

Waste Isolation Pilot Plant
Compliance Certification Application
Reference 212

DOE (U.S. Department of Energy). and State of New Mexico. 1981.
Consultation and Cooperation Agreement. Appendix A to the Stipulated Agreement
Resolving Civil Action, 81-0363JB, State of New Mexico vs. United States
Department of Energy, United States District Court, Albuquerque, NM.

STATE OF NEW MEXICO, ex rel.
JEFF BINGAMAN, Attorney General
of the State of New Mexico,

Plaintiff,

v.

THE UNITED STATES DEPARTMENT
OF ENERGY, et al.,

Defendants.

CIVIL ACTION NO.
81-0363 JB

FILED
UNITED STATES DISTRICT COURT
ALBUQUERQUE, NEW MEXICO

JUL 01 1981

JOINT MOTION TO STAY ALL PROCEEDINGS

Come now Plaintiff and Defendants and move this
Honorable Court for an Order granting a stay of all pro-
ceedings in this action in accordance with their Stipulated
Agreement.

In Support of this Motion the parties state as follows:

1. That they have entered into the attached Stipulated Agreement dated July 1/1981, according to which they have agreed to abide by the provisions therein in lieu of going forward with this litigation at the present time.
2. That the Stipulated Agreement makes any further proceedings before this Court prior to February 1, 1982 unnecessary; and,
3. That the parties will advise the Court on February 1, 1982, on the status of the case.

Dated: July 1/1981, 1981.

Respectfully submitted,


JOSEPH CANEPA
Deputy Attorney General

JEFF BINGAMAN
Attorney General
State of New Mexico


RAYMOND HAMILTON
Assistant U.S. Attorney

R.E. THOMPSON
United States Attorney

OF COUNSEL:

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COPY

FILE

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW MEXICO
ALBUQUERQUE, NEW MEXICO

JUL 03 1981

STATE OF NEW MEXICO, ex rel.
JEFF BINGAMAN, Attorney General
of the State of New Mexico,

Plaintiff,

vs.

THE UNITED STATES DEPARTMENT
OF ENERGY, et al.,

Defendants.

CIVIL ACTION NO.
81-0363 JB



ORDER

Upon consideration of the Joint Motion To Stay All
Proceedings filed this day with the Court;

And, considering the Stipulated Agreement dated July 1,
1981, to which the parties hereto have agreed, it is on this
1st day of July, 1981:

ORDERED that these proceedings are stayed until February
1, 1982, in accordance with the agreement of the parties as
stated in their Stipulated Agreement; and the parties shall
in good faith comply with the provisions of the Stipulated
Agreement, and further, that the parties advise this Court
on that date on the status of the case.

JUAN G. BURCIAGA

UNITED STATES DISTRICT JUDGE

ii

RECEIVED
WAPP PROJECT

JUL - 1981

SAFETY & ENVIRONMENTAL
ASSESSMENT



IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW MEXICO

STATE OF NEW MEXICO, ex rel.
JEFF BINGAMAN, Attorney General
of the State of New Mexico,

Plaintiff,

v.

THE UNITED STATES DEPARTMENT
OF ENERGY, et al.,

Defendants.

CIVIL ACTION NO.
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UNITED STATES DISTRICT COURT
ALBUQUERQUE, NEW MEXICO

JUL 01 1981

STIPULATED AGREEMENT

Whereas, the plaintiff, State of New Mexico, *Jeff Bingaman* ex rel. Jeff Bingaman, Attorney General, has brought this action to address four major concerns of the State of New Mexico; and,

Whereas, these concerns include: (1) that the final decision point for commencing construction of a permanent WIPP repository and its operation should not be reached until all interested parties including the State of New Mexico know the results of actual site and design validation tests and the SPDV program in general; and (2) that the State of New Mexico be given the opportunity to have a final resolution of all essential and integral off-site state government concerns involving health, safety, and public welfare issues prior to a final decision to commence construction of permanent WIPP facilities; and (3) that the State of New Mexico be entitled to a binding and enforceable consultation and cooperation agreement that does not waive any right by the State to judicial review of any federal agency action with respect to the WIPP project; and (4) the concern that the withdrawal provisions of the Federal Land Policy and Management Act be complied with, including public hearings to be held before a decision is made to withdraw federal lands from the public domain for the WIPP project; and

Whereas, defendants do not acknowledge the validity of any of plaintiffs' claims nor admit that any of defendants' actions to date in carrying out the WIPP program have been in violation of the United States Constitution or any law or regulation of the United States or the State of New Mexico; and

Whereas, the scheduled, phased construction of the WIPP project, subject to Congressional approval, entails the excavation of the SPDV portion of the project and the completion, or substantial completion, of site and design validation tests prior to the commencement of the construction of, and excavation for, the permanent WIPP project; and

Whereas, under the present schedule between September of 1983 and the fall of 1988 construction will continue and further excavation of the waste experimental rooms are to be completed as well as the completion, or substantial completion, of the simulated waste experiments; and

Whereas, plaintiff and defendants waive no rights hereby to litigate any issues which they will attempt to dispose of by negotiation between now and the trial on the merits should these negotiations fail to achieve the desired results; and

Whereas, the parties agree to carry out in good faith the mandatory terms of this Stipulated Agreement as fully set out in this document.

NOW, THEREFORE, the parties hereby stipulate and agree as follows:

1. Simultaneous with the entry of this Stipulated Agreement, the United States Department of Energy and the State of New Mexico shall execute a consultation and cooperation agreement which shall provide for the timely exchange of information about the WIPP project and procedures for them to follow to attempt to resolve conflicts between them relating to the public health, safety or welfare of the citizens of the State should any such conflicts arise during

the course of that project. This consultation and cooperation agreement shall be a binding, enforceable agreement between the Department of Energy and the State of New Mexico and shall expressly provide that it does not constitute a waiver by the State of any right it may have to judicial review of federal agency actions with respect to the WIPP project. The consultation and cooperation agreement is attached to and incorporated herein as Appendix A hereto. The provisions and mandates of this Stipulated Agreement are in addition to the provisions and obligations of that consultation and cooperation agreement and to the extent that they are inconsistent, if at all, this Stipulated Agreement controls.

2. The United States Department of Energy shall prepare and provide to the State of New Mexico and the public a formal, public document containing a summation of the results of all experiments and studies conducted during the SPDV phase and site validation phase of the WIPP project at least sixty (60) days prior to any decision as to whether the information obtained from the SPDV program and site and design validation tests warrants the commencement of construction of the permanent facility for the full WIPP repository which decision is now estimated to be no earlier than September of 1983. Within such 60-day period the State of New Mexico and interested members of the public shall have an opportunity to comment on that document as it relates to the decision to commence construction of the permanent facility for the full WIPP project. After receiving, reviewing, considering and responding to any comments made by the State and interested members of the public, the Department of Energy shall enter a final decision on whether the information obtained from the SPDV program and site and design validation tests warrants the commencement of permanent facility construction for the WIPP project. The State of New Mexico is not barred from seeking or obtaining judicial review of that decision by

this Stipulated Agreement. Permanent facility construction shall be deemed to commence for purposes of this paragraph with excavation of the third shaft.

3. The Department of Energy shall prepare the comprehensive topical reports and conduct the site and design validation experiments and other preliminary experiments and studies set forth and attached hereto as Appendix B of this Stipulated Agreement and shall provide the State and the public with final or interim reports on the results of those experiments prior to the 60-day review period ordered in paragraph 2 above.

4. To the extent that additional funding becomes available, the Department of Energy shall also conduct the studies and experiments set forth and attached hereto as Appendix C of this Stipulated Agreement and provide the State and the public with final or interim reports on the results of those experiments and studies prior to the 60-day review period mentioned in paragraph 2 above. The Department of Energy shall make a good faith effort to arrange for such funding prior to February 1, 1982. The Department of Energy shall prepare and provide to the State of New Mexico by September 1, 1981, a report assessing the merits and costs of their experiments and studies set forth in Appendix C. Inability of DOE to arrange for funding for the studies listed in Appendix C will not preclude the State from raising the need for such studies as an issue in any trial on the merits.

5. The Department of Energy will prepare and provide to the State of New Mexico a formal, public document containing a summation of the results of all final or interim experiments and studies related to (1) the examination of the so called "disturbed zone or zone of anomalous seismic reflection data", the southern boundary of which lies in an East-West direction bisecting Sections 16 and 17 in Township

225, Range 31E, N.M.P.M., in Zone 3 of WIPP site, starting approximately 1-1/2 miles north of ERDA 49, and (2) all simulated wasted experiments, prior to the transportation of any waste into the State of New Mexico for emplacement at the WIPP site. The Department of Energy shall afford the State of New Mexico and interested members of the public a 45-day review and comment period and shall consider and respond to such comments prior to the decision to transport any waste into the State for emplacement at the WIPP site. This Stipulated Agreement shall not bar the State of New Mexico from seeking or obtaining judicial review of any Department of Energy actions and final decisions in that respect.

6. If not required by federal laws or regulations existing at the time, the Department of Energy shall, nevertheless, provide to the State of New Mexico and the public, a reasonable review period prior to any decision to change the nature or scope of the WIPP project to that of a permanent, high level waste repository, or a decision not to retrieve the high level waste placed in the repository on a temporary basis which high level waste the Department of Energy intends to remove at the conclusion of the experimental period of approximately thirty (30) years in duration.

7. The defendant, DOE, shall make a good faith effort to assist the State of New Mexico in resolving the State's off-site state governmental concerns. In order to carry out its obligations under this paragraph, the defendant, DOE, shall prior to February 1, 1982, seek to establish and participate in a State-Federal task force comprised of all federal governmental agencies with jurisdiction over or responsibility for activities related to WIPP and shall join with the State, where appropriate, in seeking and recommending federal or Congressional resolution of the following State concerns related to the WIPP project:

(a) the question of state liability arising from accidents;

(b) funding for necessary road upgrading;

(c) funding and training for ongoing emergency preparedness and emergency response;

(d) monitoring of transportation of waste through the State;

(e) funding for, and assistance in, conducting baseline health studies of inhabitants in neighboring communities near the WIPP site and reasonable periodic monitoring thereafter;

(f) funding for, and assistance in, post-operation monitoring of the WIPP site.

In the event that the State of New Mexico is not satisfied by February 1, 1982 (or a mutually agreed upon date thereafter), that such concerns will be resolved prior to the completion of the SPDV phase of the WIPP project and any decision to authorize the commencement of permanent facility construction for the WIPP project, the State of New Mexico may raise those issues in any trial on the merits.

8. The SPDV phase of the WIPP project currently underway shall not exceed, before the decision as to whether the information obtained from the SPDV program and site and design validation tests warrants the commencement of construction of the full permanent WIPP repository, the excavation of approximately 115,000 tons of salt and four acres of excavated areas as set forth in the Department of Energy's TME 3063 document on SPDV published in October of 1980.

9. The defendants, Bureau of Land Management and Department of Interior, shall, in accordance with DOI withdrawal regulations, conduct public hearings on July 14 and 15 of this year on DOE's pending withdrawal application relating to the proposed public land site for the WIPP project. That application, notice of which was published in

45 Fed. Reg. 75768-69 (November 17, 1980) seeks to reserve the land for the exclusive use of DOE for the purpose of protecting the geological integrity of the site for the research and development of a WIPP project and performing SPDV.

10. This Stipulated Agreement does not affect the validity of the Record of Decision entered by the Department of Energy for the WIPP project on January 22, 1981, nor does it obligate DOE to undertake any additional steps in the NEPA process with respect to the WIPP project beyond that required by law. Notwithstanding such Record of Decision, the Department of Energy shall comply with all of the terms and conditions contained in the provisions of this Stipulated Agreement.

11. The Department of Energy shall cooperate with County Commissions of Lea and Eddy Counties to permit the Counties to provide optimum road access to the WIPP site from population centers of both counties.

12. The application of plaintiff, State of New Mexico, for preliminary injunction is withdrawn by the plaintiff without prejudice to any of the claims in its Complaint.

13. By entering into this Stipulated Agreement, defendants do not waive any defenses they may have to this action.

14. All proceedings in this action should be stayed until February 1, 1982, at which time the parties agree to report to the Court on the status of the case. Any such subsequent trial on the merits shall be limited to the issues of State concern addressed in paragraphs 4, 7, and 9 of this Stipulated Agreement.

Signature:

For the Plaintiff State of
New Mexico


JEFF BINGAMAN
Attorney General

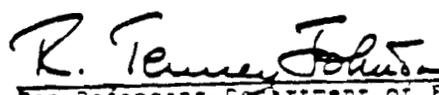
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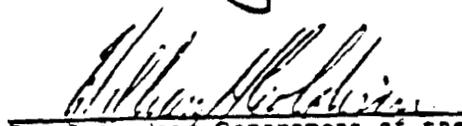
For the Defendants

R. Z. THOMPSON
United States Attorney


HYLES FLINT
U.S. Department of Justice
Washington, D.C. 20530
Attorney for Defendants

APPROVED:


For Defendant Department of Energy


For Defendant Department of the Interior

APPENDIX B

COMPREHENSIVE TOPICAL REPORTS TO BE MADE AVAILABLE TO ENVIRONMENTAL EVALUATION GROUP BEFORE THE DECISION TO CONSTRUCT THE PERMANENT REPOSITORY

1. Deep Dissolution: Including all available pertinent up-to-date data and arguments for and against the hypothesis of deep dissolution in the Delaware Basin and its potential effect on WIPP.
2. Disturbed Zone: Including all available pertinent up-to-date data and analyses of the nature, extent and potential significance to the repository.
3. Breccia Pipes: Including all available pertinent up-to-date data and analyses concerning the existence of breccia pipes in the basin and the reef, potential for future breccia pipe development, and their significance to WIPP.
4. DMG Hydrology: Including all available pertinent up-to-date data and analyses of the hydrologic characteristic, geochemistry, potential and rates for salt removal, and directions of flow and possible communication with other aquifers e.g., reef aquifer, San Andres Limestone aquifer and shallow equifers.
5. Regional Hydrology: Including all available pertinent up-to-date data and analyses of the recharge and discharge area, flow times and interconnections of aquifers near the site.
6. Natural Resources: Including detailed plans to control recovery of potash and hydrocarbons without disturbing the repository, and the evaluation of potential consequences of these plans.
7. Results of SPDV Site Validation Experiments: Including all pertinent results and analyses of experiments as listed in WIPP-TME-2975, pp. 15-16.
8. Plans for SPDV Design Validation: Updated, detailed plans and rationale for the proposed design validation experiments as outlined in TME-3058 and TME-3063

9. Results of SPDV Design Validation Experiments: Including all pertinent results and analyses of experiments as agreed by DOE and EEG. (Further results to be later provided per note below.

10. Plans for Simulated Wastes Experiments: Updated, detailed plans and rationale for the proposed experiments.

11. Results of Simulated Waste Experiments: Including all pertinent results and analyses of experiments as agreed by DOE and EEG.

NOTE: To be completed prior to the 45 day review period and prior to the decision to proceed as set forth in Paragraph 5 of the Order.

APPENDIX C

ADDITIONAL INVESTIGATIONS, THE RESULTS OF WHICH TO BE MADE AVAILABLE TO ENVIRONMENTAL EVALUATION GROUP BEFORE THE DECISION TO CONSTRUCT THE PERMANENT REPOSITORY

1. Test Brine Reservoir in Deformation Zone: Reopen ERDA-6 and allow it flow for at least 10 days to measure the depletion of pressure at regular intervals in this well, and if access can be obtained, in Pogo #1 feeder well. Perform other necessary tests to determine the size, age, origin, and possible association with aquifers or other brine pockets.
2. Report on Brine Reservoirs: Provide a comprehensive topical report of available information concerning brine reservoirs in evaporite beds found in the Delaware Basin including the results of tests on ERDA-6. This should include available information on the location, sizes, quantity, pressures, quality, ideas on origin and methods of handling in mines.
3. Horizontal Exploration of the Disturbed Zone: At the earliest possible stage of facility construction and before emplacement of any waste at the WIPP repository, provide for an additional 3000 feet of drift north of presently planned station #2, which is approximately 2500 feet North of ERDA #9, and drill 3000 feet horizontal cores to the north from this new location.
4. Fracture Flow in Rustler Aquifers: Evaluate the extent of fracture flow in the Rustler aquifers and provide a report on the effect of fracture flow on the resultant release pathways considered in the FEIS.
5. Study of Aquifer Characteristics: Using in-situ methods, assess quantitatively and qualitatively the lithology, porosity, permeability, bulk density and distribution coefficients of the Rustler aquifers.

AGREEMENT FOR
CONSULTATION AND
COOPERATION BETWEEN
DEPARTMENT OF ENERGY AND
THE STATE OF NEW MEXICO
ON THE WASTE ISOLATION
PILOT PLANT

Updated April 18, 1988

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[The text herein reflects the current text including all amendments to April 1, 1985. The text is that contained in the original 1981 version except where noted in **bold face type** and annotated to reflect the date of amendment.]

AGREEMENT FOR CONSULTATION AND COOPERATION

This Agreement is entered into effective as hereinafter provided by and between the State of New Mexico (hereinafter referred to as the "State") and the United States Department of Energy (hereinafter referred to as "DOE").

WHEREAS, DOE is proceeding with plans for the Waste Isolation Pilot Plant project (hereinafter referred to as "WIPP") in New Mexico, as more fully described below;

WHEREAS, the parties recognize: (1) the United States Government's responsibility for national security; (2) DOE's responsibility for environmental aspects in developing procedures, systems and facilities for safe disposal of radioactive wastes arising from past and future conduct of the Nation's defense programs; and (3) the State's responsibility for the welfare of its citizens including, but not limited to, public health and safety, environmental and socioeconomic aspects of the transportation, handling, storage and disposal of radioactive wastes in New Mexico;

WHEREAS, the Department of Energy National Security and Military Applications of Nuclear Energy Authorization Act of 1980, P. L. 96-164, attached as Appendix A, provides only with respect to WIPP that the Secretary of DOE shall enter into a written agreement with the appropriate State officials providing for consultation and cooperation with regard to the public health and safety aspects of the project;

WHEREAS, under P. L. 96-164 the State has the right to comment on and make recommendations with regard to the public health and safety aspects of WIPP;

WHEREAS, the Secretary shall receive, consider, resolve and act upon the comments and recommendations made by the State within time frames specified in Article IX of this Agreement; and

WHEREAS, the Agreement has been reached in accordance with P. L. 96-164.

