and B1-10 should be stricken and the following sentence should be added in its place: “If a filter H₂ diffusivity for a container is undocumented or unknown or is less than 1.9×10^{-6} filter H₂ diffusivity, a filter of known H₂ diffusivity that is greater than or equal to 1.9×10^{-6} filter H₂ diffusivity must be installed prior to initiation of the relevant DAC period.”
 - d. The following language should be added to Permit Attachment B1, Section B1-1a(3), following the sentence ending on line 36 of page B1-3 of the August 26 Proposed Final Permit: “Consistent with footnote “a” in Table B1-8, any waste

container that cannot be assigned a packaging configuration specified in Table B1-8 shall not be shipped to, or accepted for disposal at WIPP.”

- e. The following language should be added to the August 26 Proposed Final Permit, Table B1-8, Scenario 3 Packaging Configuration Groups, following the footnotes:

“Definitions:

Liner Bags: One or more optional plastic bags that are used to control radiological contamination. Liner bags for drums have a thickness of approximately 11 mils. SWB liner bags have a thickness of approximately 14 mils. Liner bags are typically similar in size to the container.

Inner Bags: One or more optional plastic bags that are used to control radiological contamination. Inner bags have a thickness of approximately 5 mils and are typically smaller than liner bags.”

- f. Table B1-8 should be amended such that the words “55 gal.” precede the word “drums” where it is used in Table B1-8.

2. The Hazardous Waste Bureau shall prepare a Final Permit dated _____, that incorporates all modifications shown in the August 26 Proposed Final Permit, with any amendments discussed herein, and that incorporates any Class 1, Class 1*, or Class 2 modifications that are effective as of that date.

These Findings of Fact and Conclusions of Law and Ordering paragraphs are based on the full record and are recommended to Mr. Greg Lewis, Director of the Water and Wastewater Management Division of NMED, who has been delegated the final decision-making authority in this proceeding, by order dated July 15, 2002.

These Proposed Findings of Fact and Conclusions of Law are respectfully submitted to the Hearing Officer on this 9th day of October, 2000.

Charles F. Noble
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Certificate of Service

I hereby certify that on October 9, 2002, a copy of the Hazardous Waste Bureau's Proposed Findings of Fact and Conclusions of Law were mailed to the following persons by first class mail:

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