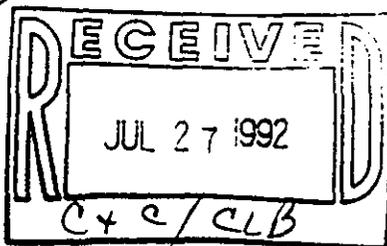


**PEER 20 - Supplemental Information to the Environmental
Evaluation Group**

DE 920085



Department of Energy
Field Office, Albuquerque
P.O. Box 5400
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July 15, 1992

X C&C	X Weddle
X PRC	• Conway
• Anderson	X <u>Rehman</u>
X Carrell	X <u>Blad</u>
X Cox	X <u>Beddy</u>
X Kuntz	• _____
• Lee	• _____
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X Trego	

Mr. Robert H. Neill, Director
Environmental Evaluation Group
7007 Wyoming, N.E., Suite F-2
Albuquerque, NM 87109



Dear Mr. Neill:

The Department of Energy (DOE) has reviewed EEG-50, "Implications of Oil and Gas Leases at the WIPP on Compliance With EPA TRU Waste Disposal Standards." Several issues raised in EEG-50 are misleading, incomplete or incorrect and subject to misinterpretation. This letter addresses only our general concerns and is not intended to be a detailed response to your report. A detailed response will be provided in the near future. In general, we believe the report should be revised and reissued.

Our first concern is the report's implication that, because DOE is self regulated with regard to compliance with 40 CFR Part 191, therefore we are not responsible to any external regulator in the context of institutional controls at the Waste Isolation Pilot Plant (WIPP). WIPP is regulated by the Environmental Protection Agency (EPA) and by the State of New Mexico Environment Division (NMED). DOE has obtained a No-Migration Determination (NMD) from the EPA for the Test Phase and will have to obtain another NMD for disposal. In addition, WIPP has applied for a Resource Conservation and Recovery Act (RCRA) Part B permit from the NMED. The Disposal Phase closure plan developed for these WIPP permitting activities will require review and approval by both these regulating agencies. The active and passive institutional control measures will be critical components of that closure plan.

The report's allegation that knowledge of the leases and well for hydrocarbon extraction were "lost" for several years is misleading. These leases and the well have not been overlooked. They are properly recorded and filed with state and federal authorities. This documentation is on file in the appropriate Bureau of Land Management (BLM) offices. As you are aware, continuing dialogue and informational exchange has taken place with the BLM regarding these leases in recent years. In fact, pursuant to agreement between the BLM and DOE, the BLM advised DOE in late

1981 of the application to drill beneath Section 31 below the 6000-foot level and sought DOE comments regarding the application. That notice and comment process remains in place today.

In order to not unnecessarily limit the lessees' rights to develop oil and gas or the State's royalty income, the United States did not condemn the mineral rights located below 6000 feet in Section 31. Those mineral rights may only be accessed by directional drilling from locations outside the land withdrawal area. In Section 31, no one has the right to explore or extract in the area from the surface to a depth of 6000 feet. In the other fifteen sections of the land withdrawal area, no exploration or extraction rights exist. This is clearly stated in the Memorandum of Understanding with the Department of Interior's Bureau of Land Management.

The limitation of 6000 feet provides a sufficient margin of facility protection. The presence of the James Ranch #13 well has been thoroughly reviewed by DOE and EPA and has been determined to not pose any safety or technical issues.

As will be further discussed in our detailed response to EEG-50, the DOE believes that current policies and programs adequately preserve the integrity of WIPP. If you have any questions regarding this matter, please contact Les Gage of my staff at 845-5983.

Sincerely,



W. John Arthur, III
Project Director
WIPP Project Integration Office

cc: _

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July 15, 1992

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NOV 03 1992

Robert H. Neill, Director
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Dear Mr. Neill:

The Department of Energy (DOE) has reviewed EEG-50, "Implications of Oil and Gas Leases at the WIPP on Compliance With EPA TRU Waste Disposal Standards." The DOE's general concerns regarding EEG-50 were provided to the Environmental Evaluation Group (EEG) with my July 15, 1992, letter. We stated in the July 15 letter that several issues raised in EEG-50 are misleading, incomplete, or incorrect and subject to misinterpretation. Following the DOE's detailed review of EEG-50, our position has not changed. The DOE's detailed comments pertaining to EEG-50 are enclosed with this letter.

