PDR-016

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

Cross reference
50-320

July 8, 1982

Mr. Don Hancock
Southwest Research and Information Center
P.O. Box 4524
Albuquerque, NM 87106

IN RESPONSE REFER
TO FOIA-82-231

Dear Mr. Hancock:

This is in final response to your letter dated May 11, 1982 in which you requested, pursuant to the Freedom of Information Act, documents relating to the decision by the Department of Energy (DOE) to accept the core of the TMI-2 Nuclear Reactor.

A copy of the documents listed on the appendix are enclosed. The attachment to the letter, appendix item 5, has been referred to the Department of Energy for release determination and direct response to you.

This completes action on your request.

Sincerely,

J. M. Felton, Director
Division of Rules and Records
Office of Administration

Enclosures: As stated

Appendix

1.	1/26/82	Letter to W. V. Roth from N. J. Palladino.
2.	10/20/80	Letter to C. W. Duncan from J. F. Ahearne.
3.	7/23/81	SECY-81-446, 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.
4.	4/19/82	SECY-82-165, Revision of SECY-81-446.
5.	2/19/81	Letter to J. F. Ahearne from M. E. Gates.
		Attachment: October 1980, TMI Zeolite Vitrification Demonstration - Program Plan

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

CHAIRMAN

A-1

SECRETARIAT RECORD COPY

January 26, 1982

The Honorable William V. Roth, Jr.
Chairman, Committee on Governmental
Affairs
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

This letter responds to the recommendations made by the General Accounting Office (GAO) in its report entitled, "Greater Commitment Needed to Solve Continuing Problems at Three Mile Island."

The Nuclear Regulatory Commission, in response to the first GAO recommendation to NRC, notes that it has published a proposed rule which would require power reactor licensees to maintain the maximum amount of commercially available onsite property damage insurance. A voluntary insurance program may be available within the next several months that would cover cleanup costs for damage comparable to that suffered at Three Mile Island -- that is, about $1 billion. If this level of coverage is not obtained through the voluntary actions of the industry, the Commission believes that such action should be mandated.

In response to the second GAO recommendation to NRC, the Commission has directed its staff to develop the scope of guidelines to facilitate recovery efforts in the event of nuclear-related accidents. After evaluating the proposed scope, the Commission will decide whether to proceed further.

Specific comments on the GAO recommendations to the NRC are presented in Enclosure 1. In addition, Commission comments relating to other findings of the GAO study are presented in Enclosure 2.

With respect to the present situation at Three Mile Island, the Commission will assure that NRC attention to TMI-2

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cleanup efforts remains at a high level of priority until the problem is solved.

Sincerely,

Original signed by
Nunzio J. Palladino

Nunzio J. Palladino

Enclosures:
1. Responses to GAO Recommendations to the NRC
2. Commission Comments on Other GAO Recommendations

cc: Sen. Thomas F. Eagleton

Identical letters to:

The Honorable Jack Brooks
The Honorable Alan Simpson
The Honorable Morris K. Udall
The Honorable Richard L. Ottinger
The Honorable Toby Moffett
The Honorable Charles Bowsher
The Honorable David A. Stockman

RESPONSE TO RECOMMENDATIONS TO NRC

Item 1. GAO Recommendation: "Because another nuclear accident at an under-insured utility company could seriously affect public health and safety, we recommend that NRC closely follow the current efforts of the insurance and utility industries to increase insurance coverage to what it determines to be an acceptable level. We further recommend that no later than December 31, 1981, NRC assess the progress being made. This assessment should include an evaluation of the insurance available in the private sector and a determination as to whether a mandated insurance coverage program is necessary."

NRC Response: NRC has been and continues to monitor progress being made by the insurance and utility industries to increase insurance coverage that would pay onsite nuclear accident cleanup costs. While we expect to be able to provide an assessment of such progress, we suggest that the December 31 report due date be extended. The timing of developments and progress toward increasing this insurance coverage on a voluntary basis is dependent largely on actions in the insurance market worldwide and is not determined by NRC.