NOW, THEREFORE, the parties agree as follows:

ARTICLE I - PURPOSE AND INTENT

A. This Agreement affirms the intent of the Secretary to consult and cooperate with the appropriate officials of the State with respect to the public health and safety concerns of the State, and to give consideration to such concerns and cooperate with such officials in

resolving such concerns consistent with P. L. 96-164. It also affirms the intent of the Governor of the State to express such concerns in a timely manner and to make all reasonable efforts to cooperate with DOE in resolving such concerns.

- B. It is recognized that WIPP was an ongoing project at the time the parties commenced their negotiations of this Agreement. In the event the WIPP mission as described in Article VI of this Agreement is substantially changed, whether by amendment to P. L. 96-164 or otherwise, the parties may mutually agree to no longer be bound by this Agreement or provisions of it and the parties shall not be bound to comply with certain provisions of the Agreement if such changes in the WIPP mission make a particular provision impossible to perform or enforce. Any such agreement shall be reflected in a modification to this Agreement.
- C. The purpose of this Agreement, in carrying out the intent expressed in Paragraph A of this Article, is to designate Key Events; set time frames for review, comment and resolution of comments; and establish procedures for review of WIPP and for resolving conflicts.

ARTICLE II - DEFINITIONS

For purposes of this Agreement:

- A. The term "State" means the sovereign State of New Mexico, as represented by the Governor of the State of New Mexico or his duly authorized representative;
- B. The term "DOE" means the United States Department of Energy as represented by the Secretary or his duly authorized representative;
- C. The term "Secretary" means the Secretary of the United States Department of Energy, or anyone serving in that capacity, or any duly authorized representative of the Secretary;
- D. The term "public health and safety" means the potential impact upon the citizens of New Mexico resulting from activity attendant to WIPP, and includes any environmental effects which can impact the health and safety of New Mexico citizens;
- E. The term "defense waste" means radioactive wastes resulting from defense activities and defense programs of the United States Government exempted from regulation by the United States Nuclear Regulatory Commission. The term excludes any radioactive waste generated by the commercial nuclear power industry;
- F. The term "transuranic waste" or "TRU waste" means defense waste, other than high level waste or spent reactor fuel, containing alpha emitting

transuranic elements (including Uranium-223), with radioactive half lives greater than one year, in excess of 10 nanocuries per gram of waste;

- G. The term "high level waste" means defense waste, in the form of the solidified product of the first-cycle solvent extraction or similar process by means of which uranium and plutonium are recovered from irradiated reactor fuel;
- H. The term "Key Event" means a significant activity in the development, design, construction, operation and decontamination and decommissioning of WIPP;
- I. The term "Milestone" means an action which shall be achieved prior to the commencement by DOE of a Key Event; however, it is recognized that there may be revisions to Milestone documentation after commencement of the Key Event involved; and
- J. The term "Working Agreement" means the document, incorporated herein by reference as Appendix B, which elaborates on the details of this Agreement and shall be further developed pursuant to this Agreement.

ARTICLE III - EFFECTIVE DATE

As required by P. L. 96-164, this Agreement shall become effective upon the elapse of forty-five days while Congress is in session unless the Committees on Armed Services of the Senate and House of Representatives, in writing, waive any portion of such forty-five days; the forty-five days to commence running upon submission of this Agreement as signed by the parties to the Committees. DOE shall advise the State in writing as to the date on which the foregoing requirement has been fulfilled and such date shall be deemed to be the effective date of this Agreement.

ARTICLE IV - POINTS OF CONTACT

- A. The Chairman, Radioactive Waste Consultation Task Force, State of New Mexico, or such other person as designated by the Governor, is the principal representative of the State for maintaining liaison with DOE and for the consultation and cooperation process.
- B. The Manager, Albuquerque Operations Office, DOE (Manager, ALO), or anyone serving in that capacity, is designated by the Secretary as the principal representative of DOE for maintaining liaison with the State and for the consultation and cooperation process.
- C. The principal representatives may designate appropriate individuals or groups to conduct day-to-day activities for them.

ARTICLE V - MODIFICATIONS

- A. The parties to this Agreement recognize that future developments, including but not limited to changes in applicable law, including but not necessarily limited to P. L. 96-164, may make it desirable or

necessary for one or both parties to seek to modify this Agreement. Either party to this Agreement may request a review of the terms and conditions contained herein upon written notice to the other party, setting forth the modification or modifications requested together with the reasons therefor. The other party agrees to consider the requested modification or modifications, to respond to the request in writing and to enter into negotiations in good faith within 30 days of receipt of the request.

- B. Pursuant to P. L. 96-164, the Secretary shall notify the Committees on Armed Services of the Senate and the House of Representatives of modifications to this Agreement.

ARTICLE VI - WIPP MISSION

- A. P. L. 96-164 authorized WIPP as a defense activity of DOE for the express purpose of providing a research and development facility to demonstrate the safe disposal of radioactive wastes resulting from defense activities and defense programs of the U. S. Government exempted from regulation by the United States Nuclear Regulatory Commission.
- 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, (2) consult with the State of New Mexico, including providing the State with a copy of the analyses for review and comment, and (3) provide to the State a period of forty-five (45) days to review and comment on such analyses prior to granting any such exceptions. 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 February 28, 1985.

WIPP is not designed for the permanent disposal of high-level waste, nor has the WIPP site itself been characterized for such permanent disposal.
[as amended, November 1984]

- 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.

[as amended, November 1984]

- D. The DOE will not permit subsurface mining, drilling, or resource exploration unrelated to the WIPP Project on the WIPP site during facility construction, operation, or after decommissioning. This prohibition also precludes slant drilling under the site from within or from outside the 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 Eddy County, New Mexico; Sections 16 and 32 belong to the State and the exchange of those lands between the U.S. Department of the Interior and the State is pending.

At the conclusion of the WIPP project the DOE shall dispose of any residual salt tailings extracted from the WIPP site in an environmentally acceptable manner, to be determined in consultation with the State of New Mexico.

The DOE has no present intent to reorient the underground storage area toward the northern half of Zone II, as that zone is described in the WIPP Safety Analysis Report. In the unlikely event that DOE develops plans to reorient the storage area toward the north, DOE agrees to provide all available information and analysis regarding those plans to the State for review and comment at least forty five days before making a decision to reorient the storage area. If the State, after consulting with DOE about the State's comments, believes its concerns are still unresolved, the State may request that the matter be considered under the conflict resolution procedures set forth in Article IX of this Agreement.

[as amended, August 1987]

- E. 1. 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. 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 compliance prevent or stop the State from seeking conflict resolution under Article IX, herein, to resolve disputes about such health and safety measures.
2. The Final Safety Analysis Report which will be issued by DOE prior to the receipt of waste will document DOE's ability to comply with the provisions of Subpart A of the Environmental Standards of the Environmental Protection Agency for the Management and Disposal of Spent Nuclear Fuel, High Level and Transuranic Wastes (40 CFR 191, Subpart A). Upon initial receipt of radioactive waste at the WIPP, and thereafter, the DOE will comply in all respects with the said Subpart A in effect at the time.

In addition, the DOE agrees to provide the State by February 1, 1988 with a Plan describing the steps which the DOE will undertake to demonstrate compliance with the assurance requirements contained in 40 CFR 191.14 of Subpart B of the EPA standards. This Plan will contain an estimated schedule and a description of the process DOE will use to: identify needed active institutional controls, gather data for the implementation of such controls, develop and implement a monitoring plan for the underground facility, define and implement a plan for passive institutional controls, determine the barriers to be used, assess the selection of the WIPP site in view of the resources at the site, and review the recoverability of the waste for a reasonable period after disposal.

Prior to receiving more than 15 percent by volume of the transuranic waste capacity of the Waste Isolation Pilot Plant, described as 6.2 million cubic feet of transuranic waste in the Waste Isolation Pilot Plant Record of Decision (46 Federal Register 9162, dated January 23, 1981), the Secretary of Energy shall demonstrate that the Waste Isolation Pilot Plant meets the applicable environmental standards for the disposal of radioactive waste established in Subpart B of such Environmental Protection Agency Standards (40 CFR 191, Subpart B), including the Assurance Requirements under such Subpart B, in effect at that time.

The parties are aware of the opinion issued by the United States Court of Appeals for the First Circuit in Natural Resources Defense Council, et al. v. United States Environmental Protection Agency, et al., Nos. 85-1915, 86-1096, 86-1097, and 86-1098 regarding the aforementioned 40 CFR 191 standards. While the standards are on remand to the EPA for reconsideration pursuant to the July 17, 1987 opinion in that case, DOE agrees to continue its performance assessment planning as though the provisions of 40 CFR 191 effective November 19, 1985 remain applicable.

3. DOE shall use both engineered and natural barriers to isolate the radioactive waste after disposal in compliance with the EPA Standards. The barriers shall include, as a minimum, properly designed backfill, plugs and seals in the drifts and at the entries to the panels, and plugs and seals in the shafts and drillholes.

4. The transportation of radioactive waste to WIPP shall comply with the applicable regulations of the U.S. Department of Transportation and any applicable corresponding regulations of the U.S. Nuclear Regulatory Commission. All waste shipped to WIPP will be shipped in packages which the Nuclear Regulatory Commission has certified for use.

[as amended, August 1987]

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 conflict 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 DO by any other federal laws or regulations including but not limited to the National Environmental Policy Act.

[as amended, November 1984]

ARTICLE VII - KEY EVENTS AND MILESTONES

- A. DOE shall consult and cooperate with the State as the project progresses through Key Events and Milestones identified in Paragraph C of this Article and in the Working Agreement. Such consultation and cooperation shall be on a regular, ongoing basis to facilitate an orderly process of State review and evaluation. It is recognized that neither the Key Events nor the Milestones so identified are necessarily sequential, particularly since some Key Events and Milestones may properly be carried on simultaneously under this Agreement.
- B. DOE shall give prior written notice to the State of its intention to commence Key Events identified in Paragraph C of this Article.
- 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.
- [as amended, November 1984]
- D. Other significant activities may from time to time be agreed upon as Key Events or one or more of the above Key Events may be deleted or revised pursuant to the provisions of Paragraph A of Article I of the Working Agreement.

ARTICLE VIII - CONSULTATION AND COOPERATION

- A. DOE shall keep the State currently and fully advised relative to WIPP in accordance with this Agreement and the requirements of the Working Agreement so that the State may make independent reviews on public health and safety concerns relative to WIPP.
- B. The data, reports and other material to be furnished the State in order to meet the foregoing requirement as to a particular Key Event shall be identified in the Working Agreement as work progresses toward achieving that Key Event. The types of data, reports and other material DOE shall furnish the State include, but are not limited to, draft and final

environmental impact assessments and statements; technical reports and program plans; administrative and technical progress reports; the safety analysis report and amendments; construction and engineering design documents; and legislative land withdrawal proposals.

- C. In order for the State to make the independent reviews on public health and safety under this Article, the State shall have the right to conduct reasonable independent monitoring and testing of on-site activities related to the WIPP project; provided, however, that such monitoring and testing shall not unreasonably interfere with on-site activities.
- D. It is recognized that as activities on WIPP are carried on, the Milestones involved in particular Key Events shall be identified with more precision.
- E. The parties have negotiated a Working Agreement, identifying for each of the early Key Events the appropriate Milestones, the documents DOE is to submit to the State, the timing for such submissions, the timing for the State to identify public health and safety concerns and the process to be followed to try to eliminate those concerns before there is recourse to the procedure set forth in Article IX of this agreement. From time to time the Working Agreement shall be changed and added to as therein provided by agreement of the parties in consonance with the intent of this Agreement.
- F. The Working Agreement, as agreed upon and changed and added to from time to time, shall be part of this Agreement as Appendix B. Revisions to the Working Agreement consistent with the provisions of this Agreement shall not be considered as modifications to this agreement for purposes of Paragraph B of Article V of this Agreement.
- G. It is understood by the parties that the State may disseminate to the public copies of all data, reports and other material furnished the State by DOE pursuant to the provisions of this Article or other requirements of this Agreement and may elicit comments and concerns from the public thereon for communication to the DOE.

[as amended, November 1984]

- 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.

[as amended, November 1984]

ARTICLE IX - CONFLICT RESOLUTION

- A. In the event that actions under Article VIII of this Agreement do not satisfy the State's concern or concerns as to the public health and safety (including the identification of Key Events and Milestones), the principal representative of the State and the Manager, ALO shall meet to discuss the matter in detail. Within 10 calendar days after conclusion of the discussion, the Manager, ALO shall advise the State in writing what DOE action, if any, is contemplated with respect to the State's particular concern or concerns. If the State is not satisfied by the written determination of the Manager, ALO, the Governor shall notify the Secretary in writing within 10 calendar days of receipt of such determination that the State intends to invoke the provisions of this Article and the reasons therefor. The Governor may not delegate his authority under this Paragraph. A copy of the notification shall be furnished the Manager, ALO.
- B. Within 30 days after notification under Paragraph A of this Article, the principal representative of the State and the Manager, ALO shall appoint one (1) mutually agreed upon recognized, independent expert in the particular field involved as the conflict resolution hearing officer. The conflict resolution hearing officer may employ as many experts in the particular field or fields involved and support staff as he shall determine are necessary to assist him in making a recommendation or recommendations on the matter or matters before him.
- C. Within 15 calendar days after the appointment of the conflict resolution hearing officer, the principal representative of the State and the Manager, ALO shall each submit to the hearing officer a written statement of their respective positions and the basis therefor. The hearing officer may hear oral presentations by the State and the Manager, ALO.
- D. Nothing in this Article shall preclude the State or the Manager, ALO from asking for and receiving from the hearing officer a reasonable extension of the time limit set forth in Paragraph C of this Article for good cause, such as recourse to the advice of outside experts in the particular field or fields involved.
- E. The conflict resolution hearing officer shall compile and maintain an accurate record of all written submissions and a transcript of any oral presentations made to him pursuant to Paragraph C of this Article.
- F. The conflict resolution hearing officer shall consider all written submissions and oral presentations in the record and transcript required by Paragraph E of this Article and shall make written recommendations on the matter or matters before him which shall refer to the specific facts in that record relied upon by him. The responsibility for making written recommendations under this Paragraph shall not be delegated by the conflict resolution hearing officer.

- . The conflict resolution hearing officer shall transmit his written recommendations along with a copy of the record and transcript to the Secretary, the principal representative of the State and the Manager, ALO within 30 calendar days following his receipt and consideration of all written submissions and oral presentations authorized by Paragraph C of this Article.
- H. Within 10 calendar days following receipt of the written recommendations of the conflict resolution hearing officer and the record and transcript, the Governor and the Manager, ALO may submit their own written comments and recommendations to the Secretary which shall be made a part of the record required by Paragraph E of this Article. An information copy of any such comments and recommendations by either party shall be transmitted to the other party.
- I. Within 25 calendar days following receipt of the written recommendations of the conflict resolution hearing officer and the record and transcript, the Secretary shall issue a written decision on the matter or matters before him which shall include the basis in the record for such decision and shall constitute final agency action on and resolution of the matter or matters under this Agreement. Issuing a decision under this Paragraph may not be delegated by the Secretary. Copies of the decision shall be transmitted to the Governor and the Manager, ALO.
- J. Upon notification to the Secretary under Paragraph A of this Article that the State intends to invoke this Article, DOE shall not commence any Key Event if the commencement of such Key Event is inconsistent with the concern or concerns of the State under consideration under this Article unless specifically authorized in writing by the Secretary or agreed to in writing by the Governor. In the event that the Secretary decides to authorize DOE to commence any Key Event pursuant to the provisions of this Paragraph, that written authorization shall include the basis for such decision and a copy of it shall be transmitted to the Governor at the same time that it is transmitted to the Manager, ALO. The Secretary may not delegate his authority under this Paragraph.
- K. The decision of the Secretary under Paragraph I of this Article shall be implemented by DOE.
- L. Nothing in this Article shall preclude the withdrawal, at the State's request, of a matter from further consideration under this Article.
- M. Nothing in this Article shall preclude the State from seeking written public input at the State level which shall be transmitted by the State to the conflict resolution hearing officer and shall be made part of the record required by Paragraph E of this Article; provided, however, that neither such solicitation of input nor the input itself shall delay the conflict resolution process beyond the time limitations set forth in this Article.

- N. Nothing in Article IX shall be construed to be a waiver by the State of New Mexico of judicial review of any final agency actions of the Secretary of DOE or of the Secretary's aforementioned written authorizations to commence Key Events.

ARTICLE X - DOE ASSISTANCE

The parties recognize that in order for the State to comment and make recommendations under this Agreement it must have adequate resources to carry out an independent review of WIPP. DOE shall continue to assist the State in obtaining the resources necessary for the State to undertake a meaningful independent review of the public health and safety aspects of WIPP.

ARTICLE XI - SCOPE OF AGREEMENT

- A. It is recognized that a number of State and U.S. Government agencies, in addition to the Task Force and DOE, have jurisdiction over various matters involving WIPP. This Agreement does not supersede, limit, modify, relinquish or waive the authorities, rights, jurisdictions or responsibilities of such agencies. The parties recognize that such authorities, rights, jurisdictions and responsibilities do not necessarily remove a matter from discussion.
- B. This Agreement is a binding enforceable agreement between the State of New Mexico and the Department of Energy. The provisions of this Agreement and the Working Agreement incorporated herein shall not be construed to limit, modify, relinquish or waive any right which the State, the U.S. Government or their citizens may have to seek administrative or judicial review of any action by the Secretary, DOE or the State on any matter relating to any activity conducted in connection with the WIPP project pursuant to any applicable regulation, law or constitutional provision of the State or the United States. Nothing in this Agreement shall confer or be deemed to confer any right to judicial review of any action by the Secretary except as otherwise provided by any applicable regulation, law or constitutional provisions of the State or the United States. The execution of this Agreement of itself does not constitute State approval of any specific past or future action or omission by the Federal Government with respect to the WIPP project.

[The original Agreement was signed by Governor Bruce King on behalf of the State of New Mexico on July 1, 1981, and by Secretary James B. Edwards on behalf of the United States Department of Energy on June 30, 1981. The First Modification to the Consultation and Cooperation Agreement was signed by Joseph Goldberg, Secretary of the Health and Environment Department and Chairman of the Radioactive Waste Task Force, on behalf of the State of New Mexico on November 27, 1984. It was signed by R. G. Romatowski, Manager, Albuquerque Operations Office, on behalf of the United States Department of Energy on November 30, 1984.]