The conclusions of EEG-50, relative to institutional controls, are incorrect. The implication that inadvertent exploration has taken place at the Waste Isolation Pilot Plant (WIPP), or that crucial institutional control records have failed with regard to prospective drilling in the area, is a misrepresentation. The implication in EEG-50 is that the Environmental Protection Agency's (EPA's) decision to grant the No-Migration Determination (NMD) had not been reviewed with respect to the existence of the deviated well. To the contrary, the position of the EPA in their March 13, 1991, memorandum to the NMD docket is that the deviated well located beneath Section 31 is "in compliance with institutional controls at the WIPP site" and that the existence of the deviated well beneath Section 31 in no way affects their previous decision to grant the WIPP a No-Migration Determination.

None of the documents listed in EEG-50 as being "incorrect, silent, or inconsistent" are critical to the maintenance of the institutional controls at the WIPP as was implied by the EEG's report. The records that are crucial to protect the site from inadvertent exploration are Bureau of Land Management (BLM) lease records and the internal procedures of the BLM, which require the DOE's review and comment for any permit application to drill within one mile of the WIPP site. Adherence to these policies governing resource extraction at the WIPP has been carefully maintained. Review of the BLM's interface with the DOE for the last 2 years reveals 15 separate instances of the BLM requesting the required DOE comments regarding requests to drill in the vicinity of the WIPP.

Historical documents and correspondence such as the DOE's Revised Interim Policy (and resulting comments and responses) and the 1984 Final Report and Recommendation on Natural Resources at the WIPP Site reflect the priority of protecting the underground repository by prohibiting access from the surface to 6,000 feet of the subsurface. These

records also demonstrate the shared intent of the state and the DOE not to limit access to those resources located beneath 6,000 feet. This perspective was not presented in EEG-50.

In summary, federal institutional controls have worked well under BLM management and have been working well for many years. Under legislative land withdrawal, we will continue to work under a Memorandum of Understanding with the BLM as they carry out their responsibilities for managing oil and gas leases. There are over 30 wells within a mile of the WIPP site boundary. We know about every one of these wells and we know that none of these wells pose a problem for the repository. In addition to the above institutional control system, WIPP conducts and documents monthly inspections of the WIPP boundary. One purpose of these inspections is to spot "wildcat" operations. EEG-50 inappropriately redirects responsibility for management of leases from BLM to DOE and then says DOE has done a poor job of managing something that the BLM has been managing quite well all along.

If you have any further questions or comments regarding this matter, please contact Les Gage of my staff at 845-5389.

Sincerely,



W. John Arthur, III
Project Director
WIPP Project Integration Office

Enclosure

cc w/enclosure:

C&C File (ED9200049)
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DETAILED COMMENTS

The Environmental Evaluation Group (EEG) issued a report entitled "Implications of Oil and Gas Leases at the WIPP on Compliance with EPA TRU Waste Disposal Standards" (EEG-50). Section 7.0, Conclusions, of EEG-50 states:

Several U.S. Department of Energy documents failed to record the existence of two active oil and gas leases and a producible gas well within the WIPP Site Boundary. In its performance assessment calculations, the WIPP project has assumed that active institutional control would deter human intrusion for 100 years after decommissioning. The EPA should reexamine whether full credit for 100 years active institutional control is reasonable given the actual experience of inaccurate record keeping. The DOE should also examine the basis for assuming full credit for 100 years control and consider using a lesser amount to reflect the actual experience of the WIPP Project. The EPA Standards should require the implementing agency to publish specific plans on how the agency intends to maintain active institutional control. Even in the absence of such a requirement, the DOE should publish plans now that specify in detail how the Department intends to maintain full control of activities in the area of the repository for 100 years after decontamination and decommissioning and describe how that control will completely deter human intrusion. Finally the DOE needs to describe in detail their passive institutional control system and describe how it will provide a deterrence to inadvertent human intrusion after 100 years.

On July 15, 1992, the Department of Energy (DOE) issued an interim response expressing disagreement with the conclusions and inferences of EEG-50 and committed to providing a detailed response to the EEG at a later date. The following provides DOE's specific comments to EEG-50.

EPA Standards

There are two portions of 40 Code of Federal Regulation (CFR) 191.14, Assurance Requirements, that are cited in EEG-50. The portions of interest are 40 CFR 191.14 (a), which states:

Active institutional controls over disposal sites should be maintained for as long a period of time as is practicable after disposal; however, performance assessments that assess isolation of the wastes from the accessible environment shall not consider any contributions from active institutional controls for more than 100 years after disposal;





and 40 CFR 191.14 (c), which states:

Disposal sites shall be designated by the most permanent markers, records, and other passive institutional controls practicable to indicate the dangers of the waste and their location.

