



A-3 3

POLICY ISSUE (Information)

July 23, 1981

SECY-81-446

For: The Commissioners

From: Executive Director for Operations

Subject: NRC-DOE MEMORANDUM OF UNDERSTANDING CONCERNING THE REMOVAL AND DISPOSITION OF SOLID NUCLEAR WASTES FROM CLEANUP OF THE THREE MILE ISLAND UNIT 2 NUCLEAR PLANT

Purpose: To transmit subject Memorandum of Understanding.

Discussion: On July 15, 1981, the subject Memorandum of Understanding (MOU) was signed by Bernard J. Snyder, Program Director, TMI Program Office for the NRC (under Delegations of Authority provided by the EDO and Director, NRR) and Franklin E. Coffman, Acting Director, Office of Coordination and Special Projects (Office of Nuclear Energy) for DOE (Attachment 1). This MOU formalizes the working relationship between the two agencies with respect to the removal and disposition of solid nuclear wastes generated during the cleanup of TMI-2. It also represents a significant step towards ensuring that the TMI site does not become a long-term waste disposal facility. It should be noted that liquid wastes resulting from cleanup activities are not covered within the scope of the MOU.

The need for the development of a MOU on this matter was previously discussed in the Senate Report (No. 97-113) accompanying NRC's pending FY 82-83 Authorization Bill (S.1207). As drafted, Section 304 of the Authorization Bill entitled "Three Mile Island Waste Amendment", would require the NRC to enter promptly into a MOU with DOE specifying interagency procedures for the removal and disposition of radioactive materials resulting from the cleanup of TMI-2. The staff believes the agreement just concluded satisfies this proposed requirement.

Contact:
B. J. Snyder, TMIPO:NRR
492-7761

PDR

810814025

XA

The memorandum addresses the following three basic categories of TMI-2 waste:

- (1) Wastes determined by DOE to be of generic value in terms of beneficial information to be obtained from further R&D activities (the MOU calls for DOE to perform such R&D activities at appropriate DOE facilities).
- (2) Wastes determined to be unsuitable for commercial land disposal due to high levels of contamination, but which DOE may also assume responsibility for their removal, storage and disposal on a reimbursable basis from the licensee, and
- (3) Wastes considered suitable for shallow land burial which are to be disposed of by the licensee in licensed, commercial low-level burial facilities.

The MOU specifically highlights currently identified TMI-2 wastes, e.g., EPICOR-II system wastes, submerged demineralizer system wastes, reactor fuel wastes, etc. However, the agreement also anticipates future modifications in the wastes to be covered as the cleanup progresses.

A Federal Register Notice and a draft press release (Attachment 2) pertaining to the MOU have been prepared by the staff for issuance next week. In addition, copies of the MOU will be sent to appropriate Congressional Committee Chairmen as well as several members of the Pennsylvania delegation (Attachment 3).



William J. Dircks
Executive Director for Operations

Enclosures:

1. Memorandum of Understanding
2. Draft Press Release
3. Draft Congressional letter
and Committee List

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

The present plan for the damaged core is to remove the fuel, provide appropriate fuel assemblies and samples to DOE for analysis characterization and archiving, place the balance in fuel storage

containers, and store the fuel in the TMI Unit 2 spent fuel storage pool. As is the case with other nuclear power plant spent fuel, disposition of the balance of the TMI-2 fuel will await resolution of the spent fuel storage issue.

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's activities regarding the purification system resins will either take the form of an R&D program of generic value, or DOE will take possession of these resins 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, Program Director
TMI Program Office
Office of Nuclear Reactor Regulations

Date: 7/15/81



Franklin E. Coffman
Acting Director
Office of Coordination and
Special Projects
Office of Nuclear Energy

Date: 7/15/81

DRAFT PRESS RELEASE

NRC STAFF AND DOE SIGN MEMORANDUM
ON THREE MILE ISLAND WASTES

The Nuclear Regulatory Commission staff and the Department of Energy have signed a memorandum of understanding which specifies interagency procedures for removing and disposing of certain radioactive wastes resulting from the Three Mile Island 2 accident.

