

February 27, 1981



SECY-81-133

POLICY ISSUE
(Commission Meeting)

For: The Commission

From: Executive Director for Operations

Subject: PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT ON THE DECONTAMINATION AND DISPOSAL OF RADIOACTIVE WASTES RESULTING FROM THE MARCH 28, 1979 ACCIDENT AT THREE MILE ISLAND NUCLEAR STATION, UNIT 2

Purpose: To provide the Commission with copies of the final Programmatic Environmental Impact Statement on the Decontamination and Disposal of Radioactive Wastes Resulting from the March 28, 1979 accident at Three Mile Island, Unit 2 and to provide a proposed Statement of Policy by the Commission on this Programmatic Statement.

Discussion: In its Statement of Policy and Notice of Intent to Prepare a Programmatic Environmental Impact Statement of November 21, 1979, the Commission directed the staff to prepare such a statement on the decontamination and disposal of radioactive wastes resulting from the March 28, 1979 accident at Three Mile Island, Unit 2. We are forwarding to you, for your information, advance copies of the final Programmatic Environmental Impact Statement (PEIS) (Enclosure 1).

The PEIS is being printed and adequate copies will be made publicly available at the scheduled March 9 briefing for the Commission. Formal notification of the availability of the PEIS will be published in the Federal Register (Enclosure 2). Enclosure 3 is a press release prepared by PA and Enclosure 4 is a proposed Statement of Policy relative to the PEIS for your consideration.

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SECY NOTE: This paper is virtually identical to advance copies which were circulated to Commission offices on February 27, 1981. The only difference is renumbering of the paper from SECY-80-2452 to SECY-81-133. The paper is currently scheduled for a briefing at an Open Commission meeting on Monday, March 9, 1981.

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The PEIS was developed by the Three Mile Island Program Office, NRR, with the assistance of Waste Management Division, NMSS. ELD has provided legal review. Argonne National Laboratory, under contract to NRC, was a major participant in preparing the PEIS.

Preparation of this final statement has had the benefit of extensive comments from government agencies and the public on the draft PEIS which was issued in August 1980. During the comment period, which was extended to November 20, 1980, 31 meetings were held with the public, local officials and interested groups on the draft PEIS. Verbatim transcripts were made of many of these meetings and relevant oral comments recorded are responded to in the final PEIS, along with written comments received. The staff also met with representatives of the Environmental Protection Agency and the states of Pennsylvania and Maryland. Comments were not received from the Commission's Advisory Panel on the Decontamination of TMI-2 prior to completion of the PEIS. However, based on our understanding of the Advisory Panel's concerns, the staff believes that most of the panel's comments will have been considered in the changes that have been made in the draft PEIS. Furthermore, the final PEIS is, in the staff's opinion, responsive to the comments provided to the Environmental Protection Agency by a specially constituted independent scientific assessment panel.

The staff's efforts to be responsive to the comments have resulted in a variety of changes, particularly in Chapters 5 through 8 which some persons found confusing. While the organization of those chapters in the draft statement enabled the reader to follow the expected chronological sequence of the cleanup activities, it also had the disadvantage of scattering information on particular subjects, such as processing contaminated water from several plant locations, through various parts of the document. The material in these chapters has been reorganized so that discussions of similar activities are grouped together in this final PEIS.

To further aid the reader, some of the technical descriptions have been simplified, information has been updated, and additional illustrations have been included. As a further aid, a comprehensive summary, written in a less technical manner, has been included at the beginning of the PEIS for those readers who prefer to follow the main themes of the statement without referring to the technical descriptions, calculations, data, and other details that provide the basis for assessing the cleanup alternatives and their impacts.

Relative economic cost estimates of the alternative methods of performing the cleanup of TMI-2 have also been included, as promised when the draft statement was issued. However, the staff does not regard the addition of cost information (or the other modifications mentioned above) as a substantial change in the content of the document. The differential monetary costs among suitable cleanup methods are small compared to the expected total costs of the cleanup and therefore do not constitute sufficient concern to affect a decision as to which alternatives should be chosen to accomplish the cleanup activities.

The staff's conclusions regarding the costs and benefits of the cleanup of TMI-2 are set forth with a cost-benefit balance in Section 12 (Enclosure 5) of the PEIS. Although cost-benefit analyses are routinely performed by NRC, the cost-benefit balance for the cleanup of TMI-2 is unique. In contrast to studying whether or not to take a significant action such as issuing a construction permit for a nuclear power plant, the situation at TMI-2, in the staff's view, demands that mitigative actions be taken. Specifically, there is a small possibility (which increases with time) of uncontrolled releases of radioactivity to the environment. This radioactivity (600,000 to 700,000 curies in all) is currently contained in the reactor core and distributed throughout the primary coolant system, the water in the reactor building basement, and on equipment and building surfaces. Additionally, there is also a remote possibility of core recriticality, with the attendant generation of additional fission product activity.

The benefits associated with taking some actions to decontaminate and defuel TMI-2 are straightforward. Of overriding importance is the fact that decontamination of the facility and disposition of the wastes would greatly reduce and perhaps eliminate the existing potential for physical harm to the public and to workers at TMI. Completion of the cleanup activities should also alleviate psychological distress in nearby residents and downstream of the plant. One additional benefit from carrying out the cleanup (and the ongoing studies required for its planning and implementation) would be the resulting data and other information which could prove useful in reducing the risks and consequences of future accidents.

Environmental impacts and other costs associated with alternative methods of performing all of the cleanup have been evaluated in

the PEIS. The potential impacts of taking no action (other than maintaining the reactor in safe-shutdown condition), namely uncontrolled releases of radioactivity to the environment and increased risks to occupational workers, are unacceptable and thus resulted in the staff's discounting this alternative. The effects of an early decision to decommission TMI-2 were also considered and the staff found that the choices of alternatives would be affected very little by such a decision because most of the same tasks must be performed in order to remove and dispose of the damaged fuel.

The analysis of potential decontamination impacts contained in the PEIS indicates that feasible techniques exist and can be employed to complete the cleanup with relatively small resulting environmental impacts. Accordingly, the staff has concluded that on balance the benefits of full decontamination greatly outweigh the environmental costs of the cleanup activities.



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Enclosures:

1. Final Programmatic Environmental Impact Statement on the Cleanup of TMI-2 (PEIS) (Copies to Commissioners, SECY, PE & GC only)
2. Federal Register Notice of Availability of PEIS
3. Press Release on Issuance of PEIS
4. Proposed Statement of Policy Relative to the PEIS
5. PEIS Section 12, Conclusions

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ENCLOSURE 1

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ENCLOSURE 2