The intent of the Environmental Protection Agency (EPA) for implementation of these requirements is expressed in the preamble to the final rule issued in the Federal Register in September 1985 (FR: 38066 - 38089) and in Appendix B of the final rule.

The preamble to the rule characterizes the assurance requirements as "complements" to the containment requirements that assure the required level of protection is likely to be achieved. Therefore, the assurance requirements do not in themselves guarantee that the site will remain in compliance over the long term. Instead, they mitigate some of the uncertainty associated with the analytical projections, thereby providing "assurance."

The EPA proposed two types of institutional controls as complements to the containment requirements philosophy. The preamble suggests that active institutional controls can be effective in preventing potential releases for the first 100 years. The EPA also stated that although passive institutional controls can not be assumed to eliminate the chance of inadvertent and intermittent human intrusion, they can be effective in deterring systematic or persistent exploitation of the disposal facility and in reducing the likelihood of inadvertent human intrusion.

The degree to which the institutional controls are effective is determined by the implementing agency. Appendix B of the final standard provides information for formulating intrusion scenarios during the passive control period.

In the preamble, the EPA suggests the kinds of active institutional controls that may be implemented at a disposal site. The list includes monitoring, controlling access, guarding, maintenance, and cleanup of spills or releases. The implication is that the implementing agency can perform activities that complement the goals of containment in that they would reduce the likelihood of those types of human activity that may compromise the long-term containment capability of the repository.

In contrast to the statements by the EEG, the standard does not address the topic of what the active controls will or will not do. It simply states that if the implementing agency adopts controls to accomplish a specific goal with regard to protecting the integrity of the site, only 100 years of credit can be taken for these activities. Activities which could be more significant than simply precluding human intrusion would include site restoration, the installation of markers and monuments, and the performance of monitoring programs which will likely provide meaningful near-term data regarding repository performance. Such active controls are not automatic or assumed simply because the standard allows a 100-year active

control period. Furthermore, whatever measures were used to achieve this goal could not be relied upon after 100 years. Whatever risks to the containment system were prevented by such controls would have to be assumed to be present after that time. This would not mean that a breach of the containment is imminent, because the virtues of the containment system are demonstrated through the numerical modeling activity (performance assessment), rather than the implementation of the assurance requirements.

Neither the actions surrounding the history of the James Ranch 13 well (which was drilled in compliance with the regulations in effect at that time) nor the written record suggest that institutional memory was lost. Instead, the control of drilling was managed in accordance with control plans (resource management plans) developed and implemented by the responsible federal agency, the Bureau of Land Management (BLM). The BLM management of these control plans, with DOE input, has been effective in preventing inadvertent wells being drilled. There have been no wells drilled within established no-drilling zones and there is no reason to assume that future control programs would be any less effective. Contrary to EEG-50's implication, the drilling of the well is not relevant to 40 CFR 191 compliance and did not occur during either the active or passive institutional control period at the WIPP repository or when the DOE had jurisdiction for such activities.

EEG's own statement with regard to the markers and the records associated with the well illustrate the effectiveness of both active and passive control programs. EEG-50 failed to demonstrate a single BLM document that "lost" or "forgot" the existence of the well. To argue that the history of the James Ranch 13 well is basis for reducing the active control time period is obtuse. The further attempt to make inferences regarding the viability of the passive institutional control program from this "incident" is particularly implausible.

EEG-50 is incorrect in the statement made in a footnote on page viii regarding future commitments for controlling the WIPP site:

The DOE has sole regulatory authority to make a determination of compliance of the WIPP facility with Environmental Protection Agency (EPA) standards and proceed with the WIPP as a repository.

The DOE is not self-regulating with regard to operations or closure of the site and implementing programs mandated by the assurance requirements. The imposition of the permitting requirements of the Resource Conservation and Recovery Act (RCRA) on the WIPP facility in 1990 established the EPA and the New Mexico Environment Department as regulators for many of the activities necessitated by the assurance requirements. The recent land withdrawal legislation requires that the disposal phase cannot commence until the Administrator of the EPA certifies that the WIPP facility will comply with the disposal standards. This certification will be a rule-making process which will allow opportunity for public review and comment.

Resource Extraction Policies

The following discussion is provided to clarify events between 1977 and 1983 when critical policy decisions were made on resource extraction and protection of the underground repository.