Under the agreement, the NRC will be responsible for regulating all licensee activities--including waste management--at the Three Mile Island site to assure that the activities comply with applicable rules and regulations and the licensee's operating license as modified.

In addition, the NRC staff will continue to keep public, state and local officials informed of its activities and involve Department of Energy officials in information exchanges with these officials, as appropriate.

For its part, the DOE, where it determines that generically beneficial research, development and testing of the Three Mile Island-accident generated solid wastes can be carried out, will perform such activities at appropriate DOE facilities.

For other solid radioactive wastes resulting from the accident and which cannot be buried at commercial low level waste sites, the Department may assume responsibility for removal, storage and disposal of the wastes--to the extent that

the licensee provides reimbursement. Such activities also would have to be undertaken in a manner consistent with the agency's statutory authority.

DOE facilities used to store, process or dispose of accident-generated wastes will not have to be licensed by the NRC. This reflects the fact that the facilities primarily are used for purposes other than the receipt and storage of radioactive wastes resulting from activities licensed by the NRC.

The two agencies also agree to keep each other informed of their activities and the DOE will provide technical support to the licensee and the NRC as appropriate.

The solid, accident-generated wastes presently existing or expected to be generated include: resin liners from the EPICOR-II system used to decontaminate water stored in the auxiliary building; zeolite liners from the submerged demineralizer systems being used to decontaminate water in the reactor building and reactor coolant system; the reactor fuel; waste materials such as sludge which may be contaminated with levels of transuranic radioactive materials unacceptable for commercial disposal; and resins and filters from the reactor water makeup and purification systems.

DRAFT LETTER



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

Docket No. 50-320

The Honorable Morris K. Udall
Chairman, Subcommittee on Energy
and the Environment
Committee on Interior and Insular Affairs
United States House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

The Nuclear Regulatory Commission has recently entered into a Memorandum of Understanding with the Department of Energy concerning the removal and disposition of solid nuclear wastes from the cleanup of the Three Mile Island Unit 2 nuclear plant. A copy of this memorandum is enclosed for your information.

Sincerely,

William J. Dircks
Executive Director for Operations

Enclosure:
Memorandum of Understanding

cc: The Honorable Manuel Lujan, Jr.

Copies of the MOU will also be sent to:

HOUSE OF REPRESENTATIVES:

1. The Honorable Richard L. Ottinger
Chairman, Subcommittee on Energy Conservation and Power
Committee on Energy and Commerce

cc: The Honorable Carlos J. Moorhead

2. The Honorable Toby Moffett
Chairman, Subcommittee on Environment, Energy and
Natural Resources
Committee on Government Operations

cc: The Honorable Joel Deckard

3. The Honorable Tom Bevill
Chairman, Subcommittee on Energy and Water Development
Committee on Appropriations

cc: The Honorable John T. Meyers

SENATE:

1. The Honorable Mark O. Hatfield
Chairman, Subcommittee on Energy and Water Development
Committee on Appropriations

cc: The Honorable J. Bennett Johnston, Jr.

2. The Honorable James McClure
Chairman, Committee on Energy and Natural Resources

cc: The Honorable Henry Jackson

3. The Honorable Alan K. Simpson
Chairman, Subcommittee on Nuclear Regulation
Committee on the Environment and Public Works

cc: The Honorable Gary Hart

4. The Honorable Charles Percy
Chairman, Subcommittee on Energy, Nuclear Proliferation
and Government Processes
Committee on Governmental Affairs

cc: The Honorable John Glenn

PENNSYLVANIA DELEGATION:

1. Senator Arlen Specter
2. Senator John Heinz
3. Representative Allen Ertel
4. Representative William Goodling
5. Representative Robert Walker