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STATE OF NEW MEXICO

ENVIRONMENTAL EVALUATION GROUP

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M E M O

September 19, 1984

TO: Joseph Goldberg, Secretary HED
Judy Espinoza, Secretary Transportation
Larry Larranaga, Secretary Highway Department
Denise Fort, Director EID ✓
Paul Biderman, Secretary EMD

FROM: J. Mobley

SUBJECT: C AND C AGREEMENT MODIFICATION

Attached you will find the final draft of the "First Modification To The July 1, 1981 'Agreement For Consultation and Cooperation' On WIPP By The State of New Mexico and U. S. Department of Energy." Although there are still a number of typos and format corrections to be made, the document represents the terms upon which the State and DOE negotiators agreed.

JM:rh
cc: Joe Canepa
Bruce Thompson
Robert H. Neill

(Attachment)



FIRST MODIFICATION TO THE JULY 1, 1981 "AGREEMENT
FOR CONSULTATION AND COOPERATION" ON WIPP BY THE
STATE OF NEW MEXICO AND U. S. DEPARTMENT OF ENERGY

The following modifications to the July 1, 1981 Agreement for Consultation and Cooperation, and the Working Agreement for Consultation and Cooperation, which forms a part thereof, are hereby agreed to by the State of New Mexico ("State") and the United States Department of Energy ("DOE"), and are effective and binding upon the parties as of the signing of this document.

WHEREAS, the State has identified certain continuing concerns regarding: (1) the specific mission of WIPP, (2) a demonstration of the retrievability of the WIPP waste prior to emplacement, (3) post-closure control and responsibility by DOE, (4) completion of certain additional scientific testing and reports, (5) compliance with applicable federal regulatory standards for waste repositories, and (6) a program for encouraging and reporting upon the hiring of New Mexico residents at WIPP; and

WHEREAS, DOE and the State have agreed that the following modifications address those specific State concerns and are in furtherance of, and consistent with, both DOE's responsibility for national security and carrying out the mission of

WIPP in accordance with Public Law 96-164 and the State's responsibility for the welfare of its citizens and the safe environment of New Mexico; and

WHEREAS, these modifications are made in accordance with Article V - MODIFICATIONS of the Agreement for Consultation and Cooperation and Article I. regarding modification of the Working Agreement; and

WHEREAS, the parties recognize that because of the long-term and significant nature of the WIPP Project, there may be additional issues and concerns that may be addressed in future agreed upon modifications and that this First Modification in no way limits the parties from raising such additional concerns in the future;

NOW, THEREFORE, the parties agree to modify the July 1, 1981 Agreement for Consultation and Cooperation and the Working Agreement for Consultation and Cooperation, which is a part thereof, in the following particulars only:

MODIFICATIONS TO AGREEMENT FOR CONSULTATION AND COOPERATION

1. Modify Article VI - WIPP MISSION by revising existing paragraphs B. and C. and adding new paragraphs D., E. and F. to read in their entirety as follows:

"B. WIPP is intended to include receipt, handling and permanent disposal of defense transuranic waste and temporary storage for experimental purposes of a limited amount of high-level defense waste."

"All of the high-level waste will be removed from the WIPP upon completion of the experiments and prior to decontamination and decommissioning of the facility. The transuranic waste will be subject to a period of retrievability prior to permanent disposal as set forth in the Retrievability Plan referenced in Article IV of the Working Agreement."

"The WIPP FEIS analyzes the impacts on the public health and safety from the release of radioactive material from WIPP. DOE's position is that the bounds of these impacts are established by the estimated dose consequences, rather than by any of the particular characteristics of the waste to be emplaced at WIPP. It is the State's position that the impacts on public health and safety are bounded not only by dose estimates but by the site characterization, multiple containment barriers, QA programs, design criteria, operational controls, enforcement of safety programs and other good engineering practices. The analyses in the WIPP FEIS use the upper limit of 100 rem per hour as the maximum surface dose rate for a canister of remote handled transuranic (RH-TRU) waste and an expected maximum activity level of 23 curies per liter for the waste. The Record of Decision dated January 22, 1981 also limited the total volume of RH-TRU to be shipped to WIPP to 250,000 cubic feet."