In 1977, the United States of America, at the request of the Acting Administrator of the Energy Research and Development Administration, entered into condemnation actions (77-071-B and 77-776-B) for the acquisition of land within the boundaries of Control Zone IV (Condemnation Hearings, 1977). These lands included Township 22 South, Range 31 East, N.M.P.M., Eddy County, New Mexico, Section 31. The land being acquired in Section 31 included only the surface and the upper 6,000 feet of subsurface which was that portion of the subsurface necessary to keep the salt beds intact from exploratory drill holes that could penetrate the salt medium in which the underground facility is located. The acquisition of land down to only 6,000 feet protected the salt in the repository location, while reducing acquisition costs and allowing resource extraction.

It should be noted that the decisions as to what would be allowable with regard to the extraction of resources under the site were still being determined at the time of acquisition of Section 31. On October 10, 1980, a draft position paper on the recovery of resources within Zone IV was transmitted to the DOE from Sandia National Laboratories (SNL) (SNL, 1980). This paper concluded there was no reason to restrict mineral extraction from Zone IV. Although this paper was not formalized, it provided the technical and scientific basis for the position later formalized in several reports and documents, including the Natural Resources Study Final Report, WTSD-TME 3156 (Westinghouse Waste Isolation Division, 1982).

In addition to the draft SNL position paper discussed above, the WIPP Final Environmental Impact Statement (FEIS), DOE/EIS-0026, was published in October 1980 (DOE, 1980). The FEIS discussed drilling and mining in Chapters 9, 12, and 15. The third paragraph on page 9-18 states:

The DOE has found no technical or safety reason to prohibit drilling and mining in control zone IV of the type now practiced in the area. Therefore, the DOE may allow such drilling and mining: if it does, the impacts of withdrawing minerals, resources and reserves will be reduced from those indicated for the total site.

The second paragraph of Chapter 12.2 (page 12-2) states:

The DOE may allow drilling for natural gas in control zone IV. Reserves in the inner control zones may eventually become available for exploitation through the use of such techniques as slant-hole drilling from control zone IV or by a future relaxation of the controls now thought prudent for the area.





Finally, in response to comments from the public on the duration of resource denial in all control zones at the Los Medanos site, the statement was made in paragraph 2 of page 15-26 that:

Drilling for oil and gas may be permitted with the approval of the DOE in Control Zone IV. Deviated drilling to tap the deep gas potential under Zones I, II, and III may also be permitted, provided the hole is deeper than the Castile Formation before crossing into the vertical projection of Zone III.

It is clear from the above statements that the impacts of potential extraction of mineral resources from beneath the site were being examined and that both technical and safety concerns were being considered. In addition, drilling for gas and oil within Zone IV, with DOE approval, was determined not to compromise WIPP's ability to comply with applicable regulations.

On July 1, 1981, the DOE and the State of New Mexico entered into the Stipulated Agreement (U.S. District Court, 1981) and Consultation and Cooperation (C&C) Agreement (DOE, 1981a). The Stipulated Agreement required that the DOE develop a detailed plan which allows recovery of potash and hydrocarbons without disturbance of the repository. The plan was to further evaluate the potential consequences of these activities. In response, the DOE issued an Interim Policy Statement on Resource Recovery at the Waste Isolation Pilot Plant Site on November 3, 1981 (DOE, 1981b), which states:

The incorporation of multiple buffer zones in the present design is a conservative approach to maintaining the integrity of the site and ensuring that emplaced wastes remain isolated from the environment.

It is the policy of the DOE to maximize the opportunity for resource recovery at the WIPP site, consistent with the requirements to isolate the emplaced radioactive wastes from the biosphere. The interim policy is temporary denial of all resource extraction within the four control zones of the WIPP Site until the decision is made relative to which, if any, of the emplaced waste will be retrieved.

The DOE anticipates the recovery of hydrocarbon resources from Control Zone IV will be 'allowable' following a final decision on waste retrieval. This activity includes drilling, production stimulation, and, possibly, secondary recovery. Resources located beneath Zone IV may be accessed by vertical drilling: Resources located beneath the inner three control zones may be accessed by drilling vertical in Zone IV to a depth of 6,000 feet and then deviating from vertical at the angle required to reach the target resource zone.



On December 18, 1981, the BLM, in accordance with procedures established in a 1981 Cooperative Agreement between the BLM and the DOE, requested comments on a Bass Enterprises application to drill a deviated gas well that would be slant-drilled from outside Zone IV in Section 6 into the company's leasehold beneath the south half of Section 31 (BLM, 1981). The DOE responded on December 30, 1981, referencing the 1977 condemnation of the surface and the first 6,000 feet of certain tracts and requested that any approval preclude drilling through or into the upper 6,000 feet of the tracts which had been condemned by the United States in 1977 (DOE, 1981c).

