

STATE OF NEW MEXICO
BEFORE THE SECRETARY OF THE ENVIRONMENT DEPARTMENT

IN THE MATTER OF THE APPLICATION
FOR A CLASS 3 MODIFICATION TO THE
HAZARDOUS WASTE FACILITY PERMIT
FOR THE WASTE ISOLATION PILOT PLANT,
EPA ID. No. NM 4890139088

No. HWB 06-01 (M)



HEARING OFFICER'S REPORT

Pursuant to 20.1.4.500.C(1) NMAC, hearing officer Rip Harwood (Ripley B. Harwood, P.C.), submits the following report in the above-captioned matter to the Secretary of the New Mexico Environment Department:

EXECUTIVE SUMMARY

This matter came before the hearing officer on May 31, 2006 in Carlsbad, New Mexico. The hearing continued in Carlsbad, New Mexico and in Santa Fe, New Mexico through June 9, 2006. The hearing adjourned and the record was closed on June 9, 2006 at 4:09 p.m.

Pursuant to 20.1.4.300.B NMAC, four parties timely submitted notices of intent to present technical testimony: 1) The United States Department of Energy/Washington TRU Solutions (hereafter collectively "DOE" or "the Permittees"); 2) Southwest Research and Information Center (hereafter "SRIC"); 3) Citizens for Alternatives to Radioactive Dumping (hereafter "CARD"), and; 4) the New Mexico Environment Department (hereafter "NMED" or "the Environment Department").

Pursuant to their unanimous agreement, the hearing officer took technical evidence from the parties from May 31, 2006 through June 3, 2006. The hearing

officer also took public comment in Carlsbad and Santa Fe throughout the hearing. The hearing afforded interested persons an adequate and meaningful opportunity in both Carlsbad and Santa Fe to provide comment and testimony on the Permittees' application. Approximately 194 interested persons took advantage of this opportunity and provided public comment.

In preparation of this report and recommended decision, the hearing officer extensively reviewed his notes from the hearing, the transcript of the hearing, such exhibits of record as were deemed necessary, and the parties' arguments, closing statements, and proposed findings of fact and conclusions of law. The hearing officer also weighed and considered the public comments of interested persons, pro and con, some of which provided unique and helpful perspective and insight.

Although the testimony, evidence, and record in this matter are voluminous, the Secretary may fairly regard much of it as informational rather than as directly relevant to the issues. The issues related to this permit modification, though exceedingly important, were comparatively limited to begin with, and were narrowed further by stipulation of the parties.

Importantly, the stipulation resolved all of NMED's remaining concerns with the proposed permit modification. As to the few remaining issues contested by only some of the parties to the stipulation, the Permittees proved by at least a preponderance of evidence that the draft permit as changed by the stipulation (dated May 25, 2006 and hereafter and throughout referred to as "**the draft permit as changed**"), will comply with all applicable provisions of the Resource

Conservation and Recovery Act and the New Mexico Hazardous Waste Act, and will protect public health and the environment.

The hearing officer acknowledges and thanks the non-governmental and grass roots organizations, SRIC and CARD, who made the extraordinary commitment to inform themselves sufficiently of extremely complex issues, to enable their participation in a meaningful and informative way in the technical portion of this hearing. Their presence and participation was of substantial assistance to the hearing officer in gaining an understanding of the issues, and their participation in the pre-hearing, issue-narrowing negotiation process was universally acknowledged to have resulted in a better draft permit.

No negative inferences on this tenacity and commitment are warranted by the hearing officer's conclusion that the permit opponents failed to prove by a preponderance of evidence that the draft permit as changed should not be approved as written. Specifically but without limitation, the permit opponents failed to prove that the RH prohibition should not be removed from the permit. The permit opponents also failed to prove that the draft permit as changed generates new or previously unaddressed environmental justice issues, much less any such issues that would fall within NMED's limited jurisdictional authority.

For all of the foregoing reasons, and as set forth in the following proposed findings of fact and conclusions of law, the hearing officer concludes and recommends that the Secretary should approve the draft permit as changed. A proposed order to that effect is attached to this report as Exhibit A, for the Secretary's consideration.

HEARING OFFICER'S PROPOSED FINDINGS OF FACT

A. The procedural and regulatory backdrop

WIPP's surface operations (its waste parking areas and the waste handling building), are defined in RCRA regulations as a "container management unit" regulated under 40 CFR Part 264. Sean White written testimony at p. 7-8.

WIPP's underground storage repository is defined in RCRA regulations as a "miscellaneous unit" which must demonstrate that its disposal operations are protective of human health and the environment along all pathways: air, groundwater, surface water and soil. 2 TR 405, L 15-20.

The permit iteration at issue shall be referred to throughout these findings and conclusions as the "**draft permit as changed**".

The "draft permit as changed" refers to the May 25, 2006 WIPP permit iteration which incorporates certain stipulations of the parties to this proceeding.

NMED is the sole agency of the State of New Mexico with the authority to exercise even a modicum of state regulatory oversight over non-transport, hazardous waste issues implicated in WIPP operations and in the current permit modification request.

NMED's permit, with its regulatory genesis in the hazardous waste component of mixed waste, represents a miniscule portion of the permitted risks associated with WIPP, the rest of which have already been reviewed and approved at the federal regulatory level. 3 TR 1029, L 18-21.

Although NMED's regulatory oversight role at WIPP is narrowly limited in scope to the hazardous waste components of the mixed waste disposed of at WIPP, its role is unlimited in time, literally encompassing a responsibility to all future generations, and to the environment in perpetuity, as disposal at WIPP is forever. *See e.g.*, 7 TR 1496, L 12-24.

NMED must have a vision of prioritizing the health of its residents and the environment from the standpoint of precautionary principles, not politics or profit. 3 TR 899, L 6-9.

"Mixed Waste" means a waste that contains both RCRA hazardous waste and source, special nuclear, or byproduct material subject to the Atomic Energy Act. 40 CFR §266.210. Only the hazardous waste component of "mixed waste" is subject to regulation under the HWA and RCRA. NMSA 1978 §74-4-3.1 (1981); 40 CFR §261.4(a)(4); *see* 4 TR 1175, L 19-20.

The federal Energy and Water Development Appropriations Act of 2004 directed the Permittees to file a WIPP permit modification.

The procedures provide that in the case of a request to modify the permit "[t]he Secretary may request additional information and, in the case of a modified permit, may require the submission of an updated application." See 20.4.1.901.B(5) NMAC.

The procedures also provide that any draft permit prepared by NMED shall be based on the administrative file and further that the "approval of a permit does not relieve any person from the responsibility of complying with applicable state or federal laws and regulations." See 20.4.1.901.A(2) & (11) NMAC.

NMED issued a draft WIPP permit on November 23, 2005, which incorporated major modifications to the original permit, including those required by the federal Energy and Water Development Appropriations Act of 2004.

NMED's guiding principle in crafting the draft permit was to assure that it complied with RCRA and the New Mexico Hazardous Waste Act, and was protective of human health and the environment. 4 TR 1159, L 22-25; 4 TR 1160, L 1-10.

The draft permit was released for a sixty day public comment period, exceeding the required minimum forty-five day comment period. Permittee Exhibit 4.

Pursuant to 20.4.1.901.A(4) NMAC, the Permittees and other interested parties, successfully engaged in negotiations resulting in a narrowing of issues related to the proposed permit modification, and reached substantial agreement on the majority of those matters proposed for revision.

Participation in the stipulation was voluntary, and non-participation did not foreclose anyone from attending and participating in the hearing.

Prior to the hearing, the Permittees, the New Mexico Attorney General's Office, NMED, Concerned Citizens for Nuclear Safety (hereafter "CCNS"), CARD, and SRIC reached a stipulation regarding agreed-upon language changes in the draft permit. See Permittee Exhibit 61.