APPENDIX A

PUBLIC LAW 96-164 (S.673); December 29, 1979

DEPARTMENT OF ENERGY NATIONAL SECURITY AND MILITARY APPLICATIONS OF
NUCLEAR ENERGY AUTHORIZATION ACT OF 1980

TITLE II - GENERAL PROVISIONS

WASTE ISOLATION PILOT PLANT, DELAWARE BASIN, NEW MEXICO

Sec. 213. (a) The Secretary of Energy shall proceed with the Waste Isolation Pilot Plant construction project authorized to be carried out in the Delaware Basin of southeast New Mexico (project 77-13-f) in accordance with the authorization for such project as modified by this section. Notwithstanding any other provision of law, the Waste Isolation Pilot Plant is authorized as a defense activity of the Department of Energy, administered by the Assistant Secretary of Energy for Defense Programs, for the express purpose of providing a research and development facility to demonstrate the safe disposal of radioactive wastes resulting from the defense activities and programs of the United States exempted from regulation by the Nuclear Regulatory Commission.

(b)(1) In carrying out such project, the Secretary shall consult and cooperate with the appropriate officials of the State of New Mexico, with respect to the public health and safety concerns of such State in regard to such project and shall, consistent with the purposes of subsection (a), give consideration to such concerns and cooperate with such officials in resolving such concerns. The consultation and cooperation required by this paragraph shall be carried out as provided in paragraph (2).

Consultation
and cooperation

(2) The Secretary shall seek to enter into a written agreement with the appropriate officials of the State of New Mexico, as provided by the laws of the State of New Mexico, not later than September 30, 1980, setting forth the procedures under which the consultation and cooperation required by paragraph (1) shall be carried out. Such procedures shall include as a minimum--

Written
agreement

(A) the right of the State of New Mexico to comment on, and make recommendations with regard to, the public health and safety aspects of such project

before the occurrence of certain key events identified in the agreement;

(B) procedures, including specific time frames, for the Secretary to receive, consider, resolve, and act upon comments and recommendations made by the State of New Mexico; and

(C) procedures for the Secretary and the appropriate officials of the State of New Mexico to periodically review, amend, or modify the agreement.

(3) As soon as practicable after the date on which the agreement referred to in paragraph (2) is entered into by the Secretary and the appropriate officials of the State of New Mexico, but not more than 15 days after such date, the Secretary shall transmit to the Committees on Armed Services of the Senate and the House of Representatives copies of such agreement, and a period of 45 days shall elapse while Congress is in session before such agreement becomes effective unless the Committees on Armed Services of the Senate and the House of Representatives, in writing, waive any portion of such 45-day period. The Secretary shall promptly notify such committees of any amendment or modification made to such agreement under paragraph (2)(C).

Submittal to
congressional
committees

(c) No law enacted after the date of the enactment of this Act shall be held, considered, or construed as amending, superseding, or otherwise modifying any provision of this section unless such law does so by specifically and explicitly amending, repealing, or superseding this section.

Approved December 29, 1979.

APPENDIX B

WORKING AGREEMENT FOR CONSULTATION AND COOPERATION

This Working Agreement for Consultation and Cooperation forms part of the Agreement for Consultation and Cooperation between the State of New Mexico (hereinafter referred to as the "State"), as represented by the Chairman, Radioactive Waste Consultation Task Force, and the United States Department of Energy (hereinafter referred to as "DOE"), as represented by the Manager, Albuquerque Operations Office (hereinafter referred to as the "Manager, ALO"), and is identified as Appendix B.

ARTICLE I - PURPOSE AND INTENT

- A. This Working Agreement is designed as a dynamic document which sets forth the working details of the consultation and cooperation process contemplated by the underlying Agreement for Consultation and Cooperation. The Manager, ALO and the State shall revise this Working Agreement from time to time as is agreed to be mutually desirable to facilitate and maximize the benefits of the intended process of consultation and cooperation. Any revision may be initiated at the written request of either party setting forth the revision or revisions requested together with the reason or reasons therefor. The other party shall consider the requested revision or revisions, shall respond to the request in writing and shall enter into negotiations in good faith within 30 days of receipt of the request.
- B. It is agreed that the process described in this Working Agreement for the Key Events and Milestones shall establish the general pattern to be followed in the consultation and cooperation process, subject to such improvements as are deemed desirable by the parties, for the additional Key Events and Milestones to be added to this Working Agreement.

ARTICLE II - GENERAL

- A. DOE shall give prior written notice to the State of its intention to commence Key Events identified in this Working Agreement.
- B. If the State has any concern or concerns as to public health and safety, the State shall use its best efforts to advise DOE on such concerns (sic) or concerns within the time frames specified in this Working Agreement; provided, however, that notwithstanding any time frames specified in this Working Agreement, the State may at any time advise DOE of its concern or concerns as to public health and safety. It is recognized, however, that the status of WIPP at the time the State raises a concern may in itself place a limit on DOE's ability to accommodate the concern.
- C. The State and DOE shall discuss the State comments with a view toward providing clarification and satisfying any concerns the State may have as to public health and safety. It is recognized that this shall be an ongoing process, with all reasonable efforts being made to resolve the matter by both parties at the lowest level of local authority.

- D. In the event that actions under Paragraph C of this Article do not satisfy the State's concern or concerns as to the public health and safety, the provisions of Article IX of the underlying Agreement shall be followed.
- E. The parties recognize that prior consultation cannot be carried out for those Key Events or Milestones that have already commenced or been completed, such as Title I design. However, the State may comment and make recommendations on Key Events and Milestones completed or underway.
- F. Where a State or Federal permit is a prerequisite to any action by DOE (e.g., access roads, site development or discharge of pollutants), that action shall not be carried out until the appropriate permit has been obtained.
- G. The data, reports and other material to be furnished to the State by DOE and to DOE by the State for each Key Event after commencement of that Key Event shall be as agreed to by the Manager ALO and the State. Each such agreement shall be reflected in a written modification to this Working Agreement.

ARTICLE III - SAFETY ANALYSIS REPORT

- A. The Safety Analysis Report (SAR), as amended from time to time, constitutes the most comprehensive document concerning WIPP both in general and specifically as related to public health and safety as well as other matters. The SAR is a dynamic document describing all aspects of the WIPP design and shall be amended by way of revision and additions throughout the entire WIPP project. The degree of detail provided in this Article aids in the negotiation of Article IV of this Working Agreement.
- B. DOE shall furnish to the State the various chapters of the SAR and amendments to the SAR in order to afford the State both the opportunity to review these chapters and amendments and the opportunity to express to DOE any public health and safety concerns the State may have. It is anticipated that the furnishing of this material, the State's review, the State's comments and recommendations and DOE's response shall be an ongoing process in accordance with the procedures identified in Paragraphs C and D of Article II of this Working Agreement. The State shall be represented by the Director of the State's Environmental Evaluation Group in matters relating to review of, and comments and recommendations on, the SAR and amendments and references thereto.
- C. The SAR shall contain the following material:

Chapter 1 - Introduction and General Description

This chapter provides an overview of WIPP and sets forth general information on specific features of WIPP. Included is information on:

1. Location;
2. Mission;
3. Organization;
4. Facilities - both surface and underground;
5. Operations - including retrieval; and
6. Research and Development programs.

Chapter 2 - Site Characteristics

Information is included in the following areas:

1. Geography and Demography - including details on location, site description, traffic patterns, population distribution, land and water uses and agriculture;
2. Nearby Industrial, Transportation and Military Facilities - including current as well as growth projections;
3. Meteorology - including regional climatology, local meteorology, measurement programs, diffusion estimates, paleoclimatology and climatic changes;
4. Surface Hydrology - including a hydrologic description, floods, dam failures, effluents and chemical/biological composition of adjacent water courses;
5. Subsurface Hydrology - including ground water systems, utilization and monitoring;
6. Regional Geology - including physiography, geomorphology, history, stratigraphy, lithology, tectonics and pleistocene climate of the site region;
7. Site Geology - including further details for the site similar to 6 above;
8. Vibratory Ground Motion - including seismicity, tectonic activity and potential for earthquakes;
9. Surface Faulting - including discussions of capable faults and results of investigations to date;
10. Stability of Subsurface Materials and Foundations - including materials properties, soil and rock characteristics, ground water, design criteria and instrumentation; and
11. Slope Stability - including boring logs.

Chapter 3 - Principal Design Criteria

Specifically addressed are criteria on:

1. Definition of mission - including waste characterization, repository functions, storage capacities, retrievability and by-products;
2. Structural and mechanical design - including wind, tornado, flood, backfill, missile, seismic, snow, thermal and soil erosion;
3. Safety protection criteria - including confinement, handling, emplacement, retrieval, fire, explosion, radiological, criticality and mine safety;

4. Design classification - including definition of design classes and severe natural events; and
5. Decommissioning - including decontamination, backfilling, sealing, record maintenance and site markers.

Chapter 4 - Plant Design

This chapter provides a detailed facility description. This chapter shall be more frequently updated than any other SAR chapter to reflect the ongoing design and construction processes. Included are details on:

1. Location details;
2. Surface facilities - including all buildings for waste handling and support functions;
3. Shafts and subsurface facilities - including shafts and storage and experimental areas;
4. Service and utility systems - including ventilation, electrical, fire protection, waste water, salt handling, radwaste, transportation, alarms, maintenance, compressed air and underground fuel;
5. Emplacement and Retrieval - including equipment for all waste forms; and
6. Underground excavation equipment - including miners, roof bolters, etc.

Chapter 5 - Process Description

This chapter describes the processes utilized in transporting, handling, emplacing and retrieving all waste forms. Processes discussed include:

1. Contact-handled (CH) waste handling;
2. Remote-handled (RH) waste handling;
3. Experimental handling;
4. Plant generated radwaste;
5. General processes - including instrumentation, criticality safety and waste logging;
6. Underground excavation - including methods of materials handling, ventilation and backfill;
7. Control room;
8. Analytical Sampling; and
9. Retrieval of all waste forms.

Chapter 6 - Radiation Protection

This chapter is provided to address DOE requirements and existing federal laws governing occupational exposures, as well as to provide information on normal operation dose consequences. Information provided includes:

1. As low as reasonably achievable (ALARA);
2. Radiation sources;
3. Radiation protection;
4. On-site dose assessment;
5. Radiological control program; and
6. Off-site dose assessment.

Chapter 7 - Accident Analysis

This chapter provides the evaluation of potential impact on public health and safety of operational accidents which could result in off-site radiological releases. Specifically included are:

1. Accident classifications;
2. Source terms and analytical methods; and
3. Accident descriptions and actual analyses.

Chapter 8 - Long Term Waste Isolation Assessment

This chapter covers the long term impact on public health and safety following decommissioning and site control termination. Included are:

1. Identification of potential communication modes;
2. Modeling methods; and
3. Consequence analyses.

Chapter 9 - Conduct of Operations

This chapter provides information on facility operations specifically including:

1. Organizational structure;
2. Acceptance tests;
3. Training;
4. Operating procedures;
5. Security; and
6. Emergencies.

Chapter 10 - Operating Limits and Controls

This chapter provides limits on operation based on preservation of the assumptions used in the design and safety analyses. Specifically covered are:

1. Design Limits - including heat generation rates, waste content and containers;
2. Operating limits and surveillance requirements - including limits on conveyances, loading, underground fuel storage and backfill;
3. Design features;
4. Administrative controls; and
5. Guidelines for the operating organization - including monitoring instrumentation, electrical power systems and facilities.

Chapter 11 - Quality Assurance

This chapter provides information on organizational and administrative programs during site investigation, design, construction and operation. Quality Assurance programs are presented for each of the primary contracting organizations as well as DOE.

ARTICLE IV - KEY EVENTS AND ASSOCIATED MILESTONES

Where a Key Event has already commenced or been completed, DOE shall, at the State's request, review with the State the information already furnished by DOE to the State and provide such supplementary information as may be agreed upon. It is recognized, however, that DOE's ability to respond to any particular State concern may be limited after the commencement or completion of a Key Event or Milestone.

A. DRAFT ENVIRONMENTAL EVALUATION (already commenced)

1. Issuance of Geological Characterization Report - GCR

This background document has been furnished to the State.

2. Issuance of Draft Environmental Impact Statement.

- (a) DOE has furnished this document to the State.
- (b) The State has reviewed and commented in accordance with NEPA.
- (c) DOE has acknowledged the State's comments after holding additional hearings at the State's request.

B. PRELIMINARY ENGINEERING - TITLE I (already commenced)

1. Conceptual Design and Design Criteria

The State has been furnished this documentation.

2. Title I Design Report

- (a) The State has been furnished the technical portions of the Title I design report.
- (b) DOE shall furnish any supplements to these portions when completed.

3. Issuance of Safety Analysis Report (SAR) for Title I Design

- (a) The State has been furnished the SAR in five volumes.
- (b) The State's review is in progress and shall be an ongoing process.
- (c) DOE is responding and shall continue to respond to the State's comments.

- (d) Consultation shall continue.
- (e) DOE-initiated changes to the SAR shall follow this same ongoing process.

C. FINAL ENVIRONMENTAL EVALUATION (already commenced)

- 1. DOE Applications for State and Federal Permits or Approvals
- 2. Issuance of Final Environmental Impact Statement (FEIS)

DOE shall furnish copies to the State at the time of approval by the Secretary.

[as amended, April 1983]

D. SITE AND PRELIMINARY DESIGN VALIDATION (SPDV) CONSTRUCTION (already commenced)

- 1. Institutional (For Informational Purposes)*
 - (a) FEIS and Record of Decision
 - (b) Any required BLM cooperative agreement on land use
 - (c) Any required right-of-way acquisition
 - (d) Any leases that are required
 - (e) All applications for State and Federal permits and clearances
 - (f) All approved State and Federal permits and clearances

2. SPDV Design

Any State comments as to public health and safety concerns shall be provided to the DOE WIPP Project Manager within 60 calendar days after receipt of documentation from DOE. DOE shall respond to the State comments within 30 calendar days after receipt of such comments. Nothing herein shall preclude further discussions of the matter or any updates prepared by DOE. **Reasonable time frames for State comments and DOE response to any DOE updates shall be as negotiated by the WIPP Project Office (WPO) and EEG.**

- (a) Design Criteria
- (b) SPDV experimental program summary (SAR amendment - see Article III, Paragraph C, Chapter 1, item 6)
- (c) Technical portions of the SPDV design (furnished as discrete construction contract packages)

[as amended, April 1983]

3. Notification (For Informational Purposes)

- (a) 30 calendar day notification prior to site mobilization of first SPDV construction contractor
- (b) Baseline SPDV schedule summary

***Wherever documents are indicated in this Working Agreement as being furnished "for informational purposes", the furnishing of the documents is intended to provide background information for other Milestones or Key Events. While the State need not furnish comments, the State may discuss such documents with DOE under this Working Agreement.**

E. DETAILED DESIGN - TITLE II (already commenced)
[as amended, April 1983]

1. Title I

(a) Title I design package

DOE has provided this documentation to the State. Any State comments as to public health and safety concerns shall be provided to the DOE WIPP Project Manager within * calendar days after receipt of documentation from DOE. DOE shall respond to the State comments within _____ calendar days after receipt of such comments. Nothing herein shall preclude further discussions of the matter or any updates prepared by DOE. **Reasonable time frames for State comments and DOE response to any DOE updates shall be negotiated by the WPO and EEG.**

[as amended April 1983]

(b) Title I design criteria

DOE has provided this document to the State. Any State comments as to public health and safety concerns shall be provided to the DOE WIPP Project Manager within _____ calendar days after receipt of documentation from DOE. DOE shall respond to the State comments within _____ calendar days after receipt of such comments. Nothing herein shall preclude further discussions of the matter or any updates prepared by DOE. **Reasonable time frames for State comments and DOE response to any DOE updates shall be negotiated by the WPO and EEG.**

[as amended, April 1983]

(c) Waste acceptance criteria

DOE has provided the Waste Acceptance Criteria document to the State. Any State comments as to public health and safety concerns shall be provided to the DOE WIPP Project Manager within _____ calendar days after receipt of documentation from DOE. DOE shall respond to the State comments with _____ calendar days after receipt of such comments. Nothing herein shall preclude further discussions of the matter or any updates prepared by DOE. **Reasonable time frames for State comments and DOE response to any DOE updates shall be negotiated by the WPO and EEG.**

[as amended, April 1983]

(d) SAR amendments

Reasonable time limits for State review and comment and the corresponding DOE response to the State shall be agreed upon between the EEG and the DOE WIPP Project Manager for each amendment.

[as amended, April 1983]

***Wherever in this Working Agreement time requirements are left blank, it is intended that such requirements be negotiated by the WPO and EEG.**

[as amended, April 1983]

2. Institutional (For Informational Purposes)

FEIS and Record of Decision (furnished for informational purposes under IV.D.1 above)

3. Notification (For Informational Purposes)

Project Progress Report (monthly)

[as amended, April 1983]

F. CONSTRUCTION OF EXHAUST AND WASTE SHAFTS (TWO SHAFTS)

The following Milestones are currently established for this Key Event. Additional Milestones shall be negotiated in the future, as appropriate. State comments will be provided within 30 days of receipt of the final document for review unless otherwise noted.

1. Title II

- (a) Technical portions of the Title II design packages consisting of CCP-1D, including final construction drawings and specifications for the Exhaust Shaft and Waste Shaft.
- (b) Technical Portions of the Title II design packages consisting of CCP-1Fb, including final construction drawings and specifications for underground development (experimental areas).
- (c) Title II Amendments to the SAR. These amendments will reflect the cost reduced design of WIPP and the underground orientation of WIPP.

2. Institutional (for Informational Purposes)

- (a) Federal Land withdrawal - full facility administrative land withdrawal.
- (b) Lease acquisition.
- (c) All applications and approvals for State and Federal permits and clearances.
 - (1) Air Quality Permit
 - (2) Water Quality Permit
 - (3) Approval to Install Septic Field(s)
 - (4) Archaeological Mitigation
 - (5) Rights-of-Way

3. Preliminary Geotechnical Suitability Determination

- (a) Basic data reports for Site Characterization
- (b) Dissolution of Evaporites in the Delaware Basin Report (SAND 82-0461)
- (c) DMG Hydrology Report (TME 3166)
- (d) Geohydrology of the Proposed WIPP Site - Los Medanos area,

Southeast New Mexico, USGS Water Resources Investigation #83-4016.

