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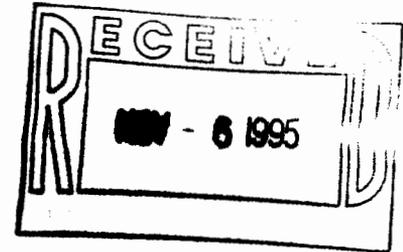
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Deputy Secretary

DATE: 10-31-95

TO: Department of Energy, Carlsbad Office
Att: Mr. Wayne Walker, Acting POC
101 West Green
Carlsbad, NM 88220



FROM: New Mexico Environment Dept./Department of Energy Oversight Bureau
Neil Weber, Bureau Chief
Keith E. McKamey, Program Manager/WIPP

SUBJECT: Comments on the Draft Title 40 CFR 191 Compliance Certification Application (DCCA) for the Waste Isolation Pilot Plant, March 31, 1995

DOE has solicited comments/recommendations from the New Mexico Environment Department by October 15, 1995, regarding technical certification requirements specific to the WIPP and to be contained in the Draft Certification Compliance Application (DCCA). Due to numerous activities our comments were not transmitted on the due date but thankfully DOE extended the comment period to October 31, 1995 (ref. Quarterly DOE/NMED/EEG, 10-19-95). This transmittal is a compilation of comments and will compare the Department of Energy Oversight Bureau/WIPP recommendations to the DCCA.

DCCA	NMED/DOE-OB/WIPP COMMENTS
Table 2-1, Issues Related to the Natural Environment that were Evaluated for the WIPP Performance Assessment Scenario Screening	Post-Drilling Events and Processes - Include Hydraulic Fracturing as a FEP
Figure 2-3, p. 2-16, Major Geologic Events - Southeast New Mexico Region	Orogenies and Revolutions affecting New Mexico are excluded - Hunton Orogeny (post Devonian) widespread erosion, 1st Wichita Orogeny (post Mississippian) Central Basin Platform emerged and eroded, Appalachian Revolution (post Permian) extensive erosion in Southeast New Mexico.
Chap. 2.1.3.4, The Salado Formation, p. 2-28, para. 4	Marker Bed 138 and 139 - need to described in detail with a discussion of mineralogy
Chap. 2.1.4.2, Site Physiography and Geomorphology, p. 2-64, para 5, Nash Draw is a subsidence of overlying sediments, p2-65 para. 2, Pecos River is 12 miles southwest of WIPP site boundary.	Nash Draw was caused by the subsidence of underlying sediments Pecos River is 10 miles from Pecos River (ref. Harroun Bend sec. 30-23S-29E)

