

ENCLOSURE 1

Memorandum of Understanding
Between the
U.S. Nuclear Regulatory Commission
and the
U.S. Department of Energy
Concerning the Removal and Disposition of Solid Nuclear Wastes
from Cleanup of the Three Mile Island Unit 2 Nuclear Plant

I. Objective

This memorandum of understanding specifies interagency procedures for the removal and disposition of nuclear wastes resulting from cleanup of the Three Mile Island Unit 2 plant. This will help to ensure that the TMI Site does not become a long-term waste disposal facility.

II. NRC Roles and Responsibilities

The NRC has the responsibility under the Atomic Energy Act of 1954 as amended (42 U.S.C. 2011 et seq.), to regulate all licensee activities at the TMI-2 site, including waste management, and ensure these activities are carried out in accordance with the requirements of applicable rules and regulations and the requirements of Facility Operating License Number DPR-73, as modified by amendments or orders issued by the NRC. NRC will carry out its responsibilities by onsite observation of licensee activities. As required, policy, and technical support will be provided to the NRC TMI Site Office by NRC Headquarters and Regional Office(s).

NRC will work cooperatively and closely with the DOE, and will keep DOE fully and currently informed of NRC's activities.

NRC will continue to keep public, state and local officials informed of NRC's activities. When appropriate, NRC will involve DOE in these information exchanges with the public, state and local officials.

III. DOE Role and Responsibilities

Where DOE determines that generically beneficial research, development and testing of the TMI-2 accident generated solid wastes can be carried out, DOE will perform such activities at appropriate DOE facilities. For those other wastes that cannot be disposed of in commercial low level waste facilities, DOE may also assume responsibility for removal, storage, and disposal to the extent that the licensee provides reimbursement to the DOE. These activities will be undertaken to the extent consistent with appropriate statutory authority. NRC licensing of DOE facilities that are utilized for storage, processing or disposal of TMI-2 accident generated wastes will not be required since these facilities have primary uses other than for receipt and storage of wastes resulting from licensed activities.

The DOE will provide technical support to the licensee and the NRC as deemed appropriate.

DOE will work closely with the NRC and keep NRC informed of DOE's activities.

IV. Currently Identified TMI-2 Accident Generated Solid Radioactive Wastes

The following lists those TMI-2 accident generated solid radioactive wastes which currently exist or are planned to be generated. This listing may be modified in the future as the cleanup progresses.

1. EPICOR-II System Wastes

Forty-nine ion exchange resin liners with loadings up to 1500 curies/liner are in temporary storage at the TMI-2 site. DOE plans to develop a prototype high integrity container (HIC), production units of which, if utilized by the licensee, may allow these liners to be acceptable for licensed disposal in commercial land burial facilities some 1-2 years from now. DOE is also performing characterization experiments on one of these liners and may find it desirable to extend its R&D program to other liners. Should a more expeditious handling of these wastes be required due to the potential for a limited release to the storage environment (which could cause public concern), a contingency plan will be implemented wherein DOE would at its discretion take receipt of these EPICOR liners on a reimbursable basis from the licensee for storage or disposal. Future EPICOR-II liners are anticipated to be loaded to allow commercial shallow land disposal offsite by the licensee.

2. Submerged Demineralizer System Wastes

It is anticipated that the dispersed radioactivity in accident generated water will be deposited on zeolites in submerged demineralizer system (SDS) liners. Due to the unique character and nature of these wastes, DOE will take possession of and retain these liners to conduct a waste immobilization research and development and testing program.

3. Reactor Fuel

Following removal of the damaged core from the reactor vessel, the entire core will be shipped to a DOE facility to survey and select those portions most appropriate for DOE's R&D program. Information obtained from detailed examinations is expected to be of generic benefit to design, fabrication and operation of reactor cores in a safe and efficient manner for current and future nuclear power plants. The remainder of the core will remain in storage at the DOE facility and will be ultimately disposed of under an agreement to be negotiated between DOE and the owner.

4. Transuranic Contaminated Waste Materials

As the cleanup progresses, some waste materials (e.g., sludges) may be found to be contaminated with transuranics at levels above which commercial low level burial facilities are authorized to accept. Alternatives for such material will be considered on a case-by-case basis and could include archiving, R&D evaluation or temporary storage onsite, or at a DOE facility awaiting further processing and/or disposal in a permanent repository offsite. Depending on the nature of these materials, DOE's activities could either take the form of an R&D program of generic value, or would be subject to reimbursement by the licensee.

5. Makeup and Purification System Resins and Filters

During the TMI-2 accident, the makeup and purification system demineralizer vessels and filters were highly contaminated by letdown

of reactor coolant through the system. These resins and filters have not been characterized, however, based on radiation measurements, the resins and filters are believed to have specific activities well in excess of the loadings on the high specific activity EPICOR-II prefilters and are considered unsuitable for commercial land disposal. Due to the generic value of the information to be obtained and the very high specific activities of the filters, DOE will take possession and retain these filters for research and development activities. DOE will also take possession of and retain purification system resins either for an R&D program of generic value or for storage or disposal on a reimbursable basis.

6. Other Solid Radioactive Wastes

The low-level wastes associated with decontamination (e.g., some ion exchange media, booties, gloves, trash) will be disposed of by the licensee in licensed commercial low level burial facilities.

- V. This Memorandum of Understanding will take effect when it has been signed by the authorized representative indicated below for each agency. DOE and NRC shall each have the right with the consent of the other party to modify this agreement.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

FOR THE U.S. DEPARTMENT OF ENERGY

Bernard J. Snyder
Bernard J. Snyder, Program Director
TMI Program Office
Office of Nuclear Reactor Regulations

Date: 3/15/82

Franklin E. Coffman
Franklin E. Coffman
Deputy Assistant Secretary for
Nuclear Waste Management and
Fuel Cycle Programs
Office of Nuclear Energy
Date: 3/15/82