- (e) Exploration of Disturbed Zone (Data File Report on ERDA-6 and WIPP-12 testing)
 - (f) Basic Data Report--Borehole WIPP-12 Deepening (TME 3148)
 - (g) Site Deformation Report (SAND 82-1069)
 - (h) Brine Reservoirs Report (TME 3153)
 - (i) Breccia Pipe Report (USGS Open File 82-968)
 - (j) Fracture Flow in the Rustler Aquifers Report (SAND 82-1012)
 - (k) Hydrogeochemical Parameters of Fluid Bearing Zones in the Rustler and Bell Canyon Formations (SAND 83-0210)
 - (l) Natural Resources Study Report (TME 3156)
 - (m) Interim Policy Statement on Resource Recovery
4. Preliminary Transportation Evaluation
- (a) Radiological impacts under normal conditions
 - (b) Radiological impacts under accident conditions
5. Preliminary Experimental Program
- (a) In-Situ Testing Plan for WIPP (SAND 81-2628)
 - (b) Simulated Waste Experiments Planned for the Waste Isolation Pilot Plant (SAND 82-0547)
6. SPDV Site and Design Validation
- (a) Plans for SPDV Design Validation
 - (b) Plans for SPDV Site Validation (WIPP-DOE-116)
 - (c) Preliminary Design Validation Report, including field data
 - (d) Results of Site Validation Experiments, including field data (sic)
 - (e) Site Validation Summary Report containing a summation of the results of all experiments and studies conducted during the SPDV phase and site validation phase at least sixty (60 (sic) days prior to issuance of the Final Validation Declaration, i.e., the "Decision to Construct the Full WIPP Repository."
- (1) State and public shall have sixty (60) days in which to comment on the document.
 - (2) DOE shall review, consider and respond to any State or public comments before entering a final decision to construct the WIPP repository.
7. Cost Reduction Program Environmental Analysis (WIPP-DOE-136)
8. 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.

9. Notification

- (a) Final decision on permanent facility construction. At least 30 calendar days, DOE notification to the State prior to site mobilization of first construction contractor
- (b) Baseline master construction schedule
- (c) Site Operations Weekly Report
- (d) Project Progress Reports (monthly)
- (e) Interim Resource Recovery Plan (Complete)

[as amended, April 1983]

G. CONSTRUCTION OF WASTE HANDLING BUILDING

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. Title II

- (a) Technical portions of the CCP 14 design package
- (b) Title II amendments to the SAR

2. Notification (For Informational Purposes)

- (a) Project Progress Reports (monthly)
- (b) Baseline schedule summary

3. 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.

[as amended, April 1983]

H. UNDERGROUND DEVELOPMENT

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. Title II

- (a) Technical portions of the CCP 1E design package
- (b) Title II amendments to the SAR

2. Notification (For Informational Purposes)

- (a) Project Progress Reports (monthly)
- (b) Baseline schedule summary
- (c) Results of geologic mapping of the tunnels, the scope of which will be determined by WPO and EEG.

3. 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.

[as amended, April 1983]

I. CONSTRUCTION OF EXHAUST FILTER BUILDING

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. Title II

- (a) Technical Portions of the CCP 19 design package
- (b) Title II amendments to the SAR

2. Notification (For Informational Purposes)

- (a) Project Progress Reports (monthly)
- (b) Baseline schedule summary

3. 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.

[as amended, April 1983]

J. COMPUTER INSTALLATION FOR THE FACILITIES ALARM AND MONITORING SYSTEMS

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. Title II

- (a) Technical portions of the CCP 17 design package
- (b) Title II amendments to the SAR

2. Notification (For Informational Purposes)

- (a) Project Progress Reports (monthly)
- (b) Baseline schedule summary

3. State shall have the opportunity to consult with DOE and comment on all materials contained in the draft DOE Orders related to the health and safety considerations of the WIPP Project prior to promulgation of final Order(s) by DOE.

[as amended, April 1983]

K. OPERATIONS

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.

Any State comments as to public health and safety concerns shall be provided to the DOE WIPP Project Manager within _____ calendar days after receipt of documentation from DOE. DOE shall respond to the State comments within _____ calendar days after receipt of such comments. Nothing herein shall preclude further discussions of the matter or any updates prepared by DOE. Reasonable time frames for State comments and DOE response to any DOE updates shall be as negotiated by the principal representatives of the parties.

1. Final facility

- (a) Final facility amendments to the SAR
- (b) Operating and Monitoring Plan
- (c) Final site emergency response manual
- (d) Periodic reports on progress of excavation and geotechnical conditions encountered for mining performed prior to this Key Event.

2. Pre-Operational Testing

Pre-operational Test Reports

3. Final Transportation Evaluation

- (a) Department of Transportation certification(s) of shipping cask(s) (For Informational Purposes)
- (b) Safety Analysis Report(s) on Packaging (SARP)
- (c) Information on the mode of transport and routing as available

4. Final Experimental Program

- (a) High level waste experimental plan and schedule including the continuing SWE
- (b) WAC and Certification Requirements for high level experimental wastes*.

5. Waste Certification

- (a) TRU Waste Acceptance Criteria (WIPP-DOE-069)
- (b) TRU Waste Certification Requirements
- (c) Quality Assurance Requirements for Certification of TRU Waste (DOE-WIPP 120)

*All sites' plans for all waste forms need not be complete to permit WIPP to start operations. Those sites shipping waste to WIPP must have approved plans covering the waste form being shipped.

(d) Site Specific TRU Waste Certification Plans*. DOE shall provide to the State drafts of the WAC compliance procedures for each certifying facility and will consider State comments on these procedures before such procedures are finalized.

6. Acquisition of State Land

7. Legislative or Administrative Land Withdrawal (For Informational Purposes)

8. DOE shall provide the following investigation and reports to the State and allow for a 45 day review and comment period by State and general public. DOE shall consider and respond to such comments prior to the decision to transport any waste into the State for emplacement at the WIPP site:

(a) Results of Simulated Waste Experiments:

Including all pertinent results and analyses of experiments as agreed upon by WPO and EEG.

(b) Final results of design validation experiments and results of continuing site research and development studies, including all pertinent results and analyses of investigations and experiments as agreed upon by WPO and EEG.

9. Notification (For Informational Purposes)

(a) Seven calendar day notification prior to RH/CH TRU and high level waste retrievability demonstration

(b) Seven calendar day notification prior to expected start of operations (i.e., receipt of first waste)

(c) Project Progress Reports (monthly)

10. 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.

[as amended, April 1983]

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:

(a) retrieval equipment design specifications for each waste form;

(b) 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

- (c) report on the mock, onsite CH-TRU retrievability demonstration which documents the results of the demonstration of the applicable procedures and techniques;
- (d) report on the mock, onsite RH-TRU retrievability demonstration which documents the results of the demonstration of the applicable procedures and techniques;
- (e) 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 (c), (d), and (e) 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.

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 and Appendix III to this Working Agreement. 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 to this Working Agreement as needed in the future.

[as amended, March 1988]

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. Such information shall be incorporated herein as Appendix II to this Working Agreement.

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 to this Working Agreement 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 and forwarded to the State prior to the shipment of any radioactive waste to WIPP or January 1, 1988, whichever is earlier.

[as amended, March 1988]

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.

[as amended, November 1984]

L. RETRIEVABILITY DECISION FOR TRU WASTE

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. Facility Performance Evaluation
2. Status of Experimental Programs (especially borehole plugging)
3. Final Geotechnical Suitability Determination (update of preliminary determination incorporating any additional data acquired)
4. Final Retrieval Plan (if retrieval is required)
5. Legislative land withdrawal (if not previously obtained)
6. Notification of Decision to Retrieve or Not to Retrieve
7. 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.
8. Periodic reports on progress of excavation and geotechnical conditions encountered for mining performed prior to this Key Event.

[as amended, April 1983]

M. HIGH LEVEL WASTE RETRIEVAL AND SHIPPING

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. Decommissioning and Decontamination Plan for Experimental Facility Underground Area
2. Transportation Modes and Routes (as available)
3. 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.
4. Periodic reports on progress of excavation and geotechnical conditions encountered for mining performed prior to this Key Event.

[as amended, April 1983]

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.
- [as amended, November 1984]

ARTICLE V - INTERPRETATION AND IMPLEMENTATION

This Working Agreement shall be interpreted and implemented in a manner consistent with the underlying Agreement.

[The April 1983 amendments were made by Revision I to the Working Agreement signed by Robert P. McNeill, Chairman, Radioactive Waste Consultation Task Force, on behalf of the State of New Mexico on March 25, 1983, and by R. G. Romatowski, Manager, Albuquerque Operations Office, on behalf of the United States Department of Energy on April 8, 1983. The November 1984 amendments were made by the First Modification to the Consultation and Cooperation Agreement, previously described.]

[There are no Articles numbered VI thru XI.]

ARTICLE XII

The DOE agrees that the State of New Mexico may have one fixed air sampler at that point in the DOE's exhaust shaft air ventilation system referred to as Station A and one fixed air sampler at that point in DOE's system referred to as Station B. The parties understand that the State's fixed air sampler for Station A will extract a sample inside the exhaust shaft at approximately the same location below the surface as the DOE system. The location of Station B will be selected based on probe and duct studies and the ability to obtain a representative sample of the exhaust effluent.

The placement of the fixed air samplers and the design of the probe(s) to be used in the samplers will be decided upon after completion of the assessment being conducted by consultants from Texas A&M and the peer review panel formed by the DOE. Installation of the State's samplers shall take place in conjunction with installation of DOE's changes in its system.

The DOE and the State will exchange with each other both the gross results and the analytical results of samples taken by their respective sampling systems.
[as amended, March 1988]

APPENDIX I

to

WORKING AGREEMENT

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 tests at hydropads H-3 and H-4.

[as amended, March 1988]

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 I was added by the November 1984 Modification]

APPENDIX II

TO

WORKING AGREEMENT

Reports to be Issued by DOE on
the Additional Geotechnical Studies

Study 1a

1. Projected Title and Availability: "Technical Report for DOE-2" (3/86).

Description: This report will describe the drilling history, general stratigraphy, structural extent of the DOE-2 depression, and results of hydrologic testing of DOE-2. The hydrologic test data will be used to: 1) estimate the permeability of distinct zones within the Rustler, 2) determine if any appreciable permeability is present in the Salado or the Castile, 3) determine hydraulic properties of the upper portion of the Bell Canyon Formation (unless pressurized brine is encountered in the Castile). Drilling, coring, and core descriptions will be used to determine structural elevation of units and assess whether or not there is evidence of evaporite dissolution.

2. Projected Title and Availability: "Geologic Structures within the Salado and Castile Formations in Hole DOE-2" (5/86).

Description: The major objective of this report will be to describe the structures and, if possible, determine their origin. This will include an analysis of drilling, coring, and core description data to: 1) determine the structural extent the depression of the marker beds, 2) assess whether or not evaporite dissolution has occurred within the Salado and/or Castile Formations, and 3) describe any significant deformation features encountered within the Salado and/or Castile Formations.

Study 1b

Projected Title and Availability: "A Compilation of Hydrologic Data from the Salado and Castile Formations at the WIPP Project" (3/86).

Description: This report will compile hydrologic (Artesian head) data from the Salado and Castile Formations from holes drilled for the WIPP Project. This will include AEC-7, WIPP-12, Cabin Baby, and previously unpublished U.S.G. data. This report will also include data from DOE-2 (see Study 1a).

Study 2

1. Projected Title and Availability: "Hydrologic Data Reports" (6/85 - 6/87).

Description: This is a series of five reports that will present existing hydrologic data and to report future data in a timely manner. The first two reports will be used to publish the existing hydrologic data. Subsequent reports will present data as it becomes available. For the most part, these reports will contain "raw" data, without interpretation, but with sufficient annotation to allow an interpretation to be made. This will include data from hydrologic testing, tracer studies, and synoptic pressure surveys.

2. Projected Titles and Availability:

"Multi-Pad and Single-Pad Aquifer Tests of the Culebra Dolomite at Hydropad H-3" (6/86).

"Hydraulic Testing of the Culebra Dolomite at H-11" (8/86).

"Single-Well Hydraulic Testing of the Rustler Water-Bearing Zone" (3/87).

Description: As the hydrologic test data are analyzed and interpreted, a series of interpretative reports will be prepared. These reports will include complete annotated listing of the test data, descriptions of the tested wells and instrumentation, testing histories, full explanation and documentation of the analysis techniques employed, analysis and/or numerical modeling of results, and interpretation of results. Reports will be prepared for multi-well testing on individual pads and for the large-scale pumping test(s). Single-well testing will be described in a separate report.

Study 3

1. Projected Title and Availability: "Hydrologic Data Report" (6/85 - 6/87).

Description: The data from all tracer tests conducted to date will be reported in the first "Hydrologic Data Report." These data will be "raw," with no interpretation provided. Data from future tracer testing will be presented in the appropriate hydrologic data reports.

2. Projected Titles and Availability:

"Convergent-Flow Tracer Tests at Hydropad H-3" (1/87).

"Convergent-Flow Tracer Tests at Hydropad H-4" (10/86).

Description: These reports will include complete annotated listings of the test data, descriptions of the wells and instrumentation configurations, discussions of the chemical composition of the tracers used, testing histories, full documentation and explanation of the analysis technique employed, analysis and modeling of results, and interpretation of those results.

[as amended, March 1988]

Study 4

1. Projected Title and Availability: "Technical Report on Analysis of Water Samples from the Rustler Aquifers at the WIPP Site" (4/87).

Description: This report will discuss results of the groundwater sampling program with respect to refined site characterization. This will include a discussion of the development of sampling criteria, procedures, and analytical methods. Basic water quality data for each well will be presented along with a discussion of the evaluation, selection, and application of isotopic and other geochemical parameters.

2. Projected Title and Availability: "Hydrogeochemical Facies in the Rustler Formation at the WIPP" (1/88).

Description: This report will compare the solutes with host rock mineralogies at and between various well sites. This report will not apply an interpretative-origin model at each site, but will attempt to delineate hydrochemical facies in the Rustler Formation. An additional comparison of these facies with flow patterns derived solely from physical hydrology will be made for purposes of examining internal consistency.

Study 5

Projected Title and Availability: "A Regional Water Balance for the WIPP Site and Surrounding Area"; SAND84-2233 (3/85).

Description: This report contains discussions and compilations of available data concerning precipitation, evaporation,

water-table elevations, storage in lakes, irrigation, municipal use, potash refining, oil-field flooding, and dumping for the Pecos River drainage basin between Artesia and the Texas/New Mexico state line. This compilation includes detailed discussions of the sources of data, data uncertainties, and the ways in which the type of data contribute to the calculation of a water budget in the vicinity of the WIPP.

Study 6

Projected Title and Availability: "Groundwater Modeling Study of the Rustler Aquifers" (1/88).

Description: The modeling and interpretation in this report will deal with relatively "undisturbed" hydrologic conditions and will involve only transport of "naturally occurring" solutes. It will be an integral part of activities aimed at a refined site characterization of the WIPP site. The computer modeling will incorporate interpretations of Rustler stable-isotope and geochemical data.

Study 7

1. Projected Title and Availability: "Dissolution of Halite and Gypsum, and Hydration of Anhydrite to Gypsum, Rustler Formation, in the Vicinity of the Waste Isolation Pilot Plant, Southeastern New Mexico"; U.S. Geol. Survey Open - File Report (12/85).

Description: This report will present an interpretation of evaporite dissolution within the Rustler in the vicinity of the WIPP site based on correlation of geophysical logs. It will include a description of lateral variability and evaporite dissolution within the Rustler Formation, based on detailed correlation of a small number of geophysical logs from holes at and near the WIPP site.

2. Projected Title and Availability: "Facies Variability and/or Evaporite Dissolution Within the Rustler Formation in the Vicinity of the WIPP Site, Southeastern New Mexico" (7/87).

Description: This report will present the overall mineralogy and a detailed lateral correlation within the Rustler Formation in the vicinity of the WIPP. Included will be a detailed investigation of Rustler core from holes at and near the WIPP, as well as from at least one hole within Nash Draw. Emphasis will be placed on interpretation of sedimentation versus dissolution as the origin of lateral variability within the Rustler, especially relative to clay-rich zones often interpreted as dissolution residues. The work will include detailed lateral

correlations within the Rustler. The work will also include a general petrographic and mineralogical description of the Rustler Formation as a whole.

Study 8

Projected Title and Availability: "Evaluation of the TEM Method for Identification of Castile Brine Occurrences near the WIPP Site, Southeastern New Mexico" (3/86).

Description: This report will describe the trial field surveys using TEM. A comparison between CSAMT and TEM methods and results within the survey area will be included, as will a correlation of MT methods to drillhole data concerning Castile brine occurrences. On the basis of these geophysical field trials, DOE will consult with EEG to decide if a geophysical method shows significant promise to conduct a survey over the WIPP repository to identify and delineate possible occurrences of brine in the Castile Formation.

Study 9

Projected Title and Availability: "Assessment of Near-Surface Dissolution in the Vicinity of the Waste Isolation Pilot Plant"; SAND84-7178 (2/85).

Description: This report presents the results of a field study of the distribution of near-surface dissolution phenomena in the WIPP site and Nash Draw area. The structures possibly resulting from dissolution are considered in terms of their relationships with the Gatuna Formation and the Mescalero Caliche. The approximate age and magnitude of past dissolution events are documented. The report includes a description and discussion of the field investigation of possible alluvial dolines in the vicinity of the WIPP site.

Study 10

Projected Title and Availability: "Marker Bed 139: A Study of Drillcore from a Systematic Array" (2/85).

Description: This report describes the macroscopic internal structure and mineral composition of Marker Bed 139 based on core from five holes drilled specifically for this purpose. The undulatory upper surface is described and sedimentary versus deformational interpretations of its origin are discussed. Fractures in the central part of the unit, which may provide local reservoirs for brine and gas, are described, and their origin is discussed in the framework of the sedimentary and erosional history of the Delaware Basin.

APPENDIX III

TO

WORKING AGREEMENT

The DOE agrees to perform certain additional studies in lieu of the sorbing tracer test. These studies are described below along with the target dates for completion of each study. Unless otherwise noted, each study will result in a report containing the analyses and results of the study.