Exhibit A to that stipulation sets forth specific language which the foregoing participants agreed should be incorporated into the draft permit.

The May 25, 2006 draft permit as changed incorporates the language set forth in stipulation Exhibit A.

Exhibit B and amended Exhibit B to the stipulation set forth certain matters within the draft permit which certain of the participants wished excepted from the stipulation. See Permittee Exhibit 61.

Subject to the specific exceptions in stipulation Exhibit B and amended Exhibit B, the stipulation participants all agreed to support and not to oppose the draft permit as changed. 4 TR 1211, L 17-24.

Subject to the specific exceptions by some of the participants in stipulation Exhibit B and amended Exhibit B, the participants to the stipulation are desirous that the Secretary approve a final permit that is substantially consistent with the draft permit as changed. 4 TR 1211-12.

CCNS signed off on the prehearing stipulation amongst the parties and agreed to the draft permit as revised with two exceptions: 1) CCNS did not agree to removal of the remote handled waste prohibition in the draft permit as revised, and relatedly 2) CCNS objected to use of the Waste Handling Building Unit's hot cell for waste handling and storage of remote handled waste. Permittee Exhibit 61, Exhibit B.

CARD signed off on the prehearing stipulation amongst the parties and agreed to the draft permit as revised with five exceptions: 1) CARD did not agree to removal of the remote handled waste prohibition in the draft permit as revised, and relatedly 2) CARD objected to use of the Waste Handling Building Unit's hot cell for waste handling and storage of remote handled waste. 3) CARD raised RH emplacement issues. 4) CARD raised issues of low-level alpha detection in the underground repository, and; 5) CARD asserted that a disparate impact study needed to be performed for WIPP transportation routes. Permittee Exhibit 61, amended Exhibit B.

The signatories to the stipulation agreed that the Waste Analysis Plan was acceptable for both CH and RH waste. 1 TR 86, L 4-6.

The signatories to the stipulation agreed that measuring the concentration of volatile organic compounds in WIPP's disposal rooms is a reasonable substitution for the current practice of 100% headspace gas sampling of all waste containers. 1 TR 93, L 23-25; 1 TR 94, L 1-5.

CCNS did not file a notice of intent to present technical testimony, and presented no technical testimony at the hearing.

The New Mexico Attorney General did not file a notice of intent to present technical testimony, and presented no testimony or public comment at the hearing.

Bonnie Bonneau, an individual, filed documents that could have been construed as a notice of intent to present technical testimony, but prior to commencement of the hearing, she filed a "notice of disappearance". This individual offered no testimony or public comment at the hearing.

B. Physical and geographic facts

WIPP is not a storage facility but a unique geological repository and final disposal facility, unlike any other RCRA facility nationwide. Bearzi written testimony summary at p. 27-8.

WIPP is the world's first underground disposal site for mixed waste.

WIPP stores and disposes of transuranic (TRU) waste that is mixed with hazardous waste. See Waste Isolation Pilot Plant Land Withdrawal Act, Public Law 102-579, as amended by Public Law 104-201 (Permittee Ex. 11).

WIPP's core mission is to provide a final, permanent disposal solution for the nation's legacy of transuranic waste and transuranic mixed waste resulting from the nation's Cold War weapons manufacturing business. 1 TR 24, L 21-25; 1 TR 25, L 1-4.

The disposal of hazardous waste containing radionuclides is a national problem of the highest priority.

The Waste Isolation Pilot Plant represents a considered, scientifically validated, best available technology and knowledge-based approach to this national problem.

Transuranic waste and transuranic mixed waste will be sealed in WIPP's underground panels forever, creating a present challenge to assure protocols and methodology that are protective of human health and the environment forever.

Former State Senator, Joseph E. Gant, Jr., could be credited with attracting WIPP's attention to southeastern New Mexico. Senator Gant was a "potasher" and chemist by training. He knew the geology of southeastern New Mexico, and when Lyons, Kansas ran the WIPP project off, Senator Gant called Senator Runnels and told him Carlsbad is the place. The rest as they say, is history. 3 TR 864, L 20-25; 3 TR 865; 3 TR 866, L 1-4; 3 TR 1031, L 17-25; 3 TR 1032, L 1-2.

WIPP is located at the center of an unpopulated sixteen square mile area approximately 26 miles east of Carlsbad, New Mexico, withdrawn from public use by the federal Land Withdrawal Act. 2 TR 420, L 19-24; see Permittee Exhibit 2.

The area surrounding the withdrawal area is sparsely populated and remote. 2 TR 425-28; 2 TR 715, L 6-20.

Only 27 persons live within ten miles of WIPP's 16 mile perimeter boundary. Permittee exhibit 46, p. D9-10 at L1; see 2 TR 428-29.

The underground waste repository is located 2,150 feet below ground level. The repository itself is configured in panels, each panel containing six rooms where waste is deposited and stored.

WIPP's waste repository was purposely located in a salt formation that is under high lithostatic pressure, meaning that fractures and fissures tend to "heal up" over time, and that after the facility is filled and closed, the salt will gradually encapsulate, and then entomb, all waste disposed there. 2 TR 486, L 3-22. While RCRA requires secondary containment for storage of hazardous waste, it does not require secondary containment for disposal of hazardous waste. 2 TR 373, L 20-25.

C. Facts related to public participation and comment

Participation in the permitting and in the hearing process by informed members of the public is important to the process and assists the Secretary to understand quality of life and community impact issues relevant to the permit decision.

Approximately 194 persons offered public comment; 160 during the Carlsbad component of the hearing, and 34 in Santa Fe.

Approximately 23 persons (12% of the commenters) opposed the proposed permit modification.

Approximately 171 persons (88% of the commenters) supported the proposed permit modification.

Of the approximately 160 persons who offered public comment during the Carlsbad component of the hearing, none opposed the proposed permit modification.

Carlsbad's Fire Chief and several members of the Carlsbad Fire Department testified in favor of the Permittees' application, indicating that the volunteer training provided by WIPP experts had served to significantly enhance the quality of Carlsbad's emergency preparedness across a broad spectrum. *See e.g.*, 3 TR 883, L 25; 3 TR 884-85.

Carlsbad's Chief of Police as well as several Carlsbad police officers testified in favor of the Permittees' application, indicating that the volunteer training provided by WIPP experts had served to significantly enhance the quality of Carlsbad's overall emergency preparedness. *See e.g.*, 1 TR 116-17.

The Director of the Carlsbad Environmental Monitoring and Research Center ("CEMRC" - affiliated with the College of Engineering at New Mexico State University), a self-proclaimed "dyed-in-the-wool, lay-down-in-front-of-the-tractor,

tree-hugging environmentalist” testified that as hard as CEMRC had tried over the past ten years of monitoring, it had found no signature for WIPP, either radiologically or environmentally. 2 TR 475, L 1-11.

Numerous persons testified that WIPP has had a substantial and positive impact on the region’s economy.

Another commenter made the valid point that WIPP is an environmental issue, not necessarily an economic one. 7 TR 1502.

A geologist and geochemist testified that she had studied salt basins elsewhere around the country and overseas, and concluded that the WIPP site is probably the best place on the planet to store nuclear waste. 2 TR 476, L 1-21.

Numerous persons testified that WIPP personnel have participated actively and willingly in a wide-ranging variety of community outreach initiatives, enhancing the quality and variety of those initiatives to the benefit of the entire community.

Numerous persons testified that the pool of scientific and technical expertise made available to the community through WIPP outreach initiatives has substantially and positively enhanced the quality and range of locally available higher educational and technical educational opportunities, resulting in a lower exodus rate of the community’s young and up and coming, and resulting in greater community stability and overall quality of life.