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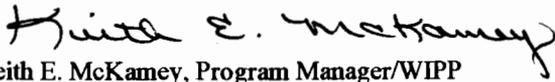
<p>Chap. 2.2.1, Groundwater Hydrology, p. 96 para. 8, Dewey Lake units appear to be mostly unsaturated hydrologically in the vicinity of the WIPP shafts and over the waste emplacement panels.</p>	<p>Chap. 2.1.3.6, Dewey Lake Redbeds, p. 2-52, para 3, states "the entire interval surface was commonly moist". Para. 4 states "There may be lateral movement of water within the Dewey Lake". These statements in a DOE document suggest the presence of groundwater in the Dewey Lake. H-16 and WQSP 6a are wells within the Land Withdrawal Boundary in the Dewey Lake. This zone should be further characterized, monitored, and have engineered barriers in order to be in compliance. Previously communicated this need in comments on the following documents: Land Management Plan, FCFA Facility Assessment for the WIPP, Assessment of Off-Site Radioactivity Surveillance Systems at the WIPP, and the Initial Assessment of the Ground Water Monitoring Program at the WIPP.</p>
<p>Chap. 2.2.1.7, Groundwater Elevation Measurements in 1991, P. 2-124, para. 1 - "The suspected cause of the loss of water-level elevation at Cabin Baby is the failure of a bridge plug located between the Culebra and the portion of the hole open to the Salado and the Castile". "The magnitude of elevation gains in the P-18 indicates that years may pass before equilibrium is achieved".</p>	<p>Is the failure of bridge plugs included in the FEP's P-18 needs to be further studied and characterized. If we do not understand the raising water levels we do not have a handle on the groundwater hydrology of the area.</p>
<p>Chap. 2.4.4.3, P-157, para. 2, Terrestrial Baseline</p>	<p>Baseline data is not adequately represented to determine overall baselines with increases or decreases for each element.</p>
<p>Chap. 2.6 Seismology, p. 2-181, para. 3, Most recent earthquake</p>	<p>Update to include the Alpine Texas earthquake in 1994</p>
<p>Chap. 3.0 Facility Description p. 3-1, para. 2 - Defines the Facility as consisting of the 16-square mile area within the Land Withdrawal Area.</p>	<p>Principal Surface Structures - p. 3-8, para. 1 - include boreholes within the 16-section boundary</p>
<p>Chap. 3.3.2.1, Engineered Barriers, Near-Surface Subsystems, p. 3-12, para. 4 - "Because significant inflows were not seen in the Dewey Lake Redbeds during shaft construction, the near-surface subsystem is not currently required to retard groundwater movement".</p>	<p>Engineered Barriers - All "potential pathways", (ref. EPA's RCRA Ground-Water Monitoring Technical Enforcement Guidance Document) including Dewey Lake, should have engineered barriers in order to be in compliance. Previously communicated this need in comments on the following documents: Land Management Plan, FCFA Facility Assessment for the WIPP, Assessment of Off-Site Radioactivity Surveillance Systems at the WIPP, and the Initial Assessment of the Ground Water Monitoring Program at the WIPP</p>
<p>Chap. 3.3.3, Engineered Barriers, Borehole Plugs, p. 3-25, para. 5 - Ten boreholes are listed as overlying the repository. "Only ERDA-9 is drilled to the repository horizon, near the WIPP underground".</p>	<p>Borehole Plugs - The inclusion of schematic drawings illustrating all the boreholes and plugs within the 16-section boundary should be included to determine penetrations and seal setting depths. DOE-1, Cotton Baby, and Badger Unit (depths all exceed the repository level) should be included as wells drilled to the repository horizon, near the WIPP underground (located within the Land Withdrawal Boundary)</p>
<p>Chap. 3.3.3, Engineered Barriers, Borehole Plugs, P. 3-26, para. 2 - "the governing regulations for plugging and/or abandonment of boreholes are summarized in Table 3-2".</p>	<p>Plugging Boreholes - Listing the regulations for plugging wells does not adequately convey the plugging or completion processes. A comprehensive list of wells and hole histories within the Land Withdrawal Boundary should be included with details on hole sizes, casing size, weight, cement quality and quantity.</p>
<p>Table 3-2, Governing Regulations for Borehole Abandonment, p. 3-29.</p>	<p>Present oil-industry standards are not suitable (ref. Johnson 1987) as long term engineered barriers. If table 3-2 standards are used, list why the plugging of boreholes at WIPP is not applicable to plugging problems in the oil industry.</p>

Chap. 6.2.4, Human-Initiated Events Processes, Likelihood of drilling, p. 6-35, para. 1, "Assuming the continuation of current practice, however, the rate of drilling associated with these activities is likely to be insignificant by comparison with drilling for resource exploration. Underground storage or disposal of fluids is excluded on the grounds of low probability of occurrence in the immediate vicinity of the WIPP.

Disposal /Injection should not be excluded. It is improper to compare the frequency of disposal wells to the frequency of wells for resource exploration. The probability of the effect on the repository from a disposal well is higher than a resource well (due to fluids being injected) and should be considered. Even though common oil field practice is to drill one injection/disposal well per four oil wells, this ratio constitutes high probability especially since there already exist injection/disposal wells along the east and west borders of the Land Withdrawal Boundary.

The above-described comments do not represent a regulator perspective but rather the Department of Energy Oversight Bureau at WIPP. If there are any questions concerning these comments call Neil Weber at 505-827-1536 or myself at 505-234-8984.

Sincerely,



Keith E. McKamey, Program Manager/WIPP

cc: Mr. Steve Zappe, NMED, Hazardous and Radioactive Waste Bureau
Mr. Chuck Byrum, EPA
Mr. Neil Weber, DOE Oversight Bureau Chief