A. Hydrologic characterization of the Rustler Formation

1. Conduct a multi-well flow test centered at H-11, to evaluate the high-transmissivity zone in the Culebra in the SE part of the WIPP site. One additional well (H-17) has been located in this area on the basis of the preliminary hydrologic model and electromagnetic surveys, and will be incorporated in this test. After completion and interpretation of the H-11 test, consideration will be given to drilling of an additional hole, if needed, to provide direct field confirmation of the high-transmissivity zone.

Target dates: Begin H-11 multi-well test: 2/88

Complete H-11 multi-well test: 5/88

Complete reporting of a multi-well test: 12/88

2. Conduct a conservative-tracer test at the H-11 pad. This test may necessitate drilling of a fourth hole near the H-11 pad, but at a sufficient distance from the pad to examine whether or not dual-porosity transport effects indeed decrease in importance with

increasing transport distance. If possible, the tracer test will be conducted as part of the H-11 multi-well interference test.

Target Dates: Begin H-11 conservative-tracer test: 2/88

Complete H-11 conservative-tracer test: 4/88

Complete reporting of H-11 tracer test: 12/88

3. Conduct additional radiocarbon studies on Rustler groundwater.

The study will consist of two parts. At least 6 wells will be sampled to investigate further questions of contamination and system stability raised in SAND86-1054; completion of this study may require resampling of one or two wells known to be contaminated at the time of earlier sampling. In addition, several (approximately 10) new radiocarbon samples will be collected during sampling as part of the Water-Quality Sampling Program (WQSP), in the hope of obtaining direct evidence of groundwater residence times. Samples from the WQSP will be restricted to the near-WIPP environment (not including Nash Draw), and will include reasonable numbers of samples from both high- and low-transmissivity holes. Serious consideration will be given to conducting limited investigations of the metabolic pathways of modern vegetation at the WIPP, and to carbon analysis of both soil gas and soil carbonate, if evaluation indicates these studies would improve the confidence in modeling of WIPP release scenarios.

Target dates: Initiate additional radiocarbon sampling of Rustler fluids: This has already taken place, with 10/87 sampling of H-17.

Indicate additional radiocarbon analyses: 4/88

Complete reporting of additional radiocarbon analyses: 9/89

4. Complete the ongoing investigation of the areas and mechanisms of recharge to the water-bearing units of the Rustler. This ongoing study consists of an investigation of water levels in existing wells north and northwest of the WIPP site. Particular effort has been made to characterize the nature and extent of a possible groundwater divide between Clayton Basin and Nash Draw. The data and interpretations from this study will be provided to NM/EEG, either as technical memos or as a separate SAND report, and will be used in regional hydrologic modeling of the Rustler Formation.

Target dates: Decision concerning conversion of existing memo records into separate SAND report: 12/87

Complete of transfer of technical information to NM/EEG: 6/88

5. Geophysical surveys to delineate the lateral resistivity variability in the Rustler Formation. Disagreement between recent geophysical interpretations and field results from drilling and testing of hole H-17 indicate limitations in the reliability of geophysical studies to determine lateral variability within the Rustler Formation. However, a geophysical anomaly of unknown origin is present at H-17. If it can be determined from analysis that this anomaly is related to the Rustler Formation, a limited geophysical program will attempt to determine its origin. The merit of extending geophysical studies of Rustler variability beyond H-17 will be evaluated after interpretation of the H-11 multi-well experiment and decision concerning studies near H-17.

Target dates: Determination of validity of additional studies in area of hole H-17 to determine origin of geophysical anomaly: 12/87

Scheduling of additional work in vicinity of H-17, if appropriate: 12/87

As noted, any additional work, other than in the vicinity of H-17, would follow interpretation of the H-11 multipad interference test, approximately 10/88-12/88

6. Development of a generalized three-dimensional regional flow model extending from the ground surface to the Bell Canyon Formation. Care will be taken that, over the long term, geologic and modeling expertise and interpretations developed as part of WIPP site-characterization activities are included in such modeling.

Target dates: Completion of regional-scale three-dimensional hydrologic modeling as part of methodology-development report: 3/88

Initiation of numerical modeling of "altered" zone around WIPP shafts: 10/88

Completion of mechanistic three-dimensional numerical modeling in vicinity of WIPP shafts: 10/90

Completion regional-scale three-dimensional hydrologic modeling as part of final performance assessment: 12/91

7. Development of transport models for the Culebra, following a high-pressure (brine-reservoir) breach. The objectives of this work will be to estimate the significance of fracture flow in contaminant transport, and to determine the most important variables in regional transport in the event of a high-pressure breach. The approach will be analogous to that already completed in SAND87-7105.

Target dates: This work is ongoing.

Completion of reporting: 6/88

B. Laboratory Studies Related to Sorption

1. Evaluation of the solute-rock interactions relevant to transport within the Culebra, to estimate the effects of such variable as fluid composition, natural and introduced organics, mineral-surface reactions, and sulfide content on distribution behavior of radionuclides within the Culebra Dolomite.

Target dates: Initiate detailed mechanistic studies: 6/88

Initiate semi-empirical sorption/reaction studies:

8/88

Complete semi-empirical studies: 10/90

Complete detailed mechanistic studies: 10/91

2. Experiments designed to determine the matrix diffusivity and effective porosity of intact material from representative lithologies from the Culebra Dolomite.

Target dates: This work is ongoing.

Complete matrix-diffusion tests with conservative tracers: 8/88

Initiate additional studies of effective porosity: 8/88

Complete additional studies of effective porosity of Rustler samples: 10/90

3. Column or fracture-flow experiments on Culebra wafers, cores, and blocks, using both conservative and reactive tracers and organic and inorganic fluid compositions relevant to WIPP breach scenarios.

Target dates: Initiate detailed planning for block, wafer, and column studies: 10/87

Complete planning and experimental design for final block, wafer, and/or column studies: 12/88

Initiate first part of block, wafer, and/or column studies: 10/88

Complete block, wafer, and/or column studies: 10/91

DOE recognizes that radionuclide retardation within the Culebra remains to be proven experimentally and remains committed to demonstrate experimentally the actual range of Kd's to be expected for transport within the Culebra. It is unlikely that transport will involve a single set of Kd values, and performance assessment likely must consider a range of values for each element. DOE will select, after consultation with the State, a range of values to be conservative, but reasonable, based on the lowest reasonable values experimentally obtained. In the absence of experimentally justifiable values, Kd will equal zero, i.e., no credit for retardation will be taken in the performance assessment calculations.

C. Pressurized Brine-Occurrence Investigations

1. Completion of the interpretation of geophysical investigations into the extent of pressurized brine in the Castile Formation underlying the WIPP facility.

Target dates: The reporting of these studies is completed in draft.

Completion of final reporting: 12/87

D. This was inadvertently left out. Section D does not exist.

E. Assessment of the Effect of Shafts on Rustler Hydrology

1. Repeat of the H-3 multi-well interference test, if specific conditions arise. The test would be repeated after interpretation of the H-11 multi-well test and the regional response to sinking of the WIPP air-intake shaft, but only if: 1) such interpretation reveals

significant remaining uncertainties in Culebra transmissivity near the site center; 2) such interpretation relies on non-documented variations in leakage rates into the WIPP shafts; and 3) it is agreed between DOE and the State that another site is not preferable to H-3. The opinion of DOE is that, even if conditions 1 and 2 above were met, a test at ERDA-9 or H-1 would be best to examine Rustler properties at and near the site center, while a test at DOE-1 would be best to examine variability over the southwest portion of the site.

Target dates: Decision concerning need for additional multipad interference testing of the Culebra Dolomite in the SW quadrant of WIPP site (dependent on review of data from H-11 multipad test): 7/88

Decision concerning the need for additional multipad interference testing of the Culebra Dolomite at and near the center of WIPP site (dependent on review of data from H-11 multipad test): 1/89

2. Monitoring of the regional response in several wells around the WIPP air-intake shaft as this shaft is drilled.

Target dates: Monitoring instrumentation is largely in place; continuous monitoring of Rustler response to shaft sinking will begin prior to the time the shaft penetrates the top of the Rustler Formation.

3. Proper instrumentation of the WIPP air-intake shaft with piezometers, to continuously monitor hydrologic behavior and parameters around the shaft.

Target dates: Instrumentation and testing of the air-intake shaft will depend upon the schedule of shaft completion and access. The present schedule is for access and instrumentation to begin early in FY89.

[as amended, March 1988]

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW MEXICO

STATE OF NEW MEXICO, ex rel.,
JEFF BINGAMAN, Attorney General
of the State of New Mexico

Plaintiff,

No. 81-0363
JB

vs.

THE UNITED STATES DEPARTMENT
OF ENERGY, et al.,

Defendants.

SUPPLEMENTAL STIPULATED AGREEMENT
RESOLVING CERTAIN STATE OFF-SITE
CONCERNS OVER WIPP

SUPPLEMENTAL STIPULATED AGREEMENT RESOLVING CERTAIN
STATE OFF-SITE CONCERNS OVER WIPP

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW MEXICO

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STATE OF NEW MEXICO, ex rel.,
JEFF BINGAMAN, Attorney General
of the State of New Mexico

Plaintiff,

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THE UNITED STATES DEPARTMENT
OF ENERGY, et al.,

Defendants.

SUPPLEMENTAL STIPULATED AGREEMENT
RESOLVING CERTAIN STATE OFF-SITE
CONCERNS OVER WIPP

I. INTRODUCTION.

This Supplemental Stipulated Agreement is entered into by the United States Department of Energy and the State of New Mexico for the purpose of addressing the State of New Mexico's off-site concerns over the proposed construction and operation of the WIPP nuclear waste facility near Carlsbad, New Mexico. On July 1, 1981 the parties entered into a Stipulated Agreement under which D.O.E. committed to making a good faith effort to assist the State in resolving the State's off-site governmental concerns over WIPP through a State-Federal Task Force. The State of New Mexico and D.O.E. have completed their negotiations on the State's off-site concerns through this State-Federal Task Force and have entered into the following additional stipulations and agreements with respect to WIPP.

II. SCOPE OF AGREEMENT.

This Supplemental Stipulated Agreement addresses the State's off-site concerns over WIPP in the four major areas of:

- A. State liability;
- B. Emergency response preparedness;

- 1 C. Independent monitoring of WIPP by the State; and the
- 2 D. Upgrading and repair of state highways.

3 The following agreements seek to finally resolve the
4 State's off-site concerns although several aspects of certain
5 issues remain to be negotiated by the parties at later dates
6 according to the time schedules set forth in this Agreement. It
7 is recognized by the parties hereto that the agreements and
8 stipulations herein are contingent upon (1) a decision by D.O.E.
9 to proceed to construct and operate a permanent waste facility as
10 currently authorized by P.L. 96-164; and (2) Congressional funding
11 therefor. (It is also noted that D.O.E. must obtain further land
12 use authority pursuant to applicable law prior to actual
13 construction of the permanent waste facility). The D.O.E. has
14 advised the State that a decision will be made after the
15 completion of the SPDV construction and site validation phases in
16 1983 whether to construct and operate the permanent WIPP facility,
17 and this Agreement does not serve to prejudge that decision by
18 either party.

19 III. OFF-SITE STATE CONCERNS ADDRESSED AND RESOLVED.

20 A. STATE LIABILITY

21 1. Summary of the State of New Mexico's Concerns.

22 It is the State of New Mexico's concern that a nuclear
23 incident relating to WIPP may result in financial liability being
24 imposed on the State, and that the provisions of the federal
25 Price-Anderson Act may not, in all circumstances, adequately
26 indemnify the State and fully protect its citizens seeking
27 financial relief thereunder. The State has sought to have D.O.E.
28 issue a legal opinion of its General Counsel answering certain

1 questions raised by the State concerning the application of the
2 Price-Anderson Act to WIPP so as to confirm indemnification
3 coverage for the State thereunder, as well as to have D.O.E.
4 separately indemnify the State for any liability it might sustain
5 as a result of WIPP activities. The State also seeks certain
6 amendments to the Price-Anderson Act to increase the Act's
7 coverage and protection to the public in the event of a WIPP-
8 related nuclear incident in New Mexico.

9 2. Stipulations and Agreements for Resolving the State's
Concerns in the Area of State Liability.

10 Following discussions with representatives of the State
11 of New Mexico, the General Counsel of the Department of Energy has
12 prepared a memorandum entitled Opinion of the General Counsel on
13 the Application of the Price-Anderson Act to the Waste Isolation
14 Pilot Plant Project, addressing questions and concerns raised by
15 the State with respect to the coverage of the Price-Anderson Act
16 and the policy and intentions of the Department of Energy in
17 implementing the indemnity provisions of that Act in contracting
18 for the WIPP. A copy of that memorandum is being provided to the
19 State of New Mexico simultaneously with execution of this
20 Stipulated Agreement but is not made a part of this agreement.

21 In an effort to accommodate the concerns raised by the
22 State of New Mexico about its possible liability in the event of a
23 nuclear incident arising out of the WIPP, the Department of Energy
24 stipulates and agrees as follows:

25 a) Confirmation of Price-Anderson Act Coverage
26 for the State of New Mexico on WIPP.

27 (1) Application of the Price-Anderson Act to
28 WIPP.

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3 It is stipulated that:

4 (i) D.O.E. has the authority to extend
5 the Price-Anderson Act indemnity coverage to the operation of the
6 WIPP facility as authorized by P.L. 96-164 for the emplacement of
7 defense waste and to the related transportation of that waste
8 through New Mexico to and from the WIPP site.

9 (ii) The term "persons indemnified" as
10 used in the Price-Anderson Act and implementing indemnity
11 agreements prescribed for the operating contract for WIPP includes
12 the State of New Mexico and its political subdivisions and
13 municipalities.

14 (iii) The D.O.E.'s authority to cover
15 "persons indemnified" other than parties to the Price-Anderson
16 indemnity agreements applies to WIPP even though that facility, as
17 authorized by P.L. 96-164, is not now, nor is it expected to be,
18 licensed by the U.S. Nuclear Regulatory Commission.

19 (iv) That while the "waiver of
20 defenses" provision of Section 170 n of the Price-Anderson Act for
21 "extraordinary nuclear occurrences" would be inapplicable to a
22 nuclear incident at the WIPP site itself (because WIPP is not a
23 "production or utilization facility" or a "device"), the "waiver
24 of defenses" provision would be applicable in the event of an
25 "extraordinary nuclear occurrence" which would occur in the course
26 of the transportation of nuclear waste to the WIPP site from "a
27 production or utilization facility" because the wastes would be
"special nuclear material" or "by-product material."

(2) Agreement to Amend the WIPP Operating
Contract to Expressly Recognize Coverage
for the State of New Mexico.

1 The D.O.E. agrees and stipulates that D.O.E.
2 will amend and include in the existing WIPP Westinghouse Contract
3 and include in any new or modified contract for the operation of
4 WIPP upon completion of its construction, a specific mention in
5 the standard Price-Anderson Act Indemnity Article that the phrase
6 "persons indemnified" under the contracts includes the State of
7 New Mexico, its municipalities and political subdivisions by the
8 inclusion of the following clause:

9 The term "Persons Indemnified" has the meaning set
10 out in 42 U.S.C. Sec. 2014(t), and, without
11 limitation, includes the State of New Mexico, its
12 municipalities and political subdivisions.

13 b) Protection Against Loss of Price-Anderson Act
14 Coverage Because of D.O.E.'s Future
15 Discretionary Actions and Because of Other
16 Factors.

17 (1) Inclusion of Price-Anderson Act Indemnity
18 Clause in Contracts.

19 The parties recognize that Price-Anderson Act
20 indemnification coverage for the State is dependent upon D.O.E.'s
21 exercising its discretion to include such a clause in the WIPP
22 operating contract. The D.O.E. has already determined that the
23 WIPP operating contract involves "activities under the risk of
24 public liability for a substantial nuclear incident." In
25 accordance with this decision, a statutory indemnity article has
26 been included in the contract with the Westinghouse Electric
27 Corporation, the current technical support contractor for WIPP and
a potential operating contractor for the completed facility.
Pursuant to this decision, it is D.O.E.'s current intention also
to exercise its discretion in such a manner as to include a
statutory indemnity article in any WIPP operating contract. While
D.O.E. considers that a reversal of this decision is highly

1 unlikely, D.O.E. cannot stipulate away its discretion in this
2 regard. However, D.O.E. does agree and stipulate that the State
3 of New Mexico shall be given at least 60 days' prior written
4 notice of D.O.E.'s intent to reverse the current decision to
5 include a Price-Anderson Act Indemnity Article in its operating
6 contract for WIPP. Such notice shall also set forth the reasons
7 for the decision and shall provide the State of New Mexico an
8 opportunity to comment on such a decision to D.O.E. and have its
9 comments considered by D.O.E. before any such reversal of such
10 decision is given effect. This stipulation does not waive or
11 otherwise preclude the State from taking such other administrative
12 or judicial actions as it may see fit with respect to such
13 reversal decision by D.O.E.

14 (2) Delivery of All WIPP Contracts to the
15 State.

16 The D.O.E. agrees and stipulates that it will
17 deliver and file with the State of New Mexico copies of all
18 WIPP-related contracts, or portions thereof, which relate to the
19 Price-Anderson indemnification coverage for the State of New
20 Mexico and its citizens in order for the State to review them to
21 insure that such protections are being provided, including but not
22 limited to (1) the WIPP operating contract; (2) prime contracts
23 for the operation of any "production or utilization facilities" or
24 other facilities which may be the source or destination of any
25 nuclear waste transported to or from the WIPP site; and (3) any
26 contracts with the transporters of the waste to the WIPP site.

27 (3) Operation of WIPP or Transportation of
Waste to WIPP by Federal Agents.

1 It is D.O.E.'s current intention to use
2 contractor employees for the operation of WIPP and the
3 transportation of waste to or from the WIPP site should a decision
4 be made to construct and operate the facility as authorized in
5 P.L. 96-164. While D.O.E. recognizes that if it chooses to
6 operate WIPP, or transport the waste to or from WIPP by federal
7 agents, Price-Anderson indemnification for the State and financial
8 protection to the public hereunder would be lost, D.O.E. cannot
9 agree or stipulate that it would not so use such federal agents.
10 However, in the unlikely event that D.O.E. should reverse its
11 present decision to use contractor employees for the operation of
12 WIPP and the transportation of waste to or from WIPP, D.O.E. agrees
13 and stipulates that it will give the State of New Mexico at least
14 60 days' prior written notice of its intention to reverse its
15 present decision which notice shall include its reasons for
16 reversing such decision, and D.O.E. shall afford the State the
17 opportunity to comment on the reversal of its decision and have
18 its comments considered by D.O.E. before it is effectuated. This
19 stipulation does not waive or otherwise preclude the State from
20 taking such other administrative or judicial actions as it may see
21 fit with respect to such reversal of D.O.E.'s decision.