Prominent local, state, and federal officers and officials testified at the hearing, and were unanimously and unequivocally in favor of the proposed permit modification, including the former Bureau Chief of the New Mexico Environment Department’s Hazardous Waste Bureau, the Carlsbad Fire Chief, the State Senator for District 41, two State Representatives for Lea and Eddy Counties, the State Representative for Chaves, Lincoln, & Otero counties, the Mayors of Carlsbad and Hobbs, Carlsbad’s Mayor *pro tem*, the former Mayor of Loving, the former Mayor of Hobbs and current Hobbs City Commissioner, the Safety Officer for the City of Carlsbad, the Eddy County Manager and Emergency Management Association chairperson, the Superintendent of Carlsbad Caverns National Park, the local BLM field office manager, the former heads of Sandia National Laboratory’s and Los Alamos National Laboratory’s Carlsbad operations, the Secretary of the Carlsbad School Board, a former Environmental Improvement Board Vice-Chairman, the former, twelve-year Director of the Carlsbad Department of Development, the Director of the Carlsbad Environmental Monitoring and Research Center, the President of the Carlsbad Chamber of Commerce, the Executive Director of the Carlsbad Chamber of Commerce, the immediate past president of the Carlsbad Chamber of Commerce, the President of the Hobbs Chamber of Commerce, the vice-president of United Steelworkers Union local 129477, the President of the College of the Southwest, an Artesia City Councilor, and numerous local business leaders, educators, medical, and legal professionals

Local Carlsbad community members who testified in favor of the Permittees' application appeared to represent a random ethnic, racial, and socio-economic cross-section of the community, and were not disproportionately of any discernible ethnic, racial, or socio-economic background.

Eighty percent of Washington TRU Solutions' contract funds go to small businesses around the nation; the majority of it in Southeast New Mexico, and approximately 40 percent of Washington TRU Solutions' total funds come into Southeast New Mexico. 2 TR 664, L 23-25; 2 TR 665, L 1-3.

D. Facts related to the permit and principal modification components

The current WIPP permit includes seven modules and 36 attachments (A through Q, with subparts) that further define the requirements in the Modules: Module I – General Permit Conditions; Module II – General Facility Conditions; Module III – Container Storage; Module IV – Geologic Repository Disposal; Module V – Groundwater Detection Monitoring; Module VI – Post Closure Care Plan; Module VII – Corrective Action for Solid Waste Management Units. See NMED Notice of Intent, Attachment B, Technical Testimony, p. 18; Permittees' Notice of Intent, Exhibit B, Summary of Direct Testimony, p.2.

The Draft permit as changed includes substantial modifications to the following Permit Modules and Permit Attachments:

- Removal of the RH TRU mixed waste prohibition and various provisions related to the acceptance, handling, storage, and disposal of RH TRU mixed waste (Permit Modules I, II, III and IV; Permit Attachments A, C, D, E, F, G, H, H2, I, J, M1, M2 and O).
- Revised waste characterization processes in the Waste Analysis Plan covering both CH and RH TRU mixed waste (Permit Modules I and II; Permit Attachments B through B6).
- Adding a waste confirmation process to the Waste Analysis Plan (Permit Modules I and II; Permit Attachments B and B7).
- Increasing CH TRU mixed waste storage capacity in the Parking Area Unit and the Waste Handling Building (Permit Module III and Permit Attachment M1, M2 and O).
- A revised method of demonstrating that WIPP underground disposal rooms comply with RCRA environmental performance standards (Permit Module IV and Permit Attachment N). Permittees' Notice of Intent, Exhibit B, Summary of Direct Testimony of Sean White, p.9 (as revised by Permittee Exhibit 72).

1. RH TRU Waste prohibition removal

If approved, the draft permit as changed authorizes WIPP to accept, store, and dispose of remote handled transuranic waste.

NMED is unaware of any technical testimony, oral or written, that would support retention of the RH prohibition in the draft permit as changed. 4 TR 1257, L 19-24.

Eight years of experience in the safe handling and disposal of contact handled hazardous waste at WIPP provides substantial anecdotal support for a conclusion that WIPP is prepared to safely handle and dispose of remote handled waste.

RH TRU waste is defined as 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. (Permit Module I.D.3, Pub. L. 102-579 (1992))

The receipt of remote-handled waste at WIPP is only a small fraction of the overall transuranic waste, but it is important that its emplacement process commence before more potential storage capacity is covered up and wasted. 2 TR 584, L 14-17.

Remote handled waste will be shipped to WIPP in two new types of Nuclear Regulatory Commission-approved containers, designated as the 72B and the 10-160B containers.

During transportation, the RH TRU waste is shielded so that it emits no more than the same amount of radiation (3 millirem per hour at one meter) as contact handled waste.

Packaging standards which shield shipments from radioactive releases, also prevent the release of hazardous materials. 2 TR 690, L4-10.

TRU mixed waste shipment packages are sealed, leak-tested, and inspected for radiation contamination before they are allowed on the highway. 2 TR 689-90.

Congress always intended for WIPP to serve as a permanent RH waste repository. 4 TR 1186, L 17-20.

The original siting and design of the WIPP facility contemplated future receipt, handling, storage, and disposal of remote handled waste. Sean White Written Testimony; see Permittee exhibits 10, 11, & 12.

The federal Land Withdrawal Act established specific radiation threshold limits for RH waste disposed of at the WIPP site, as well as maximum waste storage capacity limits. 2 TR 422, L 4-18.

In March, 2004, the Department of Energy received EPA's approval to begin receiving RH waste for disposal. 4 TR 1188-89.

The Waste Analysis Plan in Module I of the draft permit as changed, and attachments B-B7 thereto, have been changed to allow WIPP to receive RH waste.

Module II of the permit has been changed to remove the RH waste prohibition.

SRIC testified that the WIPP permit so far, over the last seven years, has been successful in helping WIPP fulfill a "start clean/stay clean" philosophy. 3 TR 1072, L 14-17.

The Permittees prepared separate CH TRU and RH TRU Documented Safety Analysis reports describing TRU mixed waste handling operations at the WIPP, including the waste received, handled and disposed of, the associated hazards, and controls necessary to protect workers, the public, and environment Permittee Exhibits 37, 38, 39.

The documented safety analysis identifies potential hazards that could occur in the handling, storage and disposal of RH waste, and develops response protocols. 1 TR 285, L 1-22; 1 TR 286-87.

The documented safety analysis utilized the generally accepted methodology of multiplying the probability of an event times the consequence of the event to yield a calculated risk. 2 TR 674, L 8-18.

The RH TRU waste Documented Safety Analysis concluded that the engineered features and the operating controls for RH waste handling are adequate to protect the public, workers, and the environment. 1 TR 291.

The Documented Safety Analysis performed for RH waste meets the requirements of 10 CFR 830, Subpart B, and adequately demonstrates that engineered features and operating controls are adequate to protect public, workers and environment during the handling, storage and disposal of RH waste. 1 TR 291, L 1-4.

NMED has reviewed and approved WIPP's documented safety analysis for CH TRU and RH TRU waste, and concludes that it demonstrates WIPP can be operated with an acceptable level of safety compliant with 10 CFR 830, Subpart B (Safety Basis Requirements).

The process and the systems as designed, ensure that WIPP's handling, storage and disposal of RH waste will have no impact on the public, on workers, or on the environment, for either hazardous or radiological constituents in the RH waste. 1 TR 294, L 8-16.

The handling, storage and disposal of RH waste will have no impact at either the sixteen square mile WIPP facility perimeter, or at the site boundary fence around the facility itself. 1 TR 295, L 11-15; 1 TR 299, L 15-24; 2 TR 376, L 1-4.

There are no identifiable adverse impacts to public health from hazardous or radioactive materials at the facility boundary. 2 TR 371, L 17-21; 4 TR 1246, L 16-20.