"A limited amount of RH-TRU waste, described below as falling within the 100 to 1000 rem per hour range, presently in existence has activity levels and characteristics which exceed the transuranic waste characteristics used in the WIPP FEIS. Since physically reducing such

waste form to levels below 100 rem per hour may be impractical and since the WIPP Waste Acceptance Criteria (WAC) or its companion waste certification compliance requirements will permit exceptions to the WAC, the DOE will, prior to granting such exceptions for such waste and prior to the shipment of such waste: (1) perform analyses to ascertain the impact of such on the public health and safety, and (2) consult with the State of New Mexico, including providing the State with a copy of the analyses for review and comment. In no instance will such an exception to the WAC be granted if it would cause a significant increase in the impacts on public health and safety discussed in the WIPP FEIS."

"The DOE agrees that no defense RH-TRU with a surface dose rate in excess of 1000 rem per hour will be shipped to WIPP and that no more than 5% of the total volume of 250,000 cubic feet (or 12,500 cubic feet maximum) of defense RH-TRU shipped to WIPP will exceed 100 rem per hour surface dose rate. Defense RH-TRU waste shipped to WIPP will not exceed the 23 curies per liter maximum activity level (averaged over the volume of the canister). The total curies of defense RH-TRU shipped to WIPP shall not exceed 5.1 million curies. The concentrations of radionuclides in the RH-TRU canisters shall be determined by a procedure which shall include one or more of the following basic methods: (1) materials accountability; (2) classification by source; (3) gross radioactivity measurements; (4) direct measurements of major contributing radionuclides; or (5) such other methods as the parties may agree to.

Further, DOE agrees that the amount of defense high-level waste (DHLW) used on an experimental basis will not exceed 430,000 curies per canister and a total of 17.2 million curies. The DOE will disclose in writing to the State the upper limit of the surface dose rate of any DHLW canister to be brought to the WIPP for experimental purposes no later than (date).

WIPP is not designated for the permanent disposal of high-level waste, nor has the WIPP site itself been characterized for such permanent disposal."

- C. DOE, or its successor governmental agency, or the United States if no such agency, shall not abandon the WIPP site without decontamination and decommissioning having been completed, and DOE or its successor governmental agency, or the United States if no such agency, shall have the responsibility for ongoing post-closure institutional control at the WIPP site. As stated in the Working Agreement, the milestones and associated consultation and cooperation process provisions covering the decontamination and decommissioning of WIPP, including the consultation process concerning the length and extent of the post-closure institutional control, shall be negotiated and resolved by the parties in the future, and at least one year prior to the start of the decontamination and decommissioning of WIPP.

D. During facility construction and operation the DOE will not allow subsurface mining, drilling or resource exploration from within the WIPP site. The "WIPP site" as used here means the 4 x 4 mile (10,240 acres) area consisting of sections 15, 16, 17, 18, 19, 20, 21, 22, 27, 28, 29, 30, 31, 32, 33 and 34 of Township 22 South, Range 31 East, NMPM, in Southeastern New Mexico.

Deviated drilling for oil and gas from outside the WIPP site may be allowed so long as the subsurface of the WIPP site is not penetrated above a depth of 6,000 feet from the surface. A portion of the land comprising the WIPP site is presently owned by the State. The foregoing statement of DOE policy regarding the preservation of the integrity of the WIPP site is not intended to diminish the State's authority and responsibility with respect to such state-owned land.

One year prior to the completion of decontamination and decommissioning of the WIPP site, DOE shall make a decision whether to continue the above-stated policy regarding subsurface mining, drilling or resource exploration, at the WIPP site. The DOE shall consult with the State prior to making the decision. The State's position at this time is that the DOE should take measures to prevent any non-WIPP mining or drilling from the surface down to 6000 feet within the 16 section (4 mile x 4 mile) "WIPP Site" and that the DOE should devise ways to protect the site by enforcing this policy for the longest time possible after the site is decommissioned.