22 (4) Confirmation That the State's Own
23 Insurance Coverage Will Not Have to be
24 Exhausted Before the State can be
25 Indemnified From the Price-Anderson Act
26 Fund.

25 The D.O.E. agrees and stipulates that, in the
26 context of the WIPP project, the State of New Mexico's own
27 financial protection available through its own liability insurance
28 or legislative appropriations would not have to be exhausted or

1 applied to pay for its public liability before it would be
2 indemnified under the Price-Anderson Act.

3 (5) Confirmation That 500 Million Dollar
4 Price-Anderson Act Fund Would Not be
5 First Depleted by Investigation Costs
6 and Expenses of Litigation.

7 The D.O.E., agrees and stipulates that,
8 pursuant to its procurement regulations, the Price-Anderson
9 indemnity article included in WIPP-related contracts shall provide
10 that the 500 million dollar Price-Anderson Act fund would not be
11 first depleted by the costs of investigating or settling claims
12 and defending suits before claimants would be paid therefrom.

13 c) Agreement by D.O.E. to Pay the Costs of
14 Clean-up in Relation to WIPP Transportation
15 Accidents.

16 The wastes to be shipped to or from WIPP shall be
17 owned by D.O.E. and shall be shipped to WIPP by transportation
18 contractors engaged by D.O.E. or its contractors or in vehicles
19 owned by D.O.E.. In the unlikely event of a transportation
20 accident involving such shipments, whether or not such an accident
21 shall result in the exposure of any such wastes to the biosphere
22 within the State upon or adjacent to the transportation corridors
23 involved, D.O.E. shall cause, at its expense, the clean up and
24 removal of any such wastes and the decontamination of any areas
25 within the State which are exposed to radiation by such wastes to
26 a level as specified in D.O.E.'s WIPP Emergency Response Plan
27 which shall be consistent with nationally accepted radiation
protection standards and also subject to consultation with the
State as provided for herein.

The obligations of D.O.E. to the State described
above shall not be (1) contingent upon the release of radioactive

1 materials into the biosphere as a result of such an accident or;
2 (2) construed to relieve others, including common carriers of
3 responsibility for such accidents or; (3) withheld or denied by
4 reason of the contributory or comparative negligence of the State
5 of New Mexico, its municipalities or political subdivisions with
6 respect to such an accident in failing to properly repair, upgrade
7 or maintain New Mexico highways, bridges, railroad crossings or
8 other road intersections or for failing to properly provide
9 emergency response to such a transportation accident.

10 d) Increased Nuclear Accident Insurance Coverage
11 Under Price-Anderson Act During the
12 Transportation of High Level Nuclear Waste for
13 Experimental Purposes Through New Mexico to
14 and From the WIPP Site.

15 The parties recognize that the maximum protection
16 currently available under the Price-Anderson Act of 500 million
17 dollars may be increased up to 560 million dollars if D.O.E. were
18 to require its contractor to provide and maintain additional
19 nuclear liability insurance in the amount of 60 million dollars.
20 The parties acknowledge that the need for such additional
21 insurance, if at all, would be during the transportation of the
22 high level wastes for experimental purposes through the State of
23 New Mexico to and from the WIPP site, particularly when near
24 population centers.

25 The D.O.E. shall use its best efforts to obtain
26 such additional insurance so as to provide daily coverage during
27 the days in which such high level wastes are shipped within the
28 State of New Mexico, either to or from the WIPP site.

29 Should D.O.E. determine that it is impossible to
30 obtain such additional insurance, D.O.E. agrees and stipulates

1 that it will give the State of New Mexico written notice at least
2 60 days prior to the first shipment of such high level waste into
3 the State of its decision not to require such additional
4 insurance. Such notice shall communicate the reasons for such
5 decision and provide the State the opportunity to comment on the
6 decision and have its comments considered by D.O.E. prior to the
7 first such high level waste shipment. This stipulation does not
8 waive or otherwise preclude the State from taking such other
9 administrative or judicial actions as it may see fit with respect
10 to such decision.

11 e) Assistance to the State of New Mexico by D.O.E.
12 in Presenting the State's Recommendations to
13 Congress and the N.R.C. for Amending the
Price-Anderson Act to Increase Financial
Protection for the Public.

14 The parties recognize that, in 1975, the Congress
15 provided in the Price-Anderson Act that the Nuclear Regulatory
16 Commission must submit to Congress by August 1, 1983 a detailed
17 report concerning the need for continuation or modification of the
18 provisions of the Price-Anderson Act.

19 The D.O.E. agrees and stipulates that it will
20 assist the State in presenting the State's recommendations for
21 amending the Price-Anderson Act to increase public protection to
22 the Nuclear Regulatory Commission and to Congress under the
23 procedures set forth in the Price-Anderson Act which
24 recommendations include but are not limited to:

25 (1) Increasing substantially the amount of
26 protection from the present 500 Million Dollar level;

27 (2) Equalizing the maximum amount of coverage
28 through government indemnity for nuclear accidents occurring in

1 the course of D.O.E. contract operations such as WIPP with the
2 coverage available for nuclear incidents occurring for N.R.C.
3 licensed activities;

4 (3) Making the "waiver of defenses" provision
5 applicable in the event of a nuclear incident at the WIPP site
6 even though WIPP is not a "production or utilization facility" and
7 whether or not it is an "extraordinary nuclear occurrence;"

8 (4) Extending the 20-year limitation on the
9 "waiver of defenses" provision pertaining to statutes of
10 limitation and making similar "waiver of defenses" provision
11 applicable to the federal government's own liability under the
12 Federal Tort Claims Act in the event of a nuclear incident;

13 (5) Extending the definition of "nuclear
14 incident" to include situations where an accident occurs but the
15 threat and release of radiation never occurs so that evacuation
16 costs would be eligible for indemnity coverage;

17 (6) Extending the Price-Anderson Act coverage
18 to cover nuclear incidents occasioned by criminal acts of theft or
19 sabotage, whether the incident occurs at the contract site, in the
20 course of transportation or after a successful diversion of the
21 nuclear material.

22 The foregoing stipulation and agreement does
23 not require or imply D.O.E. concurrence in any State
24 recommendation for amendment of the Price-Anderson Act or any
25 other law.

26 **B. EMERGENCY RESPONSE PREPAREDNESS**

27 **1. Summary of the State of New Mexico's Concerns.**

28 It is the State of New Mexico's concern that the WIPP

1 project and the resulting transportation of nuclear waste through
2 New Mexico for disposal or experimental purposes at the WIPP site
3 will impose a serious financial burden on the State to provide an
4 emergency response capability and preparedness. Therefore, the
5 State has requested that D.O.E. and other federal agencies assist
6 the State in planning, coordinating and implementing a
7 comprehensive State Radiological Emergency Preparedness Plan. The
8 State is also concerned that the State will not have the necessary
9 radiation detection equipment and training which will enable the
10 State to independently monitor potential WIPP-related nuclear
11 emergencies and which will help the State make the key decisions
12 to request federal emergency response assistance, to declare an
13 emergency or to evacuate persons in the vicinity of an accident.
14 The State is further concerned whether the federal government can
15 and will respond and effectively deal with a WIPP-related
16 radiological incident in New Mexico, at the State's request, on a
17 timely and adequate basis.

18 2. Limitations Imposed Upon D.O.E. in Assisting the
19 State and Need for State to Reorganize for
20 Emergency Response Preparedness.

21 The parties acknowledge that the following agreement by
22 D.O.E. to assist the State must be read in the light of the
23 federal government's current administrative policy limiting
24 certain types of direct financial support to the States by federal
25 agencies for the sole purpose of developing an emergency response
26 capability within the State.

27 The parties also acknowledge that it is imperative that
28 D.O.E. and the State each develop an effectual emergency response
plan related to WIPP so as to assure an appropriate professional

1 response to any emergency related to WIPP. It is also recognized
2 that the State's plan will encompass matters unrelated to WIPP and
3 will involve federal departments and agencies other than D.O.E.

4 Finally, the State has acknowledged that it is
5 incumbent upon it to reorganize certain of its operations in order
6 to provide a cohesive emergency response mechanism within the
7 State and to meet certain minimum qualifications for assistance
8 through programs administered by other federal agencies. In every
9 instance in which support and assistance by D.O.E. is described
10 below, the parties agree that the State will make a good-faith
11 effort to take all reasonable legislative and administrative
12 actions required to qualify the State for other federal assistance
13 before seeking the assistance of D.O.E. It is the intent of the
14 parties that D.O.E. shall use its offices to assist the State in
15 dealing with such agencies so as to assure that available federal
16 programs are utilized by the State to the maximum extent
17 practicable.

18 3. Stipulations and Agreements for Resolving the
19 State's Concerns in the Area of Emergency Response
Preparedness.

20 a) Federal Commitment to Respond to and
21 Effectively Deal With a WIPP-Related
Radiological Emergency in New Mexico.

22 The D.O.E. agrees and stipulates that in the event
23 of any WIPP-related radiological accident or emergency occurring
24 either on or off the WIPP site in the State of New Mexico, the
25 D.O.E. will provide, in response to a State request for assistance
26 in carrying out the State's emergency response responsibilities,
27 all appropriate and reasonably available federal emergency
28 response resources within D.O.E. control at the earliest possible

1 time and will continue to provide those resources until all
2 significant radiological risks have been eliminated and damages
3 mitigated to the maximum extent practicable.

4 b) Agreement to Provide Updated Resource Data of
5 the Federal Emergency Response Capability.

6 The D.O.E. agrees and stipulates that it will
7 provide to the State on a timely, periodic and updated basis, and
8 at least annually, a status report containing detailed information
9 on the available federal radiological response resources so that
10 the State can evaluate the capabilities of D.O.E. and other
11 federal agencies so as to assure itself that an adequate and
12 timely federal response can be provided to the State in response
13 to its request for federal assistance in dealing with a
14 radiological accident or emergency related to WIPP.

15 c) Agreement to Coordinate the D.O.E. Emergency
16 Response Program for On-site WIPP Operations
With the State's Emergency Response Program.

17 The D.O.E. agrees and stipulates that it will
18 coordinate its WIPP Emergency Preparedness Plan for the on-site
19 operation of WIPP, including, where applicable, other federal
20 emergency response programs and resource agencies available to
21 D.O.E., with the State of New Mexico's off-site Radiological
22 Emergency Response Program and Plan by, among other things,
23 (i) allowing the State to review and comment upon D.O.E.'s WIPP
24 Emergency Response Plan and by considering any such State
25 comments; (ii) providing access for the State's Emergency Response
26 Program Representative to all relevant WIPP emergency response
27 data and related information; and (iii) by participating in
28

1 appropriate joint training exercises with the State and local
2 emergency responders on a reasonably periodic basis.

3 d) Agreement to Assist the State in Developing and
4 Implementing a State Radiological Emergency
5 Response Program.

6 (1) Acknowledgements.

7 The State and D.O.E. acknowledge that although
8 no nuclear waste material for WIPP is presently scheduled to be
9 transported through the State for WIPP before approximately 1989,
10 other federal and nonfederal nuclear materials as well as certain
11 types of dangerous chemical substances are already being
12 transported through New Mexico which require the State to further
13 develop a State Emergency Response Program at the present time.

14 The State and D.O.E. further acknowledge that
15 other federal agencies and programs currently have a congressional
16 mandate and funding to assist the State in the area of emergency
17 response preparedness and that the State should make a good-faith
18 attempt to utilize these federal agencies and their resources to
19 the extent practicable during the next five (5) years to assist
20 the State in meeting its emergency response preparedness needs
21 before the State should request D.O.E. to directly provide
22 financial assistance in assisting the State in meeting those needs

23 (2) Agreement to Provide Technical Assistance.

24 The D.O.E. agrees and stipulates that it will
25 provide advisory and technical assistance to the State for its
26 emergency response preparedness by, among other things, helping in
27 the development and review of the State and local emergency
28 response plans and programs, and by providing available training
and educational materials and equipment to the State and local

1 officials and emergency responders as well as providing
2 appropriate information to the public.

3 In furtherance of this agreement to provide
4 technical assistance to the State of New Mexico in the area of
5 emergency response preparedness, the parties note that certain
6 information, data and a model state radiological emergency
7 response plan are currently being developed through D.O.E. funding
8 of the Sandia Laboratories' "Task Force on Transportation
9 Accidents Program." This study is utilizing the State of New
10 Mexico for a study model. Information, data and any model plan
11 derived from this effort will be furnished to the State of New
12 Mexico.

13 (3) Agreement to Assist the State in Obtaining
14 Technical Assistance and Emergency
15 Response Funding and Equipment Through
16 Other Federal Agencies.

17 The D.O.E. agrees and stipulates that it will
18 assist the State in obtaining the State's requested technical
19 assistance, funding and equipment in the area of emergency
20 response preparedness directly or indirectly through the other
21 federal agencies with congressional mandates to assist the State
22 in this area, including but not limited to the Department of
23 Transportation (D.O.T.) and the Federal Emergency Management
24 Agency (F.E.M.A.) under the "Emergency Management Assistance
25 Program Act" and the Disaster Assistance Program and Radiological
26 Defense Officers Program under the "1974 Disaster Relief Act."

27 (4) Agreement by D.O.E. Regarding Direct
28 Financial Assistance or "In-Kind"
29 Assistance to the State if the State's
30 Emergency Response Preparedness Requests
31 are not Satisfied by Other Federal

1 In the course of discussions of State concerns
 2 under the Stipulated Agreement, the State submitted to D.O.E. the
 3 following "best estimate" of needed direct financial or "in-kind"
 4 assistance in carrying out the State's radiological emergency
 5 response preparedness function:

6 State of New Mexico's Emergency
 7 Response Requests

Funding Requests
 (1982 Dollars)

| | <u>First Year</u> | <u>30 Years</u> |
|--|-------------------|--------------------|
| 1. Plans, Training, Education, Program Development and Coordination, including 1/2 full-time Planner and 1/2 full-time Health Physicist: | \$ 25,500 | \$ 765,000 |
| 2. Instructor Training (four courses, two each first and second years only): | 10,625 | 21,250 |
| 3. Test, Exercises and Evacuations (two activities per year): | 8,500 | 255,000 |
| 4. Radiation Detection and Monitoring Equipment Acquisitions: | * | * |
| a. Annual Maintenance; | * | * |
| b. Replacement after 15 years; | | * |
| 5. Public Information and Education: | 21,250 | 42,500 |
| GRAND TOTAL | <u>\$65,875</u> | <u>\$1,083,750</u> |

21 * Costs included under those itemized under Radiation Monitoring,
 22 infra.

1 In the event that other federal agencies do not
2 adequately fulfill, either directly or indirectly, the needs
3 reflected in the above request for financial or "in kind"
4 assistance, D.O.E. will provide federal funding to satisfy any
5 outstanding balance of the State's request then existing no later
6 than one (1) year prior to any radiological waste being brought
7 into the State for emplacement at the WIPP site.

8 C. TRANSPORTATION MONITORING OF WIPP WASTE.

9 1. Summary of the State of New Mexico's Concerns.

10 It is the State of New Mexico's concern in the area of
11 transportation monitoring that the State must exercise an
12 independent role in monitoring the transportation of nuclear waste
13 through the State to and from the WIPP facility in order to insure
14 that such transportation is done safely without danger to the
15 citizens and the environment of New Mexico. To meaningfully carry
16 out such a role, which the State considers essential for public
17 confidence in the project because there is no other federal agency
18 empowered to independently monitor such activities other than
19 D.O.E. itself, the State seeks financial assistance from D.O.E. to
20 pay for an additional State environmental scientist and radiation
21 detection equipment to conduct the transportation monitoring
22 duties. In addition, the State seeks from D.O.E. certain
23 commitments to insure that the State may effectively implement its
24 transportation monitoring activities regarding when, where and how
25 the waste, waste containers, trucks and drivers may be inspected
26 and monitored by State officials.

27 2. Stipulations and Agreements for Resolving the
28 State's Concerns in the Area of Transportation
Monitoring.

1 a) Agreement to Allow Independent Transportation
2 Monitoring by State of New Mexico.

3 The D.O.E. agrees and recognizes that the State of
4 New Mexico may, except as may be prohibited by federal laws and
5 regulations applicable at the time, independently monitor the
6 transportation of nuclear waste to and from the WIPP site within
7 the State of New Mexico.

8 b) Agreement to Allow State Review of
9 Transportation Records.

10 The D.O.E. agrees and stipulates that the State of
11 New Mexico may have access to and review pertinent shipping
12 records, and records and documents kept by D.O.E., relating to the
13 type, source, curie content and nature of the waste being shipped
14 to or from the WIPP site to insure compliance by the carriers with
15 D.O.T. or D.O.E. standards for shipping nuclear waste.

16 c) Agreement to Allow State Health Scientist
17 Access to WIPP Site to Conduct Monitoring.

18 The D.O.E. agrees and stipulates that the State of
19 New Mexico may have a health scientist present at the WIPP site to
20 conduct transportation monitoring and may conduct announced or
21 unannounced inspections of vehicles, drivers, containers and
22 records relating to the transportation of radioactive waste to or
23 from the WIPP site.

24 All such monitoring and inspection will be
25 conducted pursuant to procedures to be agreed upon by D.O.E. and
26 the State, which procedures will be designed to assure that
27 neither undue interference, delay nor expense to WIPP operations
28 or compromise of operational safety will result.

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d) Agreement to Allow Point of Entry Inspections

The D.O.E. agrees and stipulates that the State of New Mexico may, except as may be prohibited by federal laws and regulations applicable at the time, conduct off-site transportation inspections and monitoring of vehicles carrying nuclear waste to or from the WIPP site at the point of entry into or exit from New Mexico or at other off-site locations in New Mexico as to possible radiation leaks, the condition of the drivers and the condition of the trucks and containers, so long as such monitoring and inspection do not unreasonably interfere with the transportation of the waste to the site and so long as such inspections do not involve the breaking of any seals on the trucks or the opening of any canisters or other shipping containers.

e) Agreement to Allow Point of Origin Monitoring

The D.O.E. agrees and stipulates that the State of New Mexico through its health scientist representative may go to the point of origin of the nuclear waste shipments to monitor the packaged waste and the condition of the trucks to be used and containers in which the waste is to be transported to New Mexico for emplacement at WIPP, particularly with respect to those shipments involving experimental high level waste.