After BLM's approval of the application, Bass began drilling a deviated well into Section 31 on February 6, 1982. This well was completed on September 21, 1982. The well met the intent of the DOE Interim Policy. The integrity of the site was maintained while allowing resource recovery.

Effective March 30, 1982, the BLM and the DOE entered into a Memorandum of Understanding (MOU) wherein BLM agreed to notify the DOE of any request to drill within the vicinity of the WIPP and to withhold concurrence on these requests until comments were received from the DOE. As with the earlier Cooperative Agreement, this MOU established a protocol for ensuring DOE input regarding drilling and mining activities in the vicinity of the WIPP site.

On September 28, 1982, the Natural Resources Study Final Report, WTSD-TME 3156, was issued by the Westinghouse Waste Isolation Division (WID) (Westinghouse Waste Isolation Division, 1982). The report concluded that hydrocarbon resource extraction and solution mining from within (and outside of) Control Zone IV, using currently available and applicable technology, would not compromise the integrity of the WIPP facility. Page 65 of this report stated:

In summary, DOE could reevaluate its interim policy to prudently allow resource recovery in Control Zone IV. This is supported by an evaluation of the consequence analyses for resource extraction, as discussed in this report, and the additional consideration that any resource recovery operation will be reviewed by the BLM (for surface claims) and the Mineral Management Service (for underground claims) prior to its implementation. In this fashion, any planned activities will be evaluated on a case-by-case basis to ensure that the integrity of the WIPP facility will not be jeopardized.

Subsequent to the issuance and review of the Natural Resources Study Final Report, the DOE issued a Revised Interim Policy Statement on Resource Recovery at the WIPP Site (DOE, 1982). Discussions between the EEG and DOE regarding the Revised Interim Policy Statement on Resource Recovery at the WIPP Site culminated in a February 24, 1983 letter to the EEG (DOE, 1983a) which concluded:

As you know, the DOE Revised Interim Policy Statement on Resource Recovery at the WIPP Site is based on the Natural Resources Study which concludes that resource recovery outside the Site Boundary (Zone III) using current technology, will not compromise the integrity of the WIPP underground facility. Accordingly, the DOE does not plan to exercise any control over resource recovery activities outside the Site boundary and will rely, primarily, on other Federal and State regulatory agencies to assure that the WIPP boundaries are not violated. As an additional protection measure, the BLM will notify the DOE of any requests for resource recovery permits within one mile of the WIPP Site boundary so that the DOE will be aware of resource recovery activities near the site.

We do not expect to perform a comprehensive review of resource recovery plans utilizing conventional technology; however, any plans which employ unusual methods or advanced technology will be evaluated to determine possible effects on the underground facility. Upon receipt of notification of unusual or advanced technology planned resource recovery activities from the BLM, we will forward the information to the EEG.

In both the Natural Resources Study and the DOE Revised Interim Policy Statement on Resource Recovery at the WIPP Site, DOE recognized BLM's mission and responsibility to manage mining and drilling on federal lands in the WIPP vicinity. The BLM-DOE MOU assured timely and appropriate interface between these two agencies regarding vicinity mineral extraction activities. This interface complemented, reaffirmed, enhanced, and strengthened BLM's responsibility for active institutional control of mining and drilling activities. The position that BLM would be ensuring active institutional controls over mining and drilling was reaffirmed.

On December 7, 1983, the DOE sent a letter to the EEG to clarify the difference between the site boundary and Zone III, and to discuss the acquisition of lease rights and resource recovery at the WIPP site (DOE, 1983b). This letter states:

All lease rights which have been purchased by the DOE within the site boundary have been purchased in their entirety or alternatively we acquired only the upper 6,000 feet of the leases to reduce the acquisition cost to the DOE and to allow access to potential hydrocarbon resources below the WIPP Site. It was not considered necessary to detail this information in the DOE/BLM June 29, 1983 Memorandum of Understanding or Resource Management Plan because the BLM is required to enforce mineral leasing laws which prohibit violation of adjacent (in this case, DOE's) lease boundaries.





In summary, the DOE position relative to resource recovery at the WIPP Site is as follows: no potash or other commercial mining or commercial drilling will be allowed within the WIPP Site boundary. That boundary is defined in my February 17, 1983 letter as a square containing 16 sections (10,240 acres). With regard to the 6,000-foot restriction, a leaseholder who has rights to minerals located 6,000 feet or more beneath the surface cannot drill through the upper 6,000 feet without permission of the owner of those lands. Accordingly, application must be made to the BLM for such rights and the MOU does contain provisions for notification of the DOE in that event.