The data to date shows there has been no increase above background levels of radiation at WIPP's facility boundary as a result of the emplacement of waste or handling of radioactive waste at the facility, and given the process controls in place, that is not expected to change with the emplacement and handling of RH waste. 2 TR 372, L 21-25; 2 TR 373, L 1-6.

a. Hot cell facts

The draft permit as changed limits use of the hot cell both in terms of the amount of waste process-able through it and the time that RH TRU mixed waste will be stored in the there. Hot cell throughput is limited to 390 m³ of RH TRU mixed waste. Storage of 55-gallon drums in the hot cell is limited to 25 days, ensuring timely waste processing. See Permit Conditions III.A.1.j and III.A.1.; Permittees' Notice of Intent, Exhibit B, Summary of Direct Testimony of Robert Kehrman, p.3.

The concrete floor of the hot cell provides secondary containment. 1 TR 323-24.

The draft permit as changed contemplates that the cameras in the cask unloading room and hot cell area will have video recording capability at all times when RH waste moves through those areas. 1 TR 308, L 23-25; 1 TR 309, L 1-4; 4 TR 1325, L 17-20.

Surface painting issues in the hot cell will be addressed prior to RH waste handling and storage in the hot cell. 1 TR 330, L 13-25; 1 TR 331; 1 TR 332, L 1-8.

2. Waste characterization and confirmation

The Waste Analysis Plan in the draft permit as changed applies to both CH and RH waste, except that RH waste requires a documentation of radiography or visual examination for one-hundred percent of the containers in the waste stream, which is not required for CH waste if an acceptable knowledge sufficiency determination is approved. 1 TR 130.

Acceptable knowledge is the process of characterizing waste based on historical information available for the waste stream or similar waste streams. 1 TR 87, L 5-10.

The use of acceptable knowledge as the primary method of characterizing waste has been shown to be effective. 2 TR 584, L 2-4.

Acceptable knowledge as a method of characterizing waste is valid only so long as the waste characteristics are reasonably well known, reasonably uniform, and reasonably well documented.

Acceptable knowledge becomes an unacceptable way of characterizing waste when the waste characteristics are not reasonably well known, not reasonably uniform, or not well documented. *See e.g.*, 7 TR 1495, L 11-25.

The acceptable knowledge protocol set forth in the draft permit as changed reasonably takes these considerations into account.

The proposed modification institutes a good process that is protective of human health and the environment and contains the necessary checks and balances to ensure that human health and the environment continue to be protected. 2 TR 584, L 8-12.

NMED is involved in the acceptable knowledge protocol at a meaningful time and in a meaningful manner because it has the opportunity to make a sufficiency determination concerning waste streams proposed for characterization based on acceptable knowledge.

The acceptable knowledge protocol is transparent because sufficiency determination requests are posted on WIPP's website and emailed to everyone on the interested party list. 1 TR 154, L 15-24.

As it applies to RH waste, the Waste Analysis Plan does not authorize characterization by acceptable knowledge, but instead requires radiographic or visual examination for one hundred percent of the containers in the waste stream. 1 TR 130, L 6-10.

Under the draft permit as changed, a minimum of 7% of the containers in every characterized waste stream in each waste shipment to WIPP are randomly selected for confirmation of their contents by radiographic or visual examination, prior to shipment to WIPP. 1 TR 144, L 23-25; 145, L 1-5; 1 TR 166, L 8-14; 1 TR 173, L 10-20.

Approval of this modification will lessen the impact to the taxpayer by removing certain requirements that do not provide useful information or additional protections for the shipment, management and ultimate disposal of the waste coming to this facility. 1 TR 193, L 4-8.

3. Storage and disposal capacity

The draft permit as changed allows up to 40 contact-handled packages, be they HalfPACTS or TRUPACTS, and up to 8 remote-handled packages, be they 72B or 10-160B, to be stored in the parking area under normal circumstances as a part of the ongoing process. 1 TR 302-03.

The draft permit as changed provides for an increase of up to 18 facility pallets and four CH Packages in the CH Bay, and an increase to up to 50 CH Packages in the Parking Area Unit and RH TRU mixed waste storage capacity throughout the RH Complex as detailed in Table III.A.1; and up to 12 RH Packages in the Parking Area Unit. Permittees' Notice of Intent, Exhibit B; see Summary of Direct Testimony of John Garcia, p.3.

If required, the draft permit as changed allows surge storage of up to an additional 12 contact-handled packages and an additional 4 remote-handled packages in the parking area, not to ever exceed a total of 50 packages in the parking area in any combination. 1 TR 302, L 22-25; 1 TR 303, L 1-8.

Under narrow and specified circumstances, the draft permit as changed allows surge storage of CH waste in the CH Bay of the Waste Handling Building. 2 TR 394, L 15-21.

Increased storage capacity allows operational flexibility to address variations between the scheduled and actual shipping rates; provides more storage capacity during planned and unplanned activities that affect waste handling and hoisting, reduces the need for extended work shifts and employee overtime; and reduces the need to slow or stop shipments en route to the WIPP facility as the result of the lack of storage capacity. 2 TR 352, L 18-25; 2 TR 353, L 1-3.

WIPP's planned throughput under the draft permit as changed is estimated at approximately 30 shipments a week of CH waste, and approximately 6 RH shipments a week. 2 TR 354, L 23-25; 2 TR 355, L 1-3; 2 TR 385, L 19-25; 2 TR 386, L 1-8.

The more efficient waste characterization protocols and increased surface storage capacity, both of which are incorporated into the draft permit as changed, are not expected or intended to increase throughput. 2 TR 386, L 11-17.

If approved, the draft permit as changed authorizes WIPP to increase surface storage and to accommodate temporary shipment fluctuations and surges occasioned by variables such as shipment route weather phenomena.

The draft permit as changed authorizes WIPP to increase the CH underground disposal capacity by 750 cubic meters per panel, with an option to request up to an additional 1000 cubic meters per panel. 2 TR 400, L 6-22.

Increased CH underground storage capacity is desirable and necessary to avoid panel closure before available physical space is completely filled, and to reflect increased container design efficiencies which better fill and utilize the available physical space in the rooms and panels. 2 TR 399-400.

Each panel at WIPP is designed to accommodate up to 730, three barrel canisters of remote handled waste.

The draft permit as changed contemplates 500 RH TRU waste canisters in panel 5 and 600 RH TRU waste canisters in panel 6, and authorizes additional disposal capacity up to the 730 canister limit, through the Class I notification process. 2 TR 451, L 20-25; 2 TR 452, L 1-2.

Should WIPP need additional RH TRU waste disposal capacity in either panel five or six, the draft permit as changed allows the Permittees to implement additional disposal capacities through the Class 1 notification process; to store up to 730 RH TRU waste canisters in each panel. 2 TR 451, L 20-25; 2 TR 452, L 1-2.

It is in New Mexico's and the nation's best interest to utilize the costly and unique WIPP resource to its fullest contemplated design capacity.

Remote handled waste must be emplaced in the walls of disposal rooms and panels at WIPP before the rooms and panels can be filled with contact handled waste.

Delays in permitting WIPP to dispose of remote handled waste, though necessary to assure protocols permanently protective of human health and the environment, have already resulted in the closure of two entire WIPP panels 1 & 2, consisting of twelve rooms, without emplacement of any remote handled waste. Such underutilization of the WIPP resource is to be avoided.

If the proposed permit as changed is approved, remote handled waste will be disposed of in bore holes drilled into the walls of the remaining available rooms in the remaining open panels.

A major reason for the delay in presentation of this proposed final permit to the Secretary for review and consideration, and thus the delay in the facility's hoped-for authorization for the requested modifications, has been the Permittees' often inadequate and poorly supported modification requests. 3 TR 1075, L 22-25; 3 TR 1076, L 1.

