

PROJECT AGREEMENT

BETWEEN

THE DEPARTMENT OF ENERGY OF THE UNITED STATES OF AMERICA

AND

THE FEDERAL MINISTER FOR RESEARCH AND TECHNOLOGY  
OF THE FEDERAL REPUBLIC OF GERMANY

FOR THE CONDUCT OF EXPERIMENTS AT THE ASSE SALT MINE

This Project Agreement, hereinafter referred to as the Agreement, is entered into between the Department of Energy of the United States (DOE), and the Federal Minister for Research and Technology of the Federal Republic of Germany (BMFT), hereinafter referred to as the Parties, for the conduct of radioactive waste storage experiments at the Asse Salt Mine in the State of Lower Saxony.

This Agreement is entered into as provided in Article 4 of the Technical Exchange and Cooperative Arrangement between the United States Atomic Energy Commission and the Federal Ministry for Research and Technology of the Federal Republic of Germany in the Field of Management of Radioactive Wastes of 20 December 1974 as amended on 19 March 1980 by the Parties.

## ARTICLE 1 - OBJECTIVES

The objectives of cooperation under this Agreement are to:

- 1) obtain and analyze data on the migration of brine under the influence of heat and radiation;
- 2) obtain and analyze data on the suitability of test procedures and on the performance of test equipment;
- 3) obtain and analyze data on the performance of materials suitable for packaging radioactive wastes under the influence of heat, radiation and brine; and
- 4) obtain and analyze data on temperature and stress fields associated with the mining of cavities in salt and with the emplacement of heat sources in salt.

## ARTICLE 2 - SCOPE

1. To accomplish the objectives of Article 1, a five-year collaborative research and development project, hereinafter referred to as the "Project," will be undertaken concurrently by the Parties. The work will be divided into two parts with DOE responsible for the conduct, principally in the United States, of one part (Part I) and BMFT responsible for the conduct, principally in the Federal Republic of Germany, of the other part (Part II).
2. The planning documents required to carry out the Project, together with the responsibilities for their preparation, review, approval and execution, are listed in Table 1 which is appended to this Agreement.

3. In Part I, DOE will be responsible for the following:

- 1) Design, fabrication, procurement and preshipment testing of four sets of mechanical equipment, exclusive of radioactive sources, to be inserted into the mine test holes. This equipment includes, but is not limited to, sleeve assemblies, canisters, source support tubes, shield plugs, borehole liners for source and guard heater locations and guard heaters.
- 2) Design, fabrication, procurement and preshipment testing of a single Data Acquisition System (DAS) to be installed both at the mine site on the surface and on the equipment installed in the test holes. This equipment includes all system components except for the following: the data link cable joining the surface equipment and the test hole equipment, the surface alarm and its wiring to the multiplexer and the electrical power supply.
- 3) Design, fabrication, procurement and preshipment testing of the Moisture Collection System (MCS) associated with the test holes. All system components will be provided except for the pressure tubing.
- 4) Provision of procedures and technical assistance relating to installation, operation and maintenance of the above equipment and relating to operator training.
- 5) Provision of engineering services associated with (a) preparation and review of the documents listed in Table 1; (b) performance of the tasks contained in approved documents as listed in Table 1; (c) determination of site suitability through core sample analysis; and (d) field coordination as required in the U.S. and the FRG.

- 6) Provision of office support in the U.S. for the BMFT Project Leader or his designee during the equipment design, fabrication and preshipment testing efforts.

4. In Part II, BMFT will be responsible for the following:

- 1) Making available to the Project the necessary surface and subsurface portions of the Asse Salt Mine identified according to the Site Characteristics Requirements and the Site Selection Work Plan listed in Table 1.
- 2) Preparation of all required submittals and obtaining of all licenses necessary for conducting the Project at the Asse Salt Mine.
- 3) Conducting Mine excavation and experimental coring.
- 4) Design, fabrication, procurement, installation and testing of all mechanical equipment required to conduct and support the Project, other than that to be provided by DOE. This includes, but is not limited to, any transportation casks; installation casks; transfer equipment; hot cell equipment; lifting and handling equipment; receiving, storage, inspection, assembly, checkout and installation equipment; radioactive sources and the equipment or system required to maneuver the assembled radiation canister from the surface cask or hot cell to the test area and to insert each canister into the test cavity. BMFT's equipment will be capable of reversing the procedure upon completion of the experiment or when any intermediate retrieval is required.

BMFT will also provide design, fabrication, procurement, installation and testing of (a) all components of the normal power and emergency power supply system required to deliver regulated single phase power to the terminals of each heater controller, and isolated and filtered single phase power to duplex connector outlets in the vicinity of the Data Acquisition System; (b) the data line cable connecting the site modem to the surface modem in the Data Acquisition System and a surface alarm activated by the Data Acquisition System; and (c) the pressure tubing interconnecting the test sites with the Moisture Collection System.