On August 29, 1983, the DOE transmitted to the EEG documentation that described the leasehold and settlement terms for every lease purchased at the WIPP Site through that date (DOE, 1983c). This documentation included a description of Section 31 and clearly stated that only the surface and uppermost 6,000 feet of subsurface had been reserved.

Documentation of Leases

Section 5.0 of EEG-50, "The Forgotten Gas Leases and Well Beneath the WIPP Site," lists documents that the EEG believes provide substantiation for EEG's conclusions regarding institutional controls. These documents are stated to be "incorrect, silent, or inconsistent" on two oil and gas leases beneath Section 31.

The following discussion addresses the EEG's comments on these documents, and the conclusions presented in Section 5.0. Page 24 of EEG-50 states:

The Final Environmental Impact Statement (FEIS, U.S. DOE, 1980, pp 8-8--8-10) identifies the oil and gas leases held by ten companies in March 1979, yet the 1952 Conoco and 1957 Bass leases in the southwest corner of the WIPP Site on Section 31 are not mentioned.

This statement is misleading in that it fails to address the intent of the FEIS which was to identify those leases which remained to be acquired to protect the integrity of the repository. Page 8-9 of the FEIS states:

The DOE has acquired oil and gas leases on an additional 7100 acres inside the area. These acquisitions have been necessary to keep the salt beds intact....

The leases in Section 31 were among those which had been resolved when the FEIS was published. The DOE had already acquired the surface rights and the first 6,000 feet and it was not deemed necessary to discuss presettled leases in the FEIS.

Page 34 of EEG-50 states:

The 1984 report published by the New Mexico Energy and Minerals Department (NMEMD) Task Force on Natural Resources (NMEMD, 1984) stated that the DOE had acquired several oil and gas leases at a cost of over \$19.6 million dollars. The report stated that 'As a result of these lease acquisitions, only one hydrocarbon lease remains within the WIPP Site Boundary... an 80-acre tract held by Skelly Oil Company....' (NMEMD, 1984, p. 27). The report did not identify the active gas and oil leases in Section 31, deeper than 6,000 feet (1829 meters).

The NMEMD 1984 "Final Report and Recommendations of the Subcommittee on Natural Resources at the Waste Isolation Pilot Plant (WIPP) Site" identified resource-related issues, problems, and impacts associated with the development of the WIPP and to recommend possible solutions (New Mexico Energy and Minerals Department, 1984). EEG's statement regarding the 1984 report is especially surprising in view of the EEG role in preparation of the report. On January 9, 1984, a letter transmitting the report from NMEMD to the Governor of New Mexico states that the Subcommittee on Natural Resources at the WIPP Site was assisted by the New Mexico EEG in preparing the report. As stated above, the EEG had full knowledge of the existence of the leases beneath Section 31. They had received requested documentation on the leases just four months prior to the issuance of the natural resources report. The subcommittee, in agreement with the EEG, obviously concluded (as the DOE continues to believe) that the leases beneath Section 31 were not an issue of concern, because they had been resolved to the extent necessary to protect the underground salt beds.

In a 1987 modification to the C&C Agreement, the DOE agreed to prospectively preclude "subsurface mining, drilling, or resource exploration unrelated to the WIPP Project on the WIPP site, including "slant drilling under the site from within or from outside the site." The pre-existing 1982 well does not contravene this prospective agreement. Since 1987, no mining, drilling, or resource exploration has taken place within the site.

The WIPP Final Safety Analysis Report (FSAR), issued in May 1990 (DOE, 1990a), reiterated the positions that had been espoused in the Consultation and Cooperation Agreement and the 1984 NMEMD report in that it did not reference the leases located beneath Section 31. This occurred in spite of numerous reviews of the FSAR by outside parties, including the EEG.

The FSAR systematically reviews potential hazards and ensures that appropriate measures are taken to eliminate or adequately mitigate these hazards. The FSAR represents a statement and commitment by the DOE that the WIPP facility can be operated safely and at minimal risk when operated in accordance with the FSAR.





In conclusion, the deviated gas well beneath Section 31 does not and has never posed a significant hazard to the facility. Therefore, it is not necessary to revise the FSAR solely for the purpose of correcting notation of the leases in the area.