E. In carrying out this stated mission, DOE and WIPP will comply, at a minimum, with all applicable state, federal and local standards regulations and laws, including any applicable regulations or standards promulgated by the Environmental Protection Agency (EPA). Compliance by way of grandfathering, variance, waiver or exemption shall in no way prevent or stop the State from requiring any similar health and safety measures at WIPP under separate applicable authority, nor shall such type of compliance prevent or stop the State from seeking conflict resolution under Article IX, herein, over such health and safety measures.

F. The foregoing statement of the WIPP mission is based on the WIPP mission authorized by Congress in P.L. 96-164. The parties recognize that all or part of the statement of mission in this Agreement for Consultation and Cooperation would not be binding on the parties if, in the future, Congress enacts legislation specifically related to the WIPP mission which conflicts with this statement of the mission. The parties further recognize that this Agreement for Consultation and Cooperation in no way relieves or alters, in any respect, any requirements or responsibilities imposed on DOE by any other federal laws or regulations including but not limited to the National Environmental Policy Act."

2. Modify Paragraph C. of Article VII - KEY EVENTS AND MILESTONES to read in its entirety as follows:

"C. The following are currently identified as Key Events:

1. Draft Environmental Evaluation;
2. Preliminary Engineering - Title I;
3. Final Environmental Evaluation;
4. Site and Preliminary Design Validation (SPDV) Construction;
5. Detailed Design - Title II;
6. Construction of Exhaust and Waste Shafts;
7. Construction of Waste Handling Building;
8. Underground Development;
9. Construction of Exhaust Filter Building;
10. Computer Installation for the Facilities Alarm and Monitoring System;
11. Operations;
12. Retrievability Decision for TRU Waste;
13. High-Level Waste Retrieval and Shipping;
14. Decontamination and Decommissioning. "

3. Modify Article VIII - CONSULTATION AND COOPERATION by adding the following new paragraph H. concerning the employment of New Mexico residents to read in its entirety as follows:

"H. The parties recognize that neither DOE nor the State can require that New Mexico residents be employed by DOE and its subcontractors for the construction and operation of WIPP. Nevertheless, both

parties agree that it is desirable, within the limits of the law, to encourage the employment of New Mexico residents. DOE agrees to establish with the State a monitoring and statistical reporting program for itself and its subcontractors in order to periodically report on the number of New Mexico residents hired and the steps taken to fully and effectively publicize the availability of WIPP jobs in New Mexico for prospective New Mexico employees. The details of this program will be agreed upon in writing by the State and DOE."

MODIFICATIONS TO WORKING AGREEMENT FOR CONSULTATION AND COOPERATION

1. Modify Article IV - KEY EVENTS AND ASSOCIATED MILESTONES by adding the following new sub-paragraph 11 to Section K. OPERATIONS to read in its entirety as follows:

" 11. Retrievability Demonstration.

The objective of this activity is the demonstration of the retrievability of the three waste forms: i.e., remote-handled transuranic (RH-TRU), contact-handled transuranic (CH-TRU), and experimental defense high-level waste (DHLW), in accord with criteria established in WIPP-DOE-71, Design Criteria Waste Isolation Pilot Plant, as revised. DOE will provide to the State for its review and comment the following documents:

1. retrieval equipment design specifications for each waste form;

2. retrievability demonstration plan for each waste form, which will include a summary of the demonstration procedures and techniques to be followed, the in situ conditions to be simulated, and the criteria for evaluating the results of the demonstration of the procedures and techniques;
3. report on the mock, onsite CH-TRU retrievability demonstration which documents the results of the demonstration of the applicable procedures and techniques;
4. report on the mock, onsite RH-TRU retrievability demonstration which documents the results of the demonstration of the applicable procedures and techniques;
5. report on each mock, onsite DHLW retrievability demonstration which documents the results of the demonstration of the applicable procedures and techniques.

The State shall review and comment on each report listed in paragraphs 3, 4, and 5 above in writing within sixty (60) days of its receipt. DOE shall consider and respond to such comments. The first shipment of each specific waste form or configuration of that form shall not occur until seventy-five (75) days after the DOE responds to the State's comments on DOE's report on the retrievability demonstration for that waste form or configuration. The State shall be invited to view the retrievability demonstrations.