- 5) Provision of engineering services associated with (a) preparation and review of the documents listed in Table 1; (b) performance of the tasks contained in approved documents as listed in Table 1; and (c) field coordination as required in the U.S. and the FRG.
- 6) Installation and maintenance of equipment provided by DOE as defined in Part I, above, and according to Article 6, paragraph 4, below.
- 7) Preparation and implementation of all operating and maintenance instructions for the hot cell, the Asse Salt Mine including the test site, and BMFT-procured equipment including the handling, transfer and installation of that equipment.
- 8) Furnishing all labor, including supervision and management, required to excavate and prepare the test site, and required to install, test, operate, and dismantle the test equipment and the test support equipment.

- 9) Provision of geological and geochemical services to evaluate and characterize the salt in the proposed test site.
- 10) Assuming overall responsibility for the development and implementation of all site emergency, training and post-test evaluation procedures.
- 11) Provision of field coordination in the FRG and the U.S.
- 12) Provision of office support for the DOE Project Leader or his designee during the preparation and experimentation periods.
- 13) Retention of records listed in Table 1.

5. Other responsibilities may be added to either Part I, Part II or both by mutual written agreement.

#### ARTICLE 3 - SCHEDULE MILESTONES AND REPORTING REQUIREMENTS

1. A set of milestones will be developed and published by the Project Leaders during the first three months of the Project. These milestones will enable periodic assessment of progress and direction. Major milestones for the Project will include:

- 1) The issuance of a final Test Plan, which contains the details of the test objectives, planning and test hardware requirements.
- 2) The obtaining of licenses and permits.
- 3) The design, fabrication, testing and delivery to the site of DOE-supplied equipment.
- 4) The design, procurement, testing and delivery to the site of BMFT-supplied equipment.
- 5) The issuance of test results, analysis and data documentation reports.

2. It is anticipated that the first brine migration test will be initiated near the end of 1982. Tests will be conducted at each of the four test areas within the test site for approximately two (2) years, depending on data collected.

3. The Project Leader in each country will provide promptly to both Project Coordinators brief quarterly reports, which will note the status of the Project with respect to schedules and milestones.

4. The two Project Leaders will jointly prepare a detailed annual report describing the work done, results achieved and milestones completed.

5. The Project Leaders will issue topical reports as mutually agreed and will issue a final report, which will include test results and conclusions.

#### ARTICLE 4 - MANAGEMENT

1. Each Party shall appoint a Project Coordinator to act on its behalf in all matters concerning cooperation and coordination under this Agreement. Overall responsibility for the implementation of the Agreement will rest with the Project Coordinators.

2. The Project Coordinators shall jointly approve, in writing, the Project schedule and work tasks, including significant changes thereto.

3. The Project Coordinators shall meet at least once a year at a mutually agreed location.

4. Each Project Coordinator shall appoint a Project Leader to be responsible for the detailed management of its Part of the Project. Each Project Leader shall establish working contacts with the other Project Leader to assure compatibility of the work taking place under the two Parts of the Project and to facilitate coordination of technical exchanges between the Parties.

#### ARTICLE 5 - FINANCE

1. All costs resulting from cooperation under this Agreement shall be borne by the Party that incurs them.

2. Unless otherwise agreed in writing, no transfers of funds shall occur between the Parties.

#### ARTICLE 6 - EQUIPMENT

Each Party agrees that in the event equipment is to be exchanged or supplied by one Party to the other Party, the following provisions shall apply covering the shipment and use of the equipment:

1. The sending Party shall supply as soon as possible a detailed list of the equipment to be provided together with the associated specifications and technical and informational documentation.

2. The equipment, spare parts and documentation supplied by the sending Party shall remain the property of the sending Party and shall be returned to the sending Party upon completion of the mutually agreed activity unless otherwise agreed.



3. The host establishment shall provide the necessary premises and shelter for the equipment and shall provide for electric power, water, gas, etc. in accordance with technical requirements, which shall be as mutually agreed.

4. The equipment supplied by the sending Party shall be brought into operation at the host establishment only by mutual agreement between the Parties or between their senior representatives at the host establishment.

5. Responsibility for expenses, safekeeping and insurance during the transport of the equipment from the original location in the country of the sending Party to the place of entry in the country of the receiving Party shall rest with the sending Party. If the sending Party elects to have the equipment returned, it shall be responsible for expenses, safekeeping and insurance en route from the place of entry in the country of the sending Party to the final destination in the country of the sending Party.

6. Responsibility for expenses, safekeeping and insurance during the transport of the equipment from the place of entry in the country of the receiving Party to the final destination in the country of the receiving Party shall rest with the receiving Party. If the sending Party elects to have the equipment returned, the receiving Party shall be responsible for expenses, safekeeping and insurance en route from the place of departure in the country of the receiving Party to the place of entry in the country of the sending Party.