4. Underground VOC monitoring

Due to the absence of groundwater and the depth of the repository itself, NMED agrees with the Permittees that the only hazardous waste pathway of

concern at WIPP is air. 2 TR 405, L 21-25; 4 TR 1297, L 5-8; 4 TR 1342-44; see Permittee Exhibit 46.

If approved, the draft permit as changed substitutes NMED-reviewed and approved, increased volatile organic compound air monitoring in the repository for the current practice of headspace gas sampling and analysis from each drum before it is placed underground.

The proposal to substitute increased volatile organic compound air monitoring in the repository for the current practice of headspace gas sampling and analysis from each drum before it is placed underground, is protective of human health and the environment, and decreases worker and environmental exposure risks associated with headspace gas sampling. 1 TR 215, L 15-25; 4 TR 1337-38.

Headspace gas sampling of each container of an adequately characterized and confirmed waste stream is unnecessary, particularly where the waste stream is of a proven and consistent homogeneity. 1 TR 141-43.

Every sampling event, especially with respect to RH waste, creates an exposure risk and generates additional volumes of waste to be dealt with, therefore there are valid reasons to perform no more sampling than necessary for adequate characterization. 1 TR 141, L 15-25; 142, L 1-3.

With approximately 70,000 drum equivalents of waste in the repository, it is appropriate to go to statistically based sampling. 2 TR 584, L 5-7.

Some headspace gas and solid sampling, and visual and radiographic inspections of waste arriving at WIPP will always be necessary because some waste streams are heterogenous, not homogenous, actual knowledge as to some waste streams is insufficient, and particularly as it relates to older waste streams, recordkeeping was comparatively poor. 1 TR 177, L 12-17.

The Waste Analysis Plan, and every other activity that WIPP engages in, is built on a defense in-depth practice that includes an audit, and checks and balances all the way through that are designed to catch human errors. 1 TR 219, L 1-7.

The draft permit as changed satisfactorily and creatively balances the legitimate and entirely compatible objectives of adequate confirmation through limited but statistically valid sampling and analysis, with the efficiencies and safety objectives that inhere in utilization of acceptable knowledge and underground air monitoring.

5. Public health and safety and environmental protection

NMED concludes that if the Secretary approves the draft permit as changed, it will result in no adverse impacts to human health or to the environment. 4 TR 1253, L 6-9.

The data to date shows there has been no measurable volatile organic compounds detected at the facility boundary, nor any measurable amounts of any hazardous wastes detected there. 2 TR 373, L 7-16.

If there are no measurable volatile organic compounds detected at the facility boundary, there would necessarily be none detected at the sixteen square mile WIPP facility perimeter. 2 TR 379, L 1-3.

WIPP is restricted from accepting and managing wastes with free liquids, wastes that are ignitable, corrosive, or reactive, and the *de minimis* amount of liquids that may be present in the mixed waste WIPP is authorized to accept falls below the definition of free liquids and would not result in any kind of significant release. 4 TR 1284, L 1-7.

The federal Land Withdrawal Act specifically prohibits disposal of high level radioactive waste and spent nuclear fuel at the WIPP site. 2 TR 424, L 11-16.

Permit Appendix D9 is an analysis of the potential exposure to members of the public and to workers as the result of WIPP's Waste Management activities, and shows, based on methodologically sound modeling, that all health risks are orders of magnitude below EPA-established acceptable risk thresholds at WIPP's sixteen square mile outermost boundary, at its exclusive use perimeter, and at the facility's actual security fence line. 2 TR 406, L 1-4; 2 TR 415-17; 4 TR 1218-20; see Exhibit 46, D9-31.

NMED reviewed Permit Appendix D9, and agreed that the study proved WIPP's Waste Management activities pose no risk to public health or the environment, and that to date, WIPP has had no impact on human health or the environment. 2 TR 418, L 2-15; 4 TR 1218-20.

Actual studies and monitoring, in addition to modeling, including a 1997 Supplemental Environmental Impact Study, and annual Site Environmental Reports, confirm that WIPP has had no impact on human health or the environment. 2 TR 429-33; 4 TR 1220.

The Supplemental Environmental Impact Statement prepared as part of the WIPP project requirement, considered health and safety-related transportation risks, and transportation-related environmental justice issues. 2 TR 675, L 6-21; 3 TR 805, L 16-25; 3 TR 806-809 & Permittee exhibit 44.

A principal permit modification opponent, involved in the negotiations leading to the draft permit as changed, testified that in reality WIPP has proven overall to be a safe project. 2 TR 518, L 20-25.

6. Miscellaneous

The draft permit as changed incorporates a dispute resolution process in the event the Permittees or NMED disagree over acceptable knowledge sufficiency determinations or final audit reports. See Permit Module I, Condition 1.K.

The draft permit as changed incorporates a WIPP Waste Information System which is a publicly accessible, relational computer database that enables interested members of the public to access non-classified information about waste streams being stored and disposed of at WIPP, including final audit reports. See Permit attachment B, SB-4b(1)(i); 2 TR 391-92.

The draft permit as changed incorporates a new email notification protocol that is in addition to the existing mail notification protocol to provide interested stakeholders and members of the public timely notice of certain specified WIPP events, thereby enhancing the opportunity for timely and meaningful feedback from stakeholders and members of the public. 2 TR 390-91.

CARD did not introduce testimony or evidence before the close of technical testimony in the case supporting the geologic and hydrologic concerns its principal expressed in her public comments. See 7 TR 1521, L 1-7.

E. Environmental Justice-related facts

Non-governmental entities such as SRIC, CARD, and CCNS aid the permitting process by fighting for the highest level of security, information to the public, and protections for the environment. 3 TR 899, L 1-5.

Former President Clinton's Executive Order, as well as Governor Richardson's recent Executive Order on Environmental Justice, recognize that economically challenged persons and persons of color are disproportionately impacted by environmental degradation, poor enforcement and poor protection. 3 TR 899, L 10-14.

In support of the initial permit application, the Permittees performed an environmental impact study of the impacts at the facility boundary of the handling and disposal of contact handled and remote handled waste. See 2 TR 429, L 8-14; Permittees' Exhibit 44 at 5-26.

Environmental justice issues related both to transportation of CH TRU and RH TRU mixed waste to the WIPP site, and to its disposal there, were addressed in a methodologically sound manner in the initial permit application.

Permittees' environmental impact study of contact handled and remote handled waste considered environmental justice issues. Permittees' Exhibit 44 at 4-42, 5-179-181.

Permittees' environmental impact study and documented safety analysis concluded that environmental impacts at the facility boundary from the handling and disposal of contact handled and remote handled waste would be several orders of magnitude lower than applicable regulatory thresholds for all hazardous waste constituents of concern, and therefore there would be no environmental impact associated with proposed operations, including those involving remote handled waste. 4 TR 1066, L 4-25; 2 TR 416, L 2-13; Permittees Exhibit 46, page D9-26, Table D9-4.

WIPP's Final Supplemental Environmental Impact Statement, dated September, 1997, addressed environmental justice issues with respect to risks from the transportation of TRU mixed waste. Permittee Exhibit 44, Vol II, § 5.8 (p. 5-181).

CARD's expert witness, Ari Hornick, who testified that a WIPP-transportation related disparate impact study should be considered before RH TRU waste shipments should be authorized, admitted he had no knowledge of the study of the same issues that had already been done. 1 TR 641.

In connection with WIPP's initial permit application, NMED reviewed and approved the supplemental environmental impact statement which considered, among other things, mixed waste transportation and disposal-related environmental justice issues.

CARD's environmental justice expert witness characterized the environmental justice movement as one started by those who perceived themselves as being made to bear disproportionate environmental degradation burdens. 2 RP 525, L 4-8.