Page 40 of EEG-50 discusses statements on page 32 of the DOE "Implementation of the Resource Disincentive Plan in 40 CFR 191.14(e) at the Waste Isolation Pilot Plant." (DOE, 1991a.) Although not clearly stated in the text of the plan, page 32 is discussing producing leases. While the statements on page 32 are not consistent with the correct statements made on page 50 of that document, the omissions do not affect compliance with 40 CFR 191.

Page 39 of EEG-50 states:

While the Secretary of Energy's Decision Plan for the WIPP had carefully tracked an active potash lease until it was purchased, successive Revisions 6 through 10 did not document the existence of the active oil and gas leases even after the issue had been raised. The potash lease purchase was noted in Revision 5 (U.S. DOE, August 15, 1990). The failure of subsequent revisions to mention the rediscovered gas leases incorrectly suggests that there were no outstanding leases in the WIPP Site Boundary other than the one potash lease.

Although the Secretary of Energy's Decision Plan did not specifically address the leases in question, the document that provides the basis for the recommendation to the Secretary of Energy on the readiness of the WIPP did consider the active oil and gas leases. In September 1991, DOE/EM/45063-3 "Report to the Secretary of Energy Office of Environmental Restoration and Waste Management," was issued (DOE, 1991b). The active leases located below the WIPP site are discussed in Section 3.2.4, "Potash Lease Settlement":

To protect the 16 sections of land within the WIPP site from human intrusion, it was necessary for the DOE to acquire all surface and subsurface interests within the land withdrawal boundary. On June 29, 1990, the DOE purchased from IMC Fertilizer, Inc., a 1600 acre potash leasehold which encumbered 2 1/2 sections of land within the boundaries of the WIPP. With the purchase of this leasehold, the federal government now holds title to all surface and subsurface interests within the WIPP land withdrawal boundary, except for two outstanding gas well leases.

The No-Migration Variance Petition (NMVP) provided to the EPA in March 1989 did inaccurately reflect the status of oil and gas leases in the WIPP area as noted in EEG-50 (DOE, 1990b). As stated on page 34 of EEG-50:

With respect to petroleum exploration and the human intrusion issue, the last sentence in this paragraph provided incorrect information to the EPA. The EPA subsequently granted a variance to the DOE in November 1990 (U.S. EPA, 1990).

This information is incomplete and very misleading. It implies that (a) this inaccurate information was pertinent to the granting of the No-Migration Variance Determination, and (b) no actions were taken by the DOE to amend the language in the document. As discussed in the following paragraphs, neither is the case.

One final point regarding EEG's report is its reference to a producible gas well visible from the south access highway. Page 41 of EEG-50 states:

In terms of active institutional control, the leases were forgotten by the DOE in spite of the lease, drilling, and production records...and the existence of a producible gas well visible from the south access highway into the WIPP facility.

The existence of a "visible" well head is cited three times in EEG-50. These citations imply that the visibility of the well should have been cause for concern. Within the context of EEG-50's conclusions, these references are misleading. DOE is, and has been, aware that numerous oil and gas wells are located in the general vicinity of the WIPP site, including James Ranch 13. There is no visual evidence on the surface that the James Ranch 13 well deviates to some point beneath the WIPP site boundary, and nothing that would suggest that the well is in place contrary to institutional control documentation.

Actions Taken to Address Regulatory Concerns

In October 1990, the DOE, while reviewing a draft of a new MOU between the BLM and DOE, noted a reference to "one 360 acre tract of the public land within the BLM Managed Surface Area leased for oil and gas development." After review of the earlier MOUs and historical correspondence pertaining to the leases as outlined above, it became apparent that the omission of references to these oil and gas leases from certain DOE documents required clarification.

In early November 1990, the EPA and the Chairman of the New Mexico Radioactive Waste Consultation Task Force were verbally informed of the situation. These contacts were made to discuss documents containing language pertaining to the leases at the WIPP. Of primary concern were the C&C Agreement and the NMVP.

On November 15, 1990, the State of New Mexico was formally notified by the DOE of the existence of the leases located beneath Section 31 (DOE, 1990c) stating:





We do not believe that the existence of this 1982 well contravenes the August 4, 1987 Second Modification to our Agreement for Consultation and Cooperation in which we agreed to prospectively preclude "subsurface mining, drilling, or resource exploration unrelated to the WIPP Project on the WIPP site" [including "slant drilling under the site from within or outside the site"]. Since 1987, the integrity of the WIPP site has been maintained pursuant to our agreement. Nevertheless, in the spirit of consultation and cooperation, we suggest that the record be clarified to reflect the preexistence of the well.