All such monitoring shall be conducted pursuant to procedures to be agreed upon by D.O.E. and the State, which procedures shall be consistent with all security and operational safety procedures applicable at the facility where waste shipments originate and will be designed to assure that no undue

1 interference, delay or expense shall be caused with respect to
2 operations at the point of origin or related to the movement of
3 any shipment.

4 f) Agreement on Use of Highway Transportation
5 Routes for Shipment of Radioactive Waste to
6 WIPP.

7 The D.O.E. has previously published a map depicting
8 typical highway routes to be utilized in the transportation of
9 waste to and from WIPP within the State of New Mexico. Such
10 routes are included in Appendix B hereto.

11 The parties acknowledge that the use of such routes
12 is a reasonable expectation because they are the most direct
13 primary routes available in view of the presently anticipated
14 points of origin of radioactive waste to be emplaced in WIPP. The
15 present intention to use such routes is the basis for the
16 agreement of the parties regarding funding for upgrading of
17 certain highways as set forth herein at Page 30. Accordingly,
18 should future circumstances require the use by DOE of additional
19 highway routes for the shipment of radioactive waste to or from
20 WIPP, the DOE shall first consult and agree in writing with the
21 State of New Mexico regarding the suitability (including safety)
22 of such additional routes.

23 The parties anticipate that the State may be
24 granted a role in the designation of such routes under regulations
25 to be established by the U.S. Department of Transportation. The
26 State agrees that if it shall exercise its rights under these
27 regulations, it shall, at a minimum, designate the routes
28 identified in Appendix B and such additional routes as the parties
29 may formally agree to as set forth above.

1 g) Agreement for Consultation on Shipment of WIPP
2 Radioactive Waste by Railroad.

3 The D.O.E. agrees to consult and cooperate with the
4 State of New Mexico in accordance with the Consultation and
5 Cooperation Agreement on shipment of radioactive waste by railroad
6 to or from the WIPP site. Such consultation will allow the State
7 the opportunity to submit written comments and recommendations as
8 to such rail shipments and to have the State's comments considered
9 by D.O.E. before shipping such wastes by rail.

10 The D.O.E. recognizes that the State of New Mexico
11 may choose to participate in the State Rail Safety Participation
12 Program funded through the Federal Railroad Administration and
13 authorized by federal statute which would allow the State to
14 designate a State Railroad Inspector who would join with federal
15 railroad inspectors in inspecting and insuring the ~~track safety~~
16 the rail lines in New Mexico utilized to ship the WIPP waste to
17 and from WIPP and to have access to federally generated data on
18 the status of the railroad lines in New Mexico. The D.O.E.
19 further recognizes that any State comments regarding the safety of
20 a particular rail line utilized to transport waste to or from the
21 WIPP site may be based upon the results of inspections conducted
22 by the State's Railroad Inspector.

23 h) Agreement to Provide Prior Notification to the
24 State of Nuclear Waste Shipments to the WIPP
25 Site.

26 The D.O.E. agrees and stipulates that it will give
27 to the State of New Mexico detailed and timely prior notification
28 of high level nuclear waste shipments and such other notification
regarding other nuclear waste shipments as the parties may agree

1 to from time to time. The purpose of such notifications shall be
2 to permit the performance of emergency response functions
3 hereunder. The information contained in such notifications shall
4 be treated as administratively confidential information to
5 preclude the inappropriate use thereof by others. Specific
6 procedures and requirements for such notifications shall be
7 negotiated and agreed to by the parties no later than one (1) year
8 prior to the first waste shipment to the WIPP site.

9 i) Agreement to Pay for Equipment and Personnel
10 For Conducting Transportation Monitoring.

11 The D.O.E. stipulates and agrees to provide
12 financial assistance to the State of New Mexico to pay for one
13 full-time State environmental scientist and the necessary
14 radiation detection and monitoring equipment in order for the
15 State to independently conduct transportation monitoring on and
16 off the WIPP site. Such independent monitoring capability is to
17 be established prior to the emplacement of any waste at WIPP as
18 more fully explained and itemized in the "Surveillance Program for
19 WIPP" in Appendix A hereto and shall continue throughout the time
20 period that the WIPP project remains in operation.

21 D. WIPP OPERATIONS ENVIRONMENTAL MONITORING BY THE STATE
22 OF NEW MEXICO.

23 1. Summary of the State of New Mexico's Concerns and
24 Summary of D.O.E. Responses.

25 The State of New Mexico has expressed its concern in
26 the area of WIPP operations monitoring that the absence of N.R.C.
27 licensing for the project or any other independent monitoring of
28 WIPP makes it incumbent on the State to independently monitor the
29 environmental aspects of the operations of WIPP both on and off

1 the WIPP site. To meaningfully exercise this right, the State
2 seeks assistance from D.O.E. in developing and implementing a
3 State Monitoring Plan as well as financial assistance from D.O.E.
4 to pay for a state environmental scientist, certain environmental
5 monitoring equipment and funding to carry out the State's
6 environmental monitoring program for WIPP. The State also
7 requests funding to continue an independent State review
8 capability to independently analyze the D.O.E.'s WIPP operations
9 data and the results of the State's environmental monitoring
10 program. Additionally, the State is concerned that as part of th
11 State's monitoring responsibility, there should be established an
12 agreed-upon plan and procedure for conducting short-term and
13 long-term health studies which would be implemented at the federa
14 government's expense if, in the opinion of the State, a
15 significant level of radioactive material has been released into
16 the biosphere in connection with a WIPP-related activity.

17 The D.O.E. maintains that the absence of N.R.C.
18 licensing does not preclude independent methods for verification
19 of D.O.E.'s program for the environmental monitoring of WIPP. It
20 is recognized that any acceptable environmental monitoring progra
21 should include such independent verification of results. However
22 D.O.E. is unwilling to fund such verification services on a
23 commercial basis and to concurrently fund the State for the same
24 or similar services. Therefore, the D.O.E. has requested that th
25 State perform this verification service on an independent basis
26 and is willing to provide financial assistance to the State to
27 obtain this service.
28

1 The State agrees to provide such independent
2 environmental monitoring verification services to D.O.E. The
3 parties agree that such verification services by the State could
4 result in the best available assurance to the citizens of New
5 Mexico as to the adequacy of the environmental monitoring program
6 for WIPP.

7 2. Stipulations and Agreements for Resolving the
8 State's Concerns in the Area of WIPP Operations
9 Monitoring and to Furnish Independent Verification
10 to D.O.E. of its Environmental Monitoring Program.

11 a) Overview of WIPP Environmental Monitoring
12 Program.

13 The parties acknowledge that the WIPP environmental
14 monitoring program has been described in general terms but that
15 specific operational aspects of the program have not yet been
16 finalized. It is also recognized that the environmental
17 monitoring program must allow for reaction to changes in the state
18 of the art in order to remain viable during the life of the WIPP
19 project. In broadest possible terms, the environmental monitoring
20 program for WIPP shall include: (a) preoperational monitoring
21 involving the collection analysis and evaluation of environmental
22 samples as a baseline for later comparisons; (b) operations
23 monitoring on and off the site through and including
24 decontamination and decommissioning of the site; and
25 (c) post-operations monitoring on and off the site after the WIP
26 facility has been closed.

27 b) Agreement to Coordinate D.O.E.'s Environmental
28 Monitoring Plan With the State of New Mexico'
Plan and to Provide Environmental Data to the
State of New Mexico.

1 The D.O.E. agrees and stipulates that D.O.E. will
2 coordinate its environmental monitoring plans with the
3 environmental monitoring plan and program of the State of New
4 Mexico and that D.O.E. will continue to provide the State of New
5 Mexico with all available relevant data and documentation relating
6 to the environmental aspects of the WIPP operations in a timely
7 manner during the entire operational life of WIPP.

8 c) Agreement by D.O.E. to Fund the State of New
9 Mexico's Proposed Monitoring Program for WIPP
10 and Present Estimate of Costs to Furnish
11 Monitoring Services.

12 The State has furnished the D.O.E. with its
13 proposed Environmental Monitoring Program for WIPP which is
14 attached hereto as Appendix A. The parties acknowledge that
15 Appendix A will be subject to clarification and revision as the
16 parties work together in the coordination of a D.O.E.
17 Environmental Monitoring Program for WIPP and a Program of
18 Verification Services to be furnished by the State.

19 The State has also furnished its best estimate of
20 costs for the services to be furnished to D.O.E. and D.O.E. agrees
21 to provide funding and/or equipment necessary for such
22 assistance. The parties agree that such estimate of costs may be
23 subject to change in response to revisions or clarification in the
24 underlying assumptions set forth in Appendix A.

25 In the event that such estimated costs increase or
26 decrease by more than 15 percent of the amounts set forth below
27 for any given year of project operation or for the total estimated
28 cost of verification services for the entire project, D.O.E.'s
29 obligation to furnish the necessary financial assistance

1 for any year following the year in which the increase or decrease
 2 is noted shall be subject to negotiation between the parties as to
 3 the scope of the underlying assumptions in Appendix A and the
 4 adequacy of any estimates furnished by the State.

5 d) State's Present Estimate of Costs to Furnish
 6 Verification Services Pursuant to Appendix A.

7 Total Cost for all Phases of Radiation Monitoring

| 8 Monitoring Phase | 9 First Year | 10 Second Year | 11 Third Year to 30 Year | 12 30th Year to 32 Year | 13 32nd Year to 37 Year |
|---|--------------|----------------|--------------------------|-------------------------|-------------------------|
| 14 <u>Preoperational</u> | | | | | |
| Labor | \$ 28,600 | \$ 28,600 | | | |
| 15 Capital * | 92,453 | 3,603 | \$ 79,334 | | |
| 16 Maint. and Oper. * | 77,110 | 77,110 | 229,500 | | |
| 17 <hr/> | | | | | |
| Total | \$198,163 | \$109,313 | \$ 308,834 | | |
| 18 <u>Operational</u> | | | | | |
| Labor | | | \$ 800,800 | | |
| 19 Capital | | | 160,220 | | |
| 20 Maint. and Oper. | | | 1,647,840 | | |
| 21 <hr/> | | | | | |
| Total | | | \$2,608,860 | | |
| 22 <u>Decomm. and Decontam.</u> | | | | | |
| Labor and Operations and Sampling | | | | \$253,660 | |
| 23 <u>Postoper. Monitoring</u> | | | | | |
| Labor | | | | | \$ 33,000 |
| 24 Maint. and Oper. | | | | | 196,350 |
| 25 <hr/> | | | | | |
| Total | | | | | \$229,350 |
| 26 <hr/> | | | | | |
| 27 <u>Total (37 Years) Radiation Monitoring: \$3,708,180.00</u> | | | | | |

* Includes costs for Radiation Emergency Preparedness, supra.

1 e) Agreement for State Health Studies.

2 The D.O.E. agrees and stipulates that the State has
3 the right to independently conduct short-term and long-term health
4 studies through an independent agency or contractor agreed to in
5 advance by the State and D.O.E. if, in the opinion of the State, a
6 significant level of radiation has been released by a WIPP-related
7 activity on or off the WIPP site or if WIPP-related radiation
8 induced health effects are detected in New Mexico communities
9 surrounding WIPP, along transportation routes or among the WIPP
10 work force. The D.O.E. further agrees to pay the State for the
11 cost of conducting such health studies if, after a good-faith
12 effort, the State is unable to obtain such payment or services
13 from other federal sources available for this purpose provided
14 that the decision to conduct the health studies is scientifically
15 justified. Any disputes over whether the decision to conduct the
16 health studies was scientifically justified shall be submitted to
17 arbitration by a panel of scientific peers who shall follow the
18 procedures provided for under the present Consultation and
19 Cooperation Agreement between D.O.E. and the State of New Mexico.
20 Finally, D.O.E. agrees and stipulates that the State may review
21 information and data derived from D.O.E.'s own internal health
22 monitoring program and may enroll WIPP employees, on a voluntary
23 basis, in any State-instigated health studies.

24 f) Agreement to Continue Funding for the State's
25 Environmental Evaluation Group Through 1985 and
26 to Negotiate Regarding an Independent State
Review Capability Thereafter.

27 The D.O.E. agrees and stipulates that, at a
28 minimum, D.O.E. will continue to fund the activities of the

1 State's Environmental Evaluation Group through September 30, 1985
2 in its present organizational structure in the approximate amount
3 of \$600,000.00 annually.

4 The D.O.E. recognizes the State's desire to
5 continue the State review capability and further agrees to
6 negotiate for an appropriate State review capability independent
7 of D.O.E. beyond 1985 for the full operational life of WIPP
8 through and including the decontamination and decommissioning
9 stages and post-operational stages of WIPP. However, because of
10 the difficulty in accurately predicting the full nature and scope
11 of future operational activities of WIPP beyond 1985 the parties
12 agree that the extent of the funding and the organizational
13 structure of such an independent State review capability will be
14 the subject of annual or other periodic negotiation between the
15 State of New Mexico and D.O.E. The first of such negotiations
16 will commence no later than 60 days prior to October 1, 1985.

17 E. UPGRADING OF STATE HIGHWAYS.

18 1. Summary of the State of New Mexico's Concerns.

19 The State of New Mexico is concerned that based on the
20 identification of probable transportation routes by D.O.E. for
21 WIPP shipments in the Final Environmental Impact Statement for
22 WIPP, certain portions of State highways may be used which are
23 presently unsafe and substandard and must be repaired and
24 upgraded. The State seeks to have D.O.E. assist the State in
25 obtaining federal funding for the State to pay for the upgrading
26 of those portions of State highways designated for WIPP shipments
27 which are most in need of repair and for which State or federal
28 appropriations are not otherwise available. The State has

1 designated portions of the WIPP transportation routes which have
2 the highest priority for repair based upon their substandard
3 condition and the fact that almost all shipments must necessarily
4 funnel down those highways. The State also seeks assurance that
5 it shall not pay for the upgrading of any county roads or the
6 construction of new roads in the vicinity of the WIPP site which
7 may be used as access roads for the transportation of waste to
8 WIPP.

9 2. Stipulations and Agreements for Resolving the
10 State's Concerns in the Area of Upgrading of State
Highways.

11 a) Agreement by D.O.E. to Pay for Construction of
12 New Roads and that the State Shall not Pay for
13 Upgrading or Construction of County Access
Roads Used to Carry Waste to the WIPP Site.

14 The D.O.E. agrees that in the event any existing
15 New Mexico county road in the vicinity of the WIPP site is used as
16 an access road for the transportation of waste to WIPP, the State
17 shall not be responsible for the cost of any upgrading of such
18 roads which D.O.E. determines to be necessary in connection with
19 such use. In the event a new road must be constructed for use as
20 an access road for the transportation of waste to WIPP, D.O.E.
21 shall pay for the construction of such new road.

22 b) Agreement to Jointly Seek a 58 Million Dollar
23 Special Appropriation From Congress for
Upgrading of Certain New Mexico Highways.

24 The D.O.E. agrees that, with the support of the N
25 Mexico Congressional Delegation, which support will be solicited
26 by the State officials in furtherance of implementing this
27 Agreement, D.O.E. will make a good faith effort to join and
28 support the State and its Delegation in seeking a special

1 appropriation from Congress in the amount of \$57,886,544.00 (1982
2 dollars) for the purpose of assisting the State in the timely
3 upgrading and repair of the following described portions of New
4 Mexico highways which have been determined by the State to be most
5 in need of repair along the designated WIPP transportation
6 routes: (Listed by order of priority.)

7 1. U.S. Highway 285 (FAP-023-3) from its
8 junction with U.S. Highway 70 north of Roswell to junction with
9 U.S. Highway 60 at Vaughn for a distance of 89.4 miles. Estimated
10 cost: \$25,700,000.00.

11 2. U.S. Highway 60-285 (FAP-027-1) from
12 Encino toward Vaughn for a distance of 9.2 miles for an estimated
13 cost of \$2,760,000.00

14 3. U.S. Highway 285 (FAP-050-1) from
15 Torrance/San Miguel County line north and from White Lakes north
16 for a distance of 19.8 miles for an estimated cost of \$5,840,000.00

17 4. U.S. Highway 60-285 (FAP-023-1) between
18 Carlsbad and Loving for widening and resurfacing of 7.4 miles for
19 an estimated cost of \$2,710,422.00 and for resurfacing of 9.1
20 miles for an estimated cost of \$1,386,122.00.

21 5. N.M. Highway 4 (FAP-054-1) from Pojoaque
22 to the Rio Grande Bridge for a distance of 8.1 miles at an
23 estimated cost of \$2,430,000.00.

24 6. U.S. Highway 54 (FAP-20-3) from its
25 junction with U.S. Highway 60 at Vaughn to junction with N.M.
26 Highway 219 at Pastura for a distance of 32.2 miles at an
27 estimated cost of \$9,660,000.00.

28 7. U.S. Highway 62/180 (FAP-022-2) east of
29 Carlsbad and three sections of U.S. Highway 285 (FAP-023-1)
30 between Carlsbad and Roswell for a distance of 30.7 miles at an
31 estimated cost of \$7,400,000.00.

32 All as shown on Appendix B hereto.

33 TOTAL: 205.9 miles - \$57,886,544.00

34 The State recognizes that such funding may be
35 appropriated over a four-year period commencing, ideally, four
36 years prior to any waste being transported across these roads to
37

the WIPP site. The funding will be allocated and used by the
1 State on a priority basis for those portions of highways most in
2 need of repair with the highest risk of accident in the order of
3 priority as set forth above.

4 F. FUNDING AMOUNT ADJUSTMENTS.

5 The parties recognize that the level of funding for the
6 commitments set forth herein are based upon 1982 dollars and the
7 parties further recognize that the stated amounts herein will be
8 adjusted for inflation at the time payment is made. All such
9 commitments for funding are subject to the availability of
10 appropriated funds.

11 G. MODIFICATIONS.

12 The parties recognize that the particulars of this
13 Supplemental Agreement may be modified by the parties in the
14 future by formal written agreement of the parties.