The former Mayor for many years of Loving, New Mexico, testified that her town is closer to WIPP than any other, is made up mainly of persons of modest means, and those living at or below poverty level, and that she estimates 98% of them are unconcerned with WIPP and feel protected by the project. 4 TR 1313, L 24-25; 1314, L 1 & 8-13.

The State Representative in whose district WIPP is located, who also serves as vice-Chairman of the legislature's Radioactive and Hazardous Waste Committee which is mandated to oversee safety and performance at WIPP, testified that there are no adverse impacts from WIPP whatsoever. 3 TR 1028, L 12-17.

The State Representative in whose district WIPP is located testified that he represents the persons most impacted by WIPP, and estimated that 95% of his constituents are in favor of WIPP. 3 TR 1028, L 24-25; 3 TR 1029, L 1-2.

The Mayor of Carlsbad estimated WIPP's present approval rating in the local community to be at 90%. 3 TR 1037, L 10-11.

Seventy-five percent of persons living below the poverty level in the Carlsbad area are Hispanic, and WIPP has made good efforts to reach out to the Hispanic community. 1 TR 269, L 7-17.

Even if technically and statistically valid studies in general show that the siting of regulated facilities disproportionately impacts poor communities and communities of color, the siting of WIPP is not at issue in this hearing, and there was no evidence or insufficient evidence to prove any adverse impacts from the facility, much less adverse, discriminatory impacts.

The permit opponents presented no valid scientific evidence in support of the concern that increased child mortality in counties along the WIPP route could be associated with WIPP transport.

The permit opponents presented no valid scientific or epidemiological evidence in support of the concern that allegedly elevated New Mexico cancer rates could have their genesis in exposure to radionuclides. 3 TR 905; 3 TR 906.

CARD witness, Sophia Martinez, did not review a single document pertaining to the present permit modification in preparation for her testimony. 3 TR 910, L 3-5; 3 TR 911, L 6-11.

CARD expert witness, Ari Hornick, admitted that he was not present to offer scientific conclusions, merely to raise serious scientific questions. 2 TR 625, L 12-14.

CARD expert witness, Ari Hornick, agreed that if the only transportation issues under consideration with respect to this permit modification request are the EPA identification number requirements, manifest requirements and the record-keeping requirements, then the fact finder would lack the authority to require a WIPP transportation route-related disparate impact study. 2 TR 644, L 8-17.

CARD represented that the purpose of its expert witness', Mr. Hornick's testimony was to raise questions, not to come to any conclusions. 2 TR 638, L 4-7.

CARD expert witness, Ari Hornick, admitted that he had never before worked on any projects involving hazardous waste or nuclear materials issues. 2 TR 627, L 21-25; 2 TR 628, L 1-6.

CARD expert witness, Ari Hornick, agreed that WIPP's proposed acceptance of RH waste if the draft permit as changed is approved, does not give rise to the need for a disparate impact study. 2 TR 648, L 2-12.

F. Miscellaneous

Since its opening in 1999, WIPP has received in excess of 4,600 shipments of contact handled waste from sites around the country, and has disposed of over 38,000 cubic yards of waste in over 78,000 containers with no release of

hazardous or radioactive materials to the environment. 2 TR 462, L 22-25; 2 TR 463, L 1-7; 2 TR 698, L 6-11.

For the year 2005, mixed waste shipments to WIPP constituted approximately 2/1000's of one percent of the total commodity truck shipments through the State of New Mexico. 3 TR 954-57.

The Permittees' five principal testifying witnesses, all with scientific or technical educational backgrounds, had a combined total of over 130 years of experience in the nuclear industry, or in fields directly related to technical or scientific work at WIPP.

HEARING OFFICER'S PROPOSED CONCLUSIONS OF LAW

A. Jurisdiction, procedure, authority, & limitations

The United States Environmental Protection Agency authorizes the State of New Mexico 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. See 40 CFR §272.1601.

This proceeding is governed by the permitting procedures adopted by the Environmental Improvement Board (EIB). See 20.4.1.901 NMAC.

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. See §74-1-7(13) NMSA 1978.

The Secretary has authority to modify a permit at the request of the Permittee for just cause. See §74-4-4.2.G NMSA 1978.

There is just cause and sufficient evidence to approve the draft permit as changed, in its entirety.

NMED has a duty to ensure that the WIPP permit complies with all New Mexico laws and regulations which NMED administers and enforces.

NMED has a duty to assure that the draft permit as changed is protective of human health and the environment.

When a permittee requests modification of an existing, approved permit, only those matters proposed for revision are subject to review and all other aspects of the existing permit remain in effect for the duration of the original permit. 20.4.901.B(6) NMAC, incorporating 40 CFR §270.41.

No new information or standards unknown or inapplicable at the time of original permit issuance now indicate that WIPP poses a threat to human health or the environment, therefore the suitability of the facility location is not presently at issue and is not to be considered. 20.4.1.900 NMAC; see 40 CFR §270.41(c).

The draft permit the Secretary issued on or about November 23, 2005 complied with all provisions of 40 C.F.R. 270.

NMED met all procedural requirements pertaining to prehearing notices, comment periods, hearing notice, and otherwise.

The federal Hazardous Waste Transportation Act, together with numerous other federal laws and regulations, occupy the entire regulatory field pertaining to the transportation of mixed waste, and preempt states from exercising direct or indirect regulatory authority over such transportation, unless expressly authorized to do so.

The New Mexico Environment Department does not have or assert authority to regulate highway routes for the transport of mixed waste to the WIPP site. 3 TR 927, L 2-16.

Except for recordkeeping review and oversight, the New Mexico Environment Department does not have or assert authority to regulate the transport of mixed waste to the WIPP site. 3 TR 915-19.

RCRA does not govern WIPP transportation issues, including without limitation, routing issues. 3 TR 777, L 5-11.

Mixed waste transportation issues are beyond the scope of the present permit modification request. 3 TR 931-32.

Air emissions for mixed waste containers that are stored in aboveground storage areas at WIPP are regulated under the Atomic Energy Act and the Nuclear Waste Policy Act, are exempt from NMED's RCRA-derived regulatory authority under 40 CFR 264, and are accordingly beyond the scope of the permit modification under consideration. 4 TR 1176, L 6-18.

Bonnie Bonneau's "notice of disappearance" is ruled to be the equivalent of withdrawal of intent, if any existed, to present technical testimony. 1 TR 15-18.

The Secretary has duly considered all the evidence and public comment.

The draft permit as changed is consistent with the HWA and 20.4.1 NMAC – Hazardous Waste Management Regulations - and is protective of human health and the environment.

B. Public participation and comment

The hearing afforded interested persons an adequate and meaningful opportunity in both Carlsbad and Santa Fe to provide comment and testimony on the Permittees' application.

C. Environmental Justice

As a recipient of federal funds, NMED has an affirmative duty to ensure compliance with EPA's Title VI regulations and the issues of environmental justice arising thereunder and its own regulations direct NMED ensure that the Permittees have addressed all issues required by applicable laws and regulations before issuing the Completeness Determination and Draft Final Permit. 20.1.4.200A(6) NMAC.

Environmental justice issues related to transportation of CH TRU and RH TRU mixed waste to the WIPP site are beyond the scope of the current, proposed permit modification.

RCRA regulations at 40 CFR Part 263 pertaining to hazardous waste transportation and incorporated into New Mexico's hazardous waste regulations, only govern record-keeping, EPA identification number assignments, and other peripheral matters, such that NMED lacks authority over substantive aspects of the transportation of mixed waste. 3 TR 914-16; 3 TR 991, L 8-17; 4 TR 1176-77.