Concerned about the ability of a licensee to finance the cleanup costs resulting from a nuclear-related accident, the Commission has proposed adoption of an interim rule which would require all licensees for generating power reactors to maintain the maximum amount of commercially available onsite property damage insurance or an equivalent amount of protection. Based on what we have learned thus far from the insurers, we expect that a voluntary insurance program will be available within the next several months that would cover cleanup costs for damage comparable to that suffered at Three Mile Island -- that is, about $1 billion. The increased capacity of the property and cleanup insurance is based to a major extent on utilities agreeing to a retrospective assessment of premiums in the event of a need for property insurance funds greater than that available from the insurers' own reserves. If capacity of some $1 billion or more cannot be developed voluntarily, the Commission believes that the retrospective layer for such insurance should also be made mandatory and the Commission would seek legislation to accomplish this.

Item 2. GAO Recommendation: "To mitigate future regulatory constraints on nuclear accident cleanup activities, we recommend that NRC establish a set of guidelines that would facilitate the development of recovery procedures by utility companies in the event of other nuclear reactor accidents. The preparation of t e guidelines should be initially based on the lessons learned and experience gained from the TMI-2 cleanup and recovery efforts at other nuclear installations. Because a number of years may pass before another comparable accident occurs, NRC should periodically assess the adequacy of its guidelines and standards and evaluate the state-of-the-art technology for decontaminating air and water effluent produced by a nuclear accident to ensure that it can quickly respond to the needs of the regulated utility and adequately protect the public health and safety."

NRC Response: The Commission has directed the NRC staff to proceed with an effort to develop the scope of guidelines which could facilitate recovery efforts in the event of nuclear-related accidents at other operating power plants. A review of this initial effort will be made to determine whether to proceed with further development of appropriate guidelines.

COMMENTS ON OTHER GAO RECOMMENDATIONS AND FINDINGS

The Commission supports strongly the objective of a safe and expeditious cleanup at TMI-2. To further this objective, we support the following GAO recommendations and findings involving other agencies:

Department of Energy (DOE): The Commission believes that DOE should take custody of the radioactive waste generated during the TMI-2 cleanup which is unsuitable for commercial shallow land disposal. The Department should ensure that the TMI waste is not commingled with military wastes so that the issue of NRC regulation of military wastes need not arise. The Commission also supports the current Executive Branch position that it is in the public interest for DOE to provide significant funding to be expended at TMI-2 on research and development. Also, if the DOE were to take responsibility for the removal and disposal of the entire damaged reactor core as well as the radioactive wastes, it could aid one element of the cleanup that at present contains great uncertainty. There is much to be learned from the conditions of the TMI-2 core that has safety ramifications appropriate for DOE study. Furthermore, only DOE (and its contractors) has the technical capability to carry out investigations of the TMI core.

Electric Power Research Institute (EPRI): We would support EPRI's use of utility and reactor manufacturers' funds for research and development at TMI-2. If these funds are contributed to EPRI, the industry would gain valuable insight into the effects of accidents and the behavior of reactor equipment.

Electric Utility Industry: The Commission supports the formation of a property damage insurance pool to cover the cost of cleanup and repair of nuclear plants in the event of an accident in the future. We would not object to allowing GPU to borrow from this insurance pool, with repayment to be made over a multi-year period. The recent recommendation of the Edison Electric Institute that the utility industry provide about $190 million toward cleanup as part of the proposal advocated by Governor Thornburgh could provide another important increment in cleanup funding.

Pennsylvania, New Jersey and GPU: While recognizing that it is discussing areas within the jurisdiction of the states, as part of a cooperative effort to provide for cleanup

funding we would have no objection to measures such as allowing recovery of some portion of TMI-2 cleanup costs in the rate base.[1]

Summary: With respect to financing the costs of the TMI-2 cleanup, the Commission agrees that the options set forth by GAO represent a reasonable range of choices and that some combination of sources of funds is probably the most viable and equitable approach to take (see also the options discussed by the NRC staff in its report "Potential Impact of Licensee Default on Cleanup of TMI-2," NUREG-0689, November, 1980). However, the Commission does not recommend any specific mix of funding sources.

Irrespective of the ultimate form that TMI-2 cleanup funding takes, NRC is prepared to support