The Manager, AL-DOE, shall advise the State in writing, on a quarterly basis, of the estimated first shipping date of each waste form."

2. Modify ARTICLE IV - KEY EVENTS AND ASSOCIATED MILESTONES by adding the following new sub-paragraph 12 to Section K. OPERATIONS to read in its entirety as follows:

"12. Geotechnical Studies

As stated in WIPP-DOE-174, DOE will perform certain additional geotechnical studies at the WIPP site. The specific studies to be conducted for this purpose are listed at Appendix I. This list does not preclude performance of additional studies as needed to resolve scientific issues or questions. The parties may agree to amend Appendices I & II as needed in the future.

"DOE or its contractors will issue reports on these studies. The projected titles, anticipated completion dates for each report, and a detailed description of the scope of each will be provided to the State by March 31, 1985."

"The reports will be provided to the State for review and comment not later than January 1, 1988. A summary report on the additional geotechnical studies listed in Appendix I will be provided to the State by DOE not later than January 1, 1988. The State may, at its option, review and comment on such geotechnical studies and DOE's summary report."

"The completion of these studies and the issuance of these reports may be concurrent with construction of WIPP, but will be completed prior to the shipment of any radioactive waste to WIPP with the possible exception of the long-term sorbing tracer test report. The DOE will, however, make every effort to start the long-term sorbing tracer test as soon as possible and no later than January 1986."

"The State's position on these studies is that they will answer some remaining uncertainties about the site. The DOE position concerning these studies is as set forth in WIPP-DOE-174."

3. Modify ARTICLE IV - KEY EVENTS AND ASSOCIATED MILESTONES by revising existing paragraph N. DECONTAMINATION AND DECOMMISSIONING, to read in its entirety as follows:

"N. DECONTAMINATION AND DECOMMISSIONING

The following Milestones are currently established for this Key Event. Additional Milestones, together with reasonable time limits for State comment and DOE response, shall be negotiated in the future, as appropriate.

1. Decontamination and Decommissioning Plan, including any remaining borehole plugging, decontamination of surface facilities, and disposition of underground and surface facilities and equipment.
2. Post-Closure Control Plan, including, but not limited to, active

and/or passive control periods, specific organization responsibilities, control of resource recovery activities, active and passive control requirements, environmental monitoring and safety considerations. This plan will be implemented, and the implementation monitored, by DOE, its successor governmental agency or other designated federal agency.

3. Retrieval of last experimental waste.
4. Shipment offsite of last experimental waste.
5. Public Health and Safety Radiation Standards Plan. This plan shall include a description of DOE's implementation of applicable public health and radiation protection standards in effect at the time the facility is to be decommissioned.
6. The State shall have the opportunity to consult with DOE and comment on all materials contained in draft DOE orders related to the health and safety considerations of the WIPP Project prior to promulgation of final order(s) by DOE.
7. Periodic reports on progress of excavation and geotechnical conditions encountered for mining performed prior to this key event. "

The parties further agree that all other terms and conditions of their AGREEMENT FOR CONSULTATION AND COOPERATION including the WORKING AGREEMENT FOR CONSULTATION AND COOPERATION, as previously modified, shall remain in full force and effect.

APPENDIX I

Additional Geotechnical Studies

- 1.(a) Investigate the depression of the marker beds in the lower part of the Salado Formation, centered two miles north of the WIPP shafts (this structure is generally referred to as the "FC-92" structure).

DOE will investigate this depression by drilling the hole DOE-2. This hole will be drilled into the Delaware Mountain Group (DMG) Formation. It will be a multi-purpose hole, the primary purpose of which will be to answer the question about the origin of the marker bed depressions in the Salado Formation at this location. The secondary objectives will be to gather information about the Rustler and the DMG hydrologic parameters. In the event brine is encountered in the Castile, the DOE may examine the DMG elsewhere rather than deepen DOE-2.

- 1.(b) Provide data and any interpretive reports on artesian heads encountered at the levels of Salado and Castile Formations.