The Governor's Environmental Justice Executive Order exempts NMED from addressing environmental justice issues that are outside of its regulatory authority. 4 TR 1278, L 12-23; 4 TR 1301, L 5-19.

Transportation-related environmental justice issues, even if viewed as within the scope of the proposed permit modification request, are outside the scope of NMED's regulatory authority.

Assuming *arguendo* that the Governor's Environmental Justice Executive Order applies to the draft permit as changed, NMED had substantially complied with it within the bounds of its limited regulatory authority, by its regulatory review and oversight actions taken in connection with the initial permit application and thereafter, and by providing meaningful, bilingual opportunities for public comment, participation, and input. See *generally*, 4 TR 1221-27; 4 TR 1239-42.

WIPP's Final Supplemental Environmental Impact Statement addressed Environmental Justice issues with respect to the potential for disparate impact on populations of a particular ethnicity or income level, and concluded that potential high and adverse impacts from routine transportation would not be likely to disproportionately affect minority or low-income populations." Permittee Exhibit 44, Vol II, § 5.8 (p. 5-181).

WIPP's Final Supplemental Environmental Impact Statement addressed Environmental Justice issues with respect to risks from WIPP disposal operations, concluding that normal, accident-free operations would not cause significant adverse human health or environmental impacts in general, and thus would not disproportionately affect minority or low-income populations. Permittee Exhibit 44, Vol II, § 5.8 (p. 5-181).

As RH TRU waste is shielded during transportation such that it emits no more than the same amount of radiation (3 millirem per hour at one meter), as contact handled waste, any transportation-related environmental justice issues pertaining to RH TRU waste were fully covered in, and are subsumed by, environmental justice determinations made with respect to the initial permit application.

WIPP's Final Supplemental Environmental Impact Statement addressed Environmental Justice issues with respect to risks from WIPP disposal accidents, concluding that the probability of the postulated worst case scenario accident was so low that disproportionately high and adverse effects on minority or low-income populations would not be expected. Permittee Exhibit 44, Vol II, § 5.8 (p. 5-181).

If there are no measurable adverse impacts to public health and the environment from WIPP's waste disposal activities, there cannot be any disparate impacts from such activities. 2 TR 442, L 4-15; 3 TR 952, L 10-14; 4 TR 1220, L 13-21; 4 TR 1246-47.

A substantial majority of the diverse public commenters at the hearing were of the general opinion that the public welfare and quality of life of the local communities closest to WIPP will be enhanced, not degraded, by approval of the draft permit as changed.

D. Burdens of proof; met or unmet

The Permittees bear the burden of proof that the draft permit as changed is protective of human health and the environment, and complies with RCRA and New Mexico's Hazardous Waste Act and Regulations.

The Permittees met their burden of proof that the draft permit as changed is protective of human health and the environment, and complies with RCRA and with New Mexico's Hazardous Waste Act and Regulations.

The draft permit as changed is protective of human health and the environment, and consistent with RCRA and New Mexico's Hazardous Waste Act. 1 TR 304, L 1-5; 4 TR 1185; 4 TR 1199; 4 TR 1213, L 16-20.

1. *RH prohibition removal*

Removal of the RH waste prohibition as contemplated in the draft permit as changed will comply with RCRA, the New Mexico Hazardous Waste Act, and will be protective of human health and the environment. 4 TR 1257, L 25; 4 TR 1258, L 1-5.

The draft permit as changed meets the RCRA container management requirements of 40 CFR Part 264, Subpart I for RH waste. 3 TR 813, L 1-16.

The draft permit as changed meets the RCRA contingency plan and emergency procedures requirements of 40 CFR Part 264.50 *et seq.*, for RH waste, and is protective of human health and the environment. 3 TR 814-15; *see* 4 TR 1339-41.

The draft permit as changed meets the RCRA miscellaneous unit requirements for disposal of RH TRU mixed waste. 3 TR 818, L 18-23; 4 TR 1185.

The draft permit as changed to allow RH waste receipt, handling, and disposal, meets all applicable RCRA requirements. 1 TR 303, L 20-25.

2. *Other principal permit modification components*

The Waste Analysis Plan in the draft permit as changed complies with EPA guidance documents, with RCRA, with New Mexico's Hazardous Waste Act and regulations, is protective of human health and the environment, and includes all conditions necessary for the safe management, storage, and disposal of TRU mixed waste at WIPP.

Volatile organic sampling protocols set forth in the draft permit as changed comply with RCRA and with §310 of public law 108-137. 3 TR 830, L 23-25; 3 TR 831, L 1-17.

The Permittees proved that Module I of the draft permit as changed complies with the HWA and RCRA, and that it will be protective of human health and the environment.

The Permittees proved that Module II of the draft permit as changed, including the removal of the prohibition against disposal of RH waste in Module II and Attachment B-1c and procedures for the characterization, confirmation, receipt, storage, handling and disposal of CH and RH waste, comply with the HWA, RCRA, and Section 310 of Public Law 108-447 and that Module II will be protective of human health and the environment.

The Permittees proved that Module III of the draft permit as changed, including procedures for the receipt, storage, handling and disposal of CH and RH waste, and use of the Hot Cell, comply with the HWA, RCRA and Section 310 of Public

Law 108-447, and that Module III is protective of human health and the environment.

The Permittees proved that Module IV and Permit Attachment N of the draft permit as changed, including disposal capacities and underground disposal room performance standards, complies with the HWA, RCRA and the Land Withdrawal Act, and that Module IV is protective of human health and the environment.

The Permittees proved that Permit Attachments A through O of the draft permit as changed, including general modifications to allow RH TRU mixed waste to be managed at WIPP, comply with the HWA, RCRA, and the Land Withdrawal Act, and that these attachments are protective of human health and the environment.

The Permittees proved that pursuant to 40 CFR Part 264, Subpart X for miscellaneous units, the performance standards established for the WIPP permit ensure that there will be no releases of hazardous constituents to air, groundwater, surface water or soil that will affect human health and the environment, and therefore also proved that there cannot be disparate impacts on any segment of the public from the facility. *See e.g.*, 3 TR 817-18; 3 TR 826-31.

3. *Unmet burdens*

Once the Permittees met their burden of proof that the draft permit as changed is protective of human health and the environment, and complies with applicable law, the burden shifts to the opponents of the draft permit as changed to prove that it is not protective of human health and the environment, or does not comply with applicable law that NMED is responsible for implementing and enforcing.

The opponents of the draft permit as changed (CCNS & CARD), failed to prove that the proposed modifications are not protective of human health and the environment.

The opponents of the draft permit as changed failed to prove that the proposed modifications do not comply with RCRA or with New Mexico's Hazardous Waste Act and Regulations.

The opponents of the draft permit as changed failed to prove that conditions should be placed in the permit requiring a disparate impact study for WIPP routes.

The opponents of the draft permit as changed failed to prove that any additional conditions should be placed in the draft permit as changed regarding RH emplacement issues in the underground repository.

The opponents of the draft permit as changed failed to prove that any additional conditions should be placed in the draft permit as changed regarding RH handling in the Hot Cell Building.

The opponents of the draft permit as changed failed to prove that any additional conditions should be placed in the draft permit as changed regarding low-level alpha detection in the underground repository.

The opponents of the draft permit as changed failed to prove any basis in fact or law in support of the objection to removal of the remote handled waste prohibition in the draft permit as changed.

The opponents of the draft permit as changed specifically failed to meet the burden of proving that the RH prohibition in Module II and Attachment B-1c should not be removed. Amended Exhibit B-CARD (Permittee Exhibit 61).

The opponents of the draft permit as changed failed to prove any basis in fact or law in support of the objection to use of the hot cell for waste handling and storage as identified in Table III.A.1 of the Waste Handling Building Unit portion of the draft permit as revised.