15 H. EFFECT OF THIS AGREEMENT.

16 This Supplemental Stipulated Agreement, as well as the
17 prior Stipulated Agreement entered herein on July 1, 1981,
18 resolves and settles, subject to the respective contingencies
19 provided for therein and future compliance therewith, all of the
20 issues raised in this litigation. Such agreements entered into
21 between the State of New Mexico and D.O.E. in these proceedings
22 constitute a full settlement of such issues. It is further agreed
23 and recognized by the parties that this Supplemental Stipulated
24 Agreement and the previous Stipulated Agreement of July 1, 1981,
25 are binding contractual agreements the compliance with which is
26 subject to the appropriate oversight jurisdiction of this Court.
27 No provision in this Agreement shall be construed to prevent
either the State of New Mexico or the United States from seeking
further dispositive orders in this case at an appropriate future
time.

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SIGNATURE:

FOR THE PLAINTIFF STATE OF NEW MEXICO



BRUCE KING
Governor, State of New Mexico

12/27/92
DATE



JEFF BINGAMAN
Attorney General, State of New Mexico

12/27/92
DATE



GEORGE S. GOLDSTEIN, Ph.D.
Secretary, Health and Environment
Department
Chairman, Radioactive Waste
Consultation Task Force

12/27/92
DATE



JOSEPH F. CANEPA
Special Assistant Attorney General

12-27-92
DATE

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SIGNATURE:

FOR THE UNITED STATES DEFENDANTS

R. G. Romatowski

R. G. ROMATOWSKI
MANAGER, ALBUQUERQUE OPERATIONS OFFICE,
U. S. DEPARTMENT OF ENERGY

12-27-82
DATE

James Stout

JAMES STOUT
DEPUTY CHIEF COUNSEL, ALBUQUERQUE
OPERATIONS OFFICE,
U. S. DEPARTMENT OF ENERGY

12-27-82
DATE

F. Henry Habicht, II

F. HENRY HABICHT, II
DEPUTY ASSISTANT ATTORNEY GENERAL
U. S. DEPARTMENT OF JUSTICE

12-23-82
DATE

THE STATE OF NEW MEXICO'S ENVIRONMENTAL
MONITORING PROGRAM FOR WIPP

The State of New Mexico's environmental radiation surveillance program for WIPP operations is designed to serve as an independent means to evaluate the accuracy and precision of the results as determined by the Department of Energy's program. Such a meaningful, independent State role is crucial for public confidence and acceptance given the fact that WIPP is exempted from NRC licensing and inspection requirements. In order to maintain this independence the State will require the following:

- (1) that split samples will be taken by a procedure approved by the State and DOE, and, if the parties so desire, under the observation of the designated representatives of both agencies on a routine collection schedule; that, where applicable, sample preparation will follow established quality assurance/quality control procedures to insure a homogenous mixture prior to taking aliquots;
- (2) that the sample schedule and location will be expanded or altered in accordance with any reasonable request by the representatives of the State of New Mexico;
- (3) that sample analyses will be performed by laboratories not affiliated with nor under contract with the Department of Energy to perform analysis of WIPP environmental monitoring samples; and
- (4) that a State quality control program will be established and maintained for routine calibration of air samples and thermoluminescent dosimeters in addition to the intercomparison of specific radionuclide analyses by a referee laboratory program, such as the one certified by the National Bureau of Standards or the Environmental Protection Agency.

A. Preoperational Phase (Begins Two Years Prior to Waste Emplacement).

1. External Gamma Exposure

Duplicate thermoluminescent dosimeters (TLD's) at all of the DOE's stations.

2. Soil

Random split sampling and specific isotopic analyses for up to 30% of the DOE's scheduled program.

3. Atmospheric Particulates

Duplicate high volume air particulate sampler(s) adjacent to the DOE's station in the area of maximum predicted downwind ground deposition. The State representative may elect to monitor the sampling, monitoring and analytic process rather than take duplicate samples.

4. Water and Sediments

Random split samples and specific isotopic analyses for up to 30% of the DOE's scheduled program.

5. Produce and Meat

Locally produced fruit, vegetables, meat and poultry random split samples and the same analyses for up to 30% of the DOE's scheduled program.

B. Operational Phase

The operational radiation surveillance program will be similar to the preoperational phase. The final design of the program, however, will be based on a review of the environmental data collected during the two years prior to waste emplacement operations. Two additional high volume air sampling stations are planned for (1) an area downwind determined to be the area of

largest risk to population during the operational phase and, (2) a location remote and 180 degrees from the previous location and on the opposite side of the WIPP Site.

C. Decommissioning and Decontamination Phase

The level of environmental radiological surveillance developed during the operational phase shall be continued during and for at least two years following complete decommissioning and decontamination of the surface facilities. This is to include both the State and the Department of Energy's programs. In addition, increased surface soil and vegetation samples will be collected and analyzed to ensure decontamination standards in effect at the time are met.

D. Post-Operational Phase

The final environmental radiological surveillance phase will primarily serve to ensure the public that resuspension of contaminated ground surface particles, if any, is not creating a potential long-term inhalation problem. The program will also include continued analyses on an annual basis of some selected soil, and surface and ground water sampling locations as determined by a review of the data and/or the most critical pathways to man. The minimum program projected at this time and to be continued for a period of not less than five (5) years following termination of the decommissioning and decontamination phase is:

- (1) Intermittent operation of the state-operated high volume air sampling stations.
- (2) Four annual soil surface samples.

- (3) Four annual water samples.
- (4) Thermoluminescent dosimeters.

E. Costs

The dollar values used for total annual costs for operating the four program phases are based upon 1982 dollars. The transportation monitoring program costs are added into the operational phase of the environmental radiation surveillance program. Unless otherwise indicated, capital expenditures are amortized over a five-year period.

All environmental radiological monitoring equipment and supplies used in this program by the representatives of DOE and the representatives of the State of New Mexico may be purchased by the WIPP operator in lieu of the funds provided below, in accordance with a specification approved by the representatives of both agencies. Also, in lieu of funds, maintenance may be performed on-site, or maintenance contracts may be placed by the WIPP Operator containing technical specifications approved by both representatives of the agencies. The WIPP Operator's calibration equipment will be available to representatives of both agencies, and all calibration of this equipment shall be completed in accordance with procedures approved by the representatives of both agencies. Off-site calibration contracts shall be maintained on an as needed basis by the WIPP Operator and contain the technical specifications approved by representatives of both agencies. In addition, the WIPP Operator shall supply the State's representatives with all supplies necessary to implement the monitoring program.

1. Preoperational Monitoring (Two Years Prior to Receipt of Wastes)

| | <u>First Year Initial</u> | <u>Annual</u> | <u>Total (Two Years)</u> |
|--|-----------------------------------|---------------|------------------------------|
| a) <u>Labor and Benefits</u> | | | |
| <u>Environmental</u> | | | |
| Scientist III-E | | \$26,400 | \$52,800 |
| o Per Diem | | 2,200 | <u>4,400</u> |
| | | | 57,200 |
| b) <u>Capital Expenses</u> | | | |
| One (1) High Volume Air Sampler - (installation, fencing, calibra- tion equipment) | \$ 2,750 ** | 550 ** | 3,850 ** |
| Thermoluminescent Dosimeters (TLD's) | 1,100 | 220 | 1,540 |
| Radiation Detection and Monitoring Equipment * | 85,000 ** | | 85,000 ** |
| Replacement of Radiation Detec- tion Equipment After 15 Years * | | 2,833 ** | 5,667 ** |
| c) <u>Maintenance and Operation</u> | | | |
| o Transportation (State vehicle) 15,000 Miles/Year at \$0.22/Mile | | \$ 3,630 | \$ 7,260 |
| o Maintenance of Radia- tion Detection Equipment ** | | 8,500 ** | 17,000 ** |
| o Air Filters | | 110 ** | 220 ** |
| o Sample Packaging and Shipping | | 550 | 1,100 |

* For use in Radiation Emergency Preparedness.

** It is the intention of the parties that the WIPP operator shall furnish the equipment, supplies and services noted. In such event, these amounts will not be paid.

| | <u>First Year Initial</u> | <u>Annual</u> | <u>Total (Two Years)</u> |
|--|-----------------------------------|---------------|------------------------------|
| o TLD Calibration | | 1,100 | 2,200 |
| o Miscellaneous Items | | 550 | 1,100 |
| o Administrative Support, Reports, etc. | | 1,100 | 2,200 |
| o Sample Analyses | | | |
| Air | | 8,140 | 16,280 |
| TLD's | | 1,540 | 3,080 |
| Soil | | 13,640 | 27,280 |
| Water | | 5,390 | 10,780 |
| Fruits, Vegetables, Meats, etc. | | <u>32,860</u> | <u>65,720</u> |
| | | \$77,110 | \$154,220 |

Two-year Total Cost for Preoperations Monitoring: \$307,476

2. Operational Monitoring - (To Begin at Start of Shipment of Waste and Extend to Decommissioning - Third Year to 30th Year).

| | <u>First Year Initial</u> | <u>Annual</u> | <u>Total (29 Years)</u> |
|--|-----------------------------------|---------------|------------------------------|
| a. <u>Labor and Benefits</u> | | | |
| Environmental Scientist III-E | | \$26,400 | \$739,200 |
| o Per Diem | | <u>2,200</u> | <u>61,600</u> |
| Total Labor and Benefits | | \$28,600 | \$800,800 |
| b. <u>Capital Expenses</u> | | | |
| o Two (2) GM Detectors \$550 each | 1,100 ** | 220 ** | 7,260 ** |
| o Two (2) Portable Alpha Scintilla- tion Detectors \$1,300 each | 2,640 ** | 530 ** | 17,480 ** |

** It is the intention of the parties that the WIPP operator shall furnish the equipment, supplies and services noted. In such event, these amounts will not be paid.

| | <u>First Year Initial</u> | <u>Annual</u> | <u>Total (28 Years)</u> |
|---|-----------------------------------|---------------|------------------------------|
| o Two (2) Micro-R Meters \$1,540 each | 3,080 ** | 620 ** | 20,440 ** |
| o Two (2) High Volume Air Samplers \$2,200 each | 4,400 ** | 880 ** | 29,040 ** |
| o One (1) Four-Wheel Drive Vehicle | <u>13,200</u> | <u>2,600</u> | <u>86,000</u> |
| Total Capital Expenses | \$24,420 | \$4,850 | \$160,220 |
| c. <u>Maintenance and Operation</u> | | | |
| o Four-Wheel Vehicle | | \$ 1,650 | \$ 46,200 |
| o Instrument Calibration and Maintenance | | 1,540 | 43,120 |
| o Air Sampler Maintenance | | 440 | 12,320 |
| o Sample Packaging and Shipping | | 550 | 15,400 |
| o Onsite Office Space to be Provided by the DOE | | | |
| o Administrative Support, Reports, etc. | | 2,750 | 77,000 |
| o Sample Analyses | | | |
| Air | | 24,420 | 683,760 |
| TLD's | | 1,540 | 43,120 |
| Soil | | 13,640 | 381,920 |
| Water | | 5,390 | 150,920 |
| Fruits, Vegetables, Meats, etc. | | 2,860 | 80,080 |
| Additional Analyses | | <u>5,500</u> | <u>154,000</u> |
| Total Maintenance and Operation | | \$60,280 | \$1,687,840 |
| <u>28 Years Total Cost for Operational Maintenance:</u> | | | <u>\$2,648,860</u> |

** It is the intention of the parties that the WIPP operator shall furnish the equipment, supplies and services noted. In such event, these amounts will not be paid.

3. Decommissioning and Decontamination (30th Year to 32nd Year)

| | <u>Annual</u> | <u>Total (Two Years)</u> |
|------------------------------------|---------------|------------------------------|
| o Continued Operational Program | \$ 93,830 | \$187,660 |
| o Additional Sampling and Analyses | <u>33,000</u> | <u>66,000</u> |
| Total | \$126,830 | \$253,660 |

Two-Year Total Cost for D. & D: \$253,660

4. Postoperational Monitoring (32nd Year to 37th Year - Total Five Years)

| | <u>Annual</u> | <u>Total (5 Years)</u> |
|--------------------------------------|---------------|----------------------------|
| a. <u>Labor and Benefits</u> | | |
| Two Months at \$26,400/Year | \$ 4,400 | \$ 22,000 |
| o Per Diem | <u>2,200</u> | <u>11,000</u> |
| Total Labor & Benefits | \$6,600 | \$33,000 |
| b. <u>Capital Expenses</u> | 0 | |
| c. <u>Maintenance and Operations</u> | | |
| o Vehicles (Five-year Amortization) | 2,640 | 13,200 |
| o Vehicle Operation | 1,650 | 8,250 |
| o Calibration | 1,100 | 5,500 |
| o Air Sampler Maintenance | 440 | 2,200 |
| o Sample Packaging and Shipping | 550 | 2,750 |
| o Administrative Support | 1,100 | 5,500 |
| o Sample Analyses | | |
| Air | 24,420 | 122,100 |
| Soil | 3,080 | 15,400 |
| Water | 2,750 | 13,750 |
| TLD | <u>1,540</u> | <u>7,700</u> |
| Total | \$45,870 | \$229,350 |

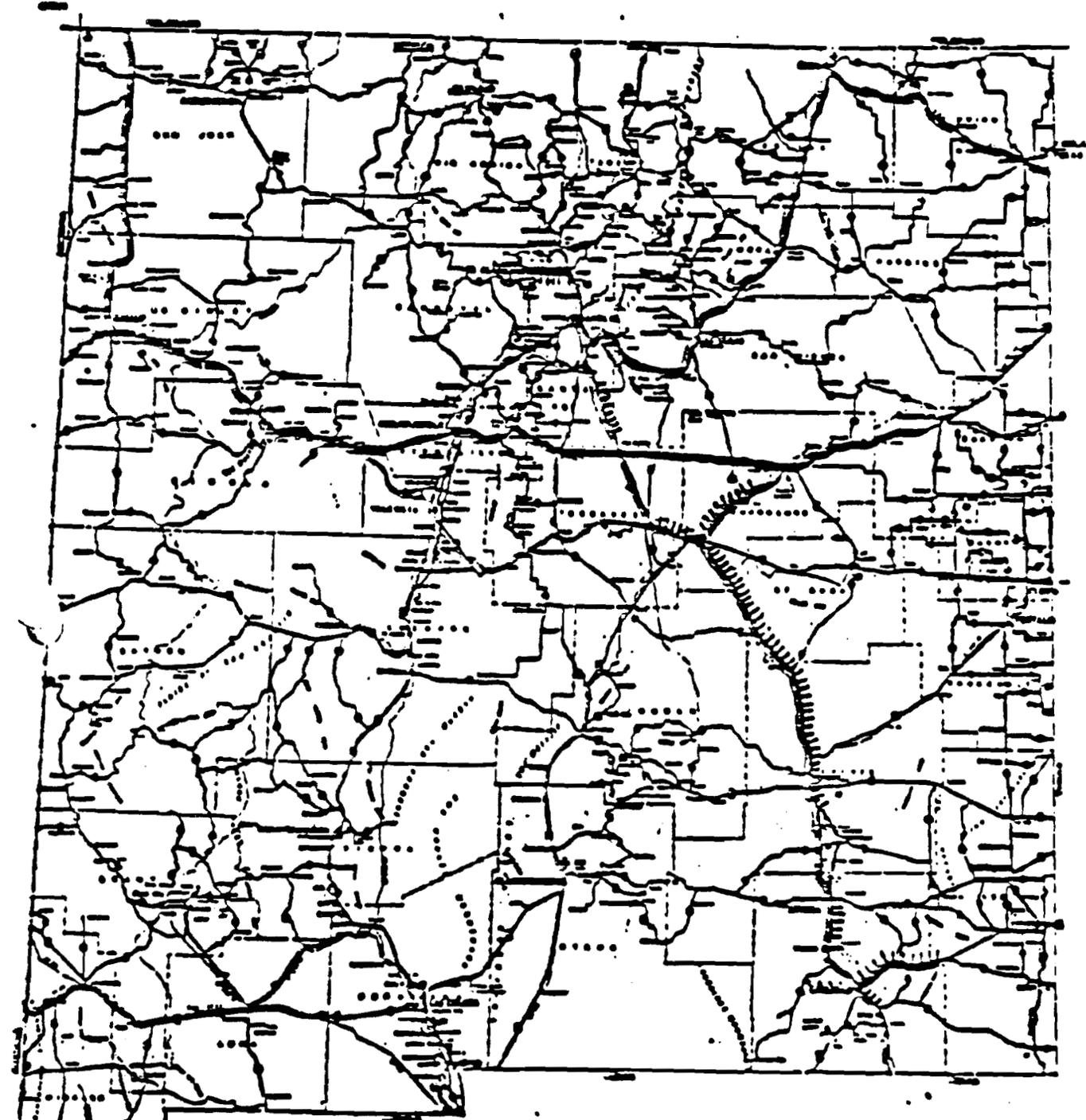
Five-Year Total Cost for Postoperation Monitoring: \$229,350

** It is the intention of the parties that the WIPP operator shall furnish the equipment, supplies and services noted. In such event, these amounts will not be paid.

5. Total Cost for all Phases of Radiation Monitoring

| Monitoring Phase: Year | 1 | 2 | 3-30 | 30-32 | 32-35 |
|---|-----------|-----------|--------------|-----------|-----------|
| <u>Preoperational</u> | | | | | |
| Labor | \$ 28,600 | \$ 28,600 | | | |
| Capital * | 92,453 | 3,603 | \$ 79,334 | | |
| Maintenance and Oper. | 77,110 ** | 77,110 ** | 229,500 ** | | |
| Total | \$198,163 | \$109,313 | \$308,834 | | |
| <u>Operational</u> | | | | | |
| Labor | | | 800,800 | | |
| Capital | | | 160,220 ** | | |
| Maintenance and Operations | | | 1,647,840 ** | | |
| Total | | | 2,608,860 | | |
| <u>Decommissioning and Decontamination</u> | | | | | |
| Labor and Operations and Sampling | | | | \$253,660 | |
| <u>Postoperational Monitoring</u> | | | | | |
| Labor | | | | | \$ 33,000 |
| Operational and Maintenance | | | | | 196,350 |
| Total | | | | | \$229,350 |
| <u>Total (35 Years) Radiation Monitoring: \$3,708,180</u> | | | | | |

** It is the intention of the parties that the WIPP operator shall furnish the equipment, supplies and services noted. In such event, these amounts will not be paid.



— TRUCK TRANSPORTATION ROUTES FOR WIPP WASTE SHIPMENTS

--- SECTIONS REQUIRING IMPROVEMENTS FOR WHICH FEDERAL FUNDING IS REQUESTED

ROAD MAP
NEW MEXICO