DOE has collected data of possible relationship to the origin of the artesian heads which have been encountered at the levels of the Salado and Castile Formations at several deep boreholes, including AEC-7,

WIPP-12 and Cabin Baby. DOE plans to undertake a further investigation at DOE-2 to determine the origin of such heads if artesian heads are encountered at that location. Data related to such heads from these deep boreholes, together with any interpretative reports thereon, will be made available to the State.

2. Perform hydrologic testing of the Rustler water-bearing zones.

Perform hydrologic testing at three-well hydropads at H-3 and H-11; long-term flow-tests at H-3; single well testing at several existing wells.

3. Perform tracer testing in the Rustler aquifers.

Perform convergent tracer test at hydropads H-3 and H-4. Perform at least one field test using sorbing tracers at a site to be selected after consultation with EEG.

4. Obtain water-chemistry data for the Rustler aquifers.

Obtain water samples from several boreholes and different water-producing horizons in the Rustler Formation where such sampling has not already been done. Analyze these for major and minor dissolved constituents as well as for environmental isotopes such as, Cl-36, C-14, U-234, U-238, Ra-226, O-18/16 and H-2/1, to aid in the determination of flow-paths, groundwater velocity and the recharge/discharge areas.

5. Conduct a water balance study for the WIPP site.

This study should try to answer the question of recharge and discharge; infiltration characteristics of surficial materials; evaporation from the WIPP ground surface, and from the lakes and the Pecos river; and the overall balance of the movement of water through the formations overlying the Salado at the WIPP site.

6. Perform computer modeling of groundwater flow and solute transport through the Rustler aquifers.

Using the information obtained from the work described in items 2 to 5 above, perform computer modeling of groundwater flow and solute transport through the Rustler.

7. Study the mechanics of removal of salt from the Rustler Formation at and near the site.

Questions to be addressed by this study include, (a) more precise areal definition of removal of salt from various zones in the Rustler (b) locations, characteristics and thickness of dissolution residues in the Rustler (c) recharge and discharge paths of fresh water and brine used in the dissolution process, and (d) the timing and the rate of dissolution.

8. Delineation of Castile brine.

Evaluate and field-test non-invasive geophysical methods near the existing WIPP Project related deep boreholes to identify and delineate possible occurrences of brine in the Castile Formation. DOE will consult with EEG prior to the selection of such methods to be tested. If a method shows results which agree with interpretative data from existing drill holes, conduct a survey over the repository using this method to delineate possible occurrences of brine.

9. Investigation of suspected "Dolines."

Investigate some of the prominent depressions at the site and in the surrounding area to address the question of their origin, particularly the suspicion of at least some of these being "dolines."

10. Study of MB-139

Study the marker bed 139 underlying the repository horizon to determine its composition, structure and origin and the origin of brine and gases apparently associated with it.

APPENDIX II.

Projected titles of reports, brief description of the scope of each and the anticipated schedules of publication will be supplied by DOE to the State by March 31, 1985. The Appendix II will then become a part of this Agreement.

j. mobley
8/14/85

Notes on the WIPP Agreements

Decision Points:

C and C Working Agreement, Appx B, pages 9 thru 12 -- these are only key event/milestone processes, but they are determinable events that could supply natural break points in the project since the initiation of each key event requires the completion of all underlying milestones.

First Mod, pages 9 thru 12 require some relatively formal review and response procedures for the retrievability demonstration and require that all geotech studies be complete prior to operations beginning on Jan 1, 1988 (nine months before their advertised starting date of October 1, 1988).

Supplemental Stipulated Agreement:

Carries the financial assistance provisos for the state activities beyond EEG. The provisions are scattered thru the document and so one has to read the whole thing to get the picture.

Agreement on health studies is on page 28. Jim Channell was correct when he stated that DOE resisted any baseline health studies and that EEG concurred that they were not necessary. Bingaman's law suit carried that demand derived from one of the public interest group's, but the negotiations did not proceed very far. I recall that Sandy Lapham and Gere Millard got \$60k (?) for some baseline work in the Carlsbad area for comparison with the mineral belt studies, but I do not recall the details.