7. The equipment provided by the sending Party for carrying out mutually agreed activities shall be considered to have a scientific, not a commercial character.

ARTICLE 7 - EXCHANGE OF OBSERVERS AND ASSIGNMENT OF PERSONNEL

1. Each Party shall at its own expense have the right to observe the test activities and analytical work of the other Party. This right may be exercised by short term visits or by the attachment of staff subject to the prior agreement of the receiving Party on each occasion.

2. Whenever an exchange of staff is contemplated under this Agreement, each Party shall ensure that qualified staff are selected for attachment to the other Party.

3. The Parties will prepare attachment or other such agreements as may be necessary in conjunction with work assignments under this Agreement.

4. Each Party shall be responsible for the salaries, insurance and allowances to be paid to its staff.

5. Each Party shall pay for the travel and living expenses of its staff while on attachment to the host Party unless otherwise agreed.

6. The host Party shall arrange for comparable accommodations for the attached staff (and their families) of the other Party on a mutually agreeable reciprocal basis.

7. The host Party shall provide all necessary assistance to the attached staff (and their families) of the other Party as regards administrative formalities, such as travel arrangements, etc.

8. The staff of each Party shall conform to the general and special rules of work and safety regulations in force at the host establishment, or as agreed in a separate staff attachment agreement.

9. The Party proposing an attachment shall notify the receiving Party of the name of the person(s) proposed for the attachment and shall provide such information respecting the said person(s) as may be required by the receiving Party.

#### ARTICLE 8 - DISCLAIMER

Information transmitted by one Party to the other Party under this Agreement shall be accurate to the best knowledge and belief of the transmitting Party, but the transmitting Party does not warrant the suitability of the information transmitted for any particular use or application by the receiving Party or by any third party. Information developed jointly by the Parties shall be accurate to the best knowledge and belief of both Parties. Neither Party warrants the accuracy of the jointly developed information or its suitability for any particular use or application by either Party or by any third party.

ARTICLE 9 - INFORMATION AND INTELLECTUAL PROPERTY

1. The publication, distribution, handling, protection and ownership of information and intellectual property, and rules and procedures related thereto not covered by this Agreement, shall be determined by the Parties by unanimity.

2. Subject to the restrictions applying to patents, copyrights and proprietary information, the Parties shall have the right to publish all information provided to or arising from the Project. For the purpose of this Agreement, proprietary information will mean information which contains trade secrets or commercial or financial information which is privileged or confidential and may only include such information which:

- a) Has been held in confidence by its owner;
- b) Is of a type which is customarily held in confidence by its owner;
- c) Has not been transmitted by the transmitting Party to other entities (including the receiving Party) except on the basis that it be held in confidence; and
- d) Is not otherwise available to the receiving Party from another source without restriction on its further dissemination.

3. It will be the responsibility of the Party providing information to the Project to identify information it furnishes which qualifies as proprietary information under paragraph 2 of this Article 9 and ensure it is appropriately marked in accordance with paragraph 5 of this Article 9.

The Party creating arising information which discloses or reveals proprietary information shall also have the responsibility to so mark such information.

Whenever proprietary information is orally communicated, the individual communicating such information shall place the recipient on notice as to the proprietary nature of the information. The Parties will take all necessary measures in accordance with this Article, the laws of their respective countries and international law to protect proprietary information. If either Party becomes aware that it will be, or may be reasonably expected to become, unable to meet the non-dissemination provisions of this Article, it shall immediately notify the other Party.

4. Proprietary information provided to or arising from the Project work of one Party, which is transferred to the other Party, shall not be disseminated by the receiving Party except to:

(i) persons within or employed by the receiving Party and concerned Government departments and agencies in the country of the Receiving Party having responsibilities related to the technology of the Project, and

(ii) prime or subcontractors of the receiving Party located within the geographical limits of the receiving Party's nation, for use only within the framework of their contracts with the receiving Party in work relating to the subject matter of the proprietary information;

provided, however, that any proprietary information so disseminated shall be pursuant to an agreement of confidentiality and shall be marked in accordance with paragraph 5 of this Article 9.

5. Any document which contains proprietary information shall be clearly marked with the following (or substantially similar) restrictive legend:

"This document contains proprietary information furnished in confidence under a Project Agreement dated \_\_\_\_\_ between the United States Department of Energy and the Federal Minister for Research and Technology of the Federal Republic of Germany, and shall not be disseminated or used except as provided for in the Project Agreement without the approval of \_\_\_\_\_. This notice shall be marked on any reproduction hereof, in whole or in part. These limitations shall automatically terminate when this information is disclosed by the owner without restriction."

6. The Parties will notify each other of any pre-existing proprietary information, or proprietary information developed independently of this Project, which will be used in the Project and which is necessary for the understanding of the Project results. Such information shall not be exchanged except by mutual agreement of the Parties under the terms and conditions set forth in this Article 9.