On November 16, 1990, a complete package of information was delivered to the state (DOE, 1990d). A similar package was sent to the EEG on December 3, 1990 (DOE, 1990e).

On January 16, 1991, the DOE formally submitted a data package covering pertinent information relative to Section 31 leases, and the existing deviated well, to the EPA Headquarters (DOE, 1991c).

After reviewing the information, the EPA issued a memorandum March 13, 1991, entitled "Supplemental Information Since the Issuance of the No-Migration Determination for the Waste Isolation Pilot Plant (WIPP)" to the official RCRA docket (Reference Number F-90-NMVP-SO734) (EPA, 1991).

With regard to the EPA's previous review of deviated drilling at the WIPP, the EPA stated:

The Agency reviewed the issue of deviated drilling while performing the initial review of the DOE no-migration petition, and decided that such wells would not be an issue during the test phase. Because they lie outside of the unit boundary, these wells provide no mechanism for potential release of hazardous constituents from the repository. EPA placed a greater emphasis on the potential for boreholes in the Salado Formation and above the repository, within the land withdrawal area. EPA concluded that these areas have a greater potential impact on the repository. It does not believe that an additional borehole located outside the unit boundary raises any new issues.

Concerning the omission of the well that was finished in Section 31, as described in the NMVP, the memorandum stated:

This well was not specifically identified in DOE's no-migration petition, although documentation supporting the decision did discuss the possibility of deviated drilling bottoming below the 4-mile by 4-mile WIPP land withdrawal area. After careful review, EPA has concluded that the information provided by DOE does not present concerns not considered in EPA's decision and does not affect its determination of no migration.

The EPA also discussed the existence of the James Ranch 13 well as it specifically pertained to institutional controls stating:

EPA also recognized in its review that oil and gas exploration and production continue to occur near the WIPP site. Typically, the explorations are located thousands of feet below the Castile Formation. The Bass well is such a well; the well is in compliance with institutional controls at the WIPP site noted earlier and it does not penetrate the unit boundary of the WIPP at any location. [Emphasis added.]

Contrary to the implications on page 34 of EEG-50, clearly the existence of the two leases and the presence of the deviated well was not crucial to the granting of the determination. It was the protection of the unit boundary that was of primary importance to the EPA. Additionally, the EPA believed that adequate supporting documentation was in existence regarding deviated drilling at the WIPP site.

As an additional measure, the DOE initiated a review of the deviated well and associated documentation in January of 1991, to ensure that adequate National Environmental Policy Act (NEPA) documentation was in place for the well.

In March 1991, the DOE determined that NEPA documentation for the well was adequate because the well was drilled in accordance with provisions contained in a BLM Environmental Assessment for oil drilling in the district and because the FEIS for the WIPP sufficiently addressed the potential for deviated drilling as it pertained to the potential for this drilling to impact the repository.

Conclusion

It is the position of the DOE that the significant conclusions of EEG-50 relative to institutional controls are incorrect. There is no substantiation for inferences that inadvertent exploration has taken place at the WIPP, or that institutional controls have failed to direct the authorities with regard to drilling in the area. To the contrary, the EPA stated that the NMVP omissions and misstatements had no impact on institutional controls.

None of the documents listed in EEG-50 as being "incorrect, silent, or inconsistent" are a part of the institutional control process at the WIPP. Nor are any of the documents critical to the maintenance of the institutional controls at the WIPP. The controls that are crucial to protect the site from inadvertent exploration are BLM leasing procedures and lease records and the internal procedures of the BLM which require the DOE's review and comment for any permit application to drill within one mile of the WIPP site.



Adherence to policies governing resource extraction at the WIPP has been carefully maintained. Review of the BLM's interface with the DOE reveals numerous requests from the BLM for DOE comments regarding requests to drill in the area.

Historical documents and correspondence such as the DOE's Revised Interim Policy (and resulting comments and responses), and the 1984 Final Report and Recommendation on Natural Resources at the WIPP Site reflect the priority of protecting the underground repository by prohibiting access from the surface to 6,000 feet of the subsurface. These records also document the intent of the State and the DOE not to unnecessarily limit access to those resources located beneath 6,000 feet.

The position of the EPA, as presented in their 1991 memorandum (EPA, 1991), is that the existence of the deviated well beneath Section 31 does not affect their previous decision to grant the WIPP a No-Migration Variance Determination. Furthermore, the EPA does not believe that the institutional controls at the WIPP have been compromised.

The DOE continues to support its position relative to EEG-50 contained in its interim response to the EEG, dated July 15, 1992.





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