The opponents of the draft permit as changed failed to prove any basis in fact or law in support if the objection to use of the Waste Handling Building Unit's hot cell for waste handling and storage of remote handled waste.

CCNS waived its right to prove its exceptions to the draft permit as changed by failing to file a notice of intent to present technical testimony, and by failing to present technical testimony in support of its exceptions.

CCNS failed to meet its burden of proving that the RH prohibition in Module II and Attachment B-1c should not be removed, and that conditions should be placed on the use of the Hot Cell for waste handling and storage as identified in Table III.A1, Waste handling Building Unit. See Exhibit 61.

No party or commenter in opposition to the proposed draft permit as changed has met its burden to show that the modifications as proposed in the draft permit as changed are inconsistent with applicable statutes or regulations, or that additional conditions are necessary to protect human health or the environment.

G. Miscellaneous

The Permittees' witnesses were qualified by education, training or experience to offer expert opinion testimony on the technical subject matter of their respective testimony.

NMED's witnesses were qualified by education, training or experience to offer expert opinion testimony on the technical subject matter of their respective testimony.

CARD's proffered expert, Ari Hornick, lacked any sound scientific or epidemiological basis for his testimony concerning the alleged adverse health impacts along WIPP transportation routes.

Mr. Hornick's testimony concerning the alleged adverse health impacts along WIPP transportation routes was methodologically flawed.

Mr. Hornick's testimony concerning the alleged adverse health impacts along WIPP transportation routes was speculative.

Mr. Hornick's testimony concerning the possibility of disparate, adverse impacts along WIPP transportation routes was speculative.

In the absence of scientifically valid, objectively verifiable proof that WIPP transports adversely affect public health, WIPP transportation cannot reasonably be viewed as an environmental stressor.

The propagation of urban environmental degradation legends lacking any sound, proven basis in scientific fact disservices the communities which environmental justice is committed to protecting, by creating fictitious stressors, and such alarmism can reasonably be regarded as socially irresponsible.

In the absence of any scientific or epidemiological data, it is socially irresponsible to speculate under oath as an ostensible expert witness in environmental justice, that cancer deaths or child mortality spikes could be related to WIPP transportation.

While the technical rules of evidence were not applied to this hearing, the hearing officer was guided by Evidence Rules 701 and 702, and concludes that it is unfair to party opponents to withhold information or testimony deemed technical under 20-1-4.A(22) & (23) NMAC, during the technical portion of a hearing, and to thereafter present it as or in conjunction with public comment. See generally, 20-1-4.300 *et seq.*

The regulations governing this hearing are to be liberally construed to facilitate public comment. 20.1.4.100.B.

As public comment could be discouraged if commenters knew or believed they would be subjected to cross-examination, the hearing officer concludes that the regulations do not subject public commenters to cross examination.

Construing the regulations as a whole, fairness demands that parties who wish technical evidence to be considered on its technical merits must, in addition to fulfilling pre-filing notice requirements, present such evidence during such portion

of the hearing when all other parties are present and available to conduct cross-examination.

The issue of whether karst exists in the geological makeup of WIPP and presents a problem relevant to the draft permit as changed, is a technical issue requiring proof by technical or expert evidence.

The permit opponents merely presented anecdotal and hearsay comment regarding karst during their public comment opportunities, and presented no technical or expert testimony or evidence that karst is present in the geology of the WIPP repository, or that it presents a geologic problem there affecting permanent storage or disposal. *See* 7 TR 1510-20.

CARD's failure to introduce technical testimony or evidence supporting the geologic and hydrologic concerns during the technical component of the case, when such testimony and evidence would have been subject to notice requirements and cross-examination, bars such issues from consideration on their alleged technical merits, even if such matters were at issue under the present permit modification request, because it deprives opponents of the right to advance notice and to cross-examination. *See* 7 TR 1521, L 1-7.

Evidence or material of a technical nature presented or submitted for the record as or during public comment in this hearing was considered and weighed by the hearing officer as public comment, but was not regarded as proof of such technical opinions or conclusions as were expressed in the materials or testimony.

The presence or absence of karst in the geological makeup of the WIPP repository is a siting issue that was addressed in the initial permit proceeding and which was not placed at issue again by the Permittees' permit modification request. *See* Permittee Exhibit 16b at p. 79-85.

The Permittees presented technical or expert testimony that karst is not present in the geology of the WIPP repository, and that it does not present a geologic problem there affecting permanent storage or disposal. 3 TR 1045, L 20-25, 3 TR 1046, L 1-12.

In connection with initial permit issuance, the EPA considered and rejected the claim that karst was present in the geology of the WIPP repository, or that it presented a geologic problem affecting permanent storage or disposal. 71 Fed. Reg. 18010 (April 10, 2006).

There was insubstantial evidence that karst presents a geologic problem at WIPP.

There was insubstantial evidence that the presence or absence of karst in WIPP's geological makeup is relevant to any matter at issue respecting the draft permit as changed.

NMED objected to CARD witnesses, Noel Marquez' and Betty Richards', qualifications as expert witnesses and the hearing officer concluded that neither were qualified by education, training or experience to testify as expert witnesses.

The hearing record proves that Noel Marquez' and Betty Richards' disqualifications as expert witnesses did not materially restrict the scope or content of the testimony they offered, which was deemed to be rationally based upon their perceptions as members of their respective communities, and therefore admissible. 3 TR 840-41.

There was insubstantial evidence that aliens have infiltrated management at the WIPP site. 9 TR 1664-65.

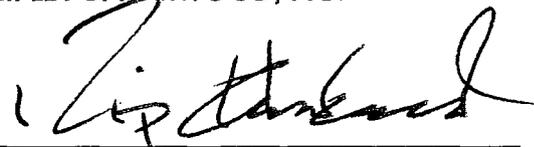
RECOMMENDED DECISION

After due consideration of all the evidence, testimony and public comment, the hearing officer recommends that the Secretary approve the May 25, 2006 draft permit as changed, in its entirety.

Respectfully Submitted by:

RIPLEY B. HARWOOD, P.C.

By:



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Hearing Officer, Pro Tempore

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

IN THE MATTER OF THE APPLICATION
FOR A CLASS 3 MODIFICATION TO THE
HAZARDOUS WASTE FACILITY PERMIT
FOR THE WASTE ISOLATION PILOT PLANT,
EPA ID. No. NM 4890139088

No. HWB 06-01 (M)

SECRETARY'S ORDER APPROVING PERMIT

THIS MATTER came before the Secretary of the New Mexico Environment Department upon the Hearing Officer's report, proposed findings of fact and conclusions of law, and recommended decision. Having read and reviewed same, and having duly considered the Application and all evidence and public comment of record pertaining to it, the Secretary RULES AND ORDERS AS FOLLOWS:

The Secretary adopts the Hearing Officer's report, proposed findings of fact and conclusions of law, and recommended decision. The May 25, 2006 draft permit as changed is hereby approved in its entirety.

IT IS SO ORDERED.

RON CURRY, CABINET SECRETARY
New Mexico Environment Department

CERTIFICATE OF SERVICE

I hereby certify that on this 13th day of September, 2006, I served the foregoing Hearing Officer's Report by U.S. mail, postage prepaid, upon the following:

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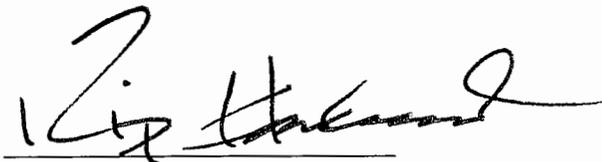
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For Concerned Citizens for Nuclear Safety

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Office of the Attorney General
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For the Office of the New Mexico Attorney General

A handwritten signature in black ink, appearing to read "Ripley B. Harwood". The signature is written in a cursive style with a large initial "R".

RIPLEY B. HARWOOD