7. Information arising in the course of or under the Project ("arising information") which does not disclose or reveal pre-existing proprietary information will be freely available to both Parties for use and dissemination. A Party possessing information regarding inventions on which patent protection is to be obtained shall notify the other Party and thereafter such information shall not be published or publicly disclosed until a patent application has been filed; provided, however, that this restriction on publication or

disclosure shall not extend beyond six months from the date of notice to the other Party under this paragraph. Such information shall be appropriately marked to restrict publication or disclosure.

8. Reports containing arising information and information developed prior to or outside the Project necessary for and used in the Project, including proprietary information, will be exchanged by the Parties and will cover the work performed by each Party under this Project.

9. Inventions made or conceived in the course of or under this Project ("arising inventions") will be owned by BMFT in the Federal Republic of Germany and by DOE in the United States. Each Party, its Government and the nationals of its country designated by it, shall receive a royalty-free, non-exclusive license in the other Party's country. In third countries, arising inventions shall be owned by the inventing Party. The Party owning an invention in a third country shall grant to the other Party, its Government, and the nationals of its country designated by it, a non-exclusive, royalty-free license. However, if the Party having the right to file a patent application in third countries does not wish to file in one or more third countries, that Party shall extend to the other Party the option to file in one or more third countries. If neither Party wishes to file in a third country, the inventing Party may dispose of the invention in any manner it deems appropriate.

10. Each Party may take appropriate measures necessary to protect copyrightable material generated by it under this Project. Copyrights obtained will be the property of that Party; provided, however, that the other Party may reproduce and distribute such material, but will not publish it with a view to profit.

11. Each Party will, without prejudice to any right of inventors or authors under its national laws, take all necessary steps to provide the cooperation of its authors and inventors required to carry out the provisions of this Article 9. Each Party will assume the responsibility to pay awards or compensation required to be paid to its employees according to the laws of its country.

#### ARTICLE 10 - APPROPRIATED FUNDS

The ability of the Parties to carry out their obligations under this Agreement is subject to the availability of appropriated funds.

#### ARTICLE 11 - LAWS AND REGULATIONS

Cooperation under this Agreement shall be in accordance with the laws of the respective countries and the regulations applicable to the respective Parties. All questions related to the Agreement arising during its term shall be settled by the Parties by mutual agreement.

#### ARTICLE 12 - LEGAL RESPONSIBILITY

1. The Parties shall use all reasonable skill and care in carrying out their duties under this Agreement in accordance with all applicable laws and regulations.



2. Compensation for damages incurred during the implementation of this Agreement shall be in accordance with the applicable laws of the countries of the Parties.

#### ARTICLE 13 - OTHER AGREEMENTS

The provisions of this Agreement shall not affect the rights or duties of the Parties under other agreements or arrangements. This Agreement also in no way precludes commercial firms or other legally constituted enterprises in the countries of the Parties from engaging in commercial dealings in accordance with the applicable laws of each country; nor does it preclude the Parties from engaging in activities with other governments or persons.

#### ARTICLE 14 - DURATION

1. This Agreement shall enter into force upon signature, shall continue in force for a five-year period, and may be amended or extended by written agreement of the Parties.

2. All joint efforts and experiments not completed at the expiration of this Agreement may be continued until their completion under the terms of this Agreement.

3. In the event that, during the period of this Agreement, the nature of either Party's radioactive waste management program should change substantially whether this be by substantial expansion, reduction, transformation or amalgamation of major elements with the radioactive waste management program of a third party, either Party shall have the right to request revisions in the scope and/or terms of this Agreement.

ARTICLE 15 - TERMINATION

1. This Agreement may be terminated at any time at the discretion of either Party upon six months advance notification in writing by the Party seeking to terminate the Agreement. Such termination shall be without prejudice to the rights that may have accrued under this Agreement to either Party up to the date of the termination.

2. All joint efforts and experiments not completed at the termination of this Agreement may be continued until their completion under the terms of the Agreement.

ARTICLE 16 - LAND BERLIN

This Agreement shall also apply to Land Berlin, provided that the Government of the Federal Republic of Germany has not made a contrary declaration to the Government of the United States of America within three months from the date of entry into force of this Agreement.

Done at Bonn, in duplicate in the English and German languages, each equally authentic, this 1st day of October 1981.

FOR THE UNITED STATES  
DEPARTMENT OF ENERGY

Ambassador Arthur F. Burns

Name: 

Title: Ambassador

FOR THE FEDERAL MINISTER  
FOR RESEARCH AND TECHNOLOGY  
OF THE FEDERAL REPUBLIC OF GERMANY

Dr. Wolf-Juergen Schmidt-Kuester

Name: 

Title: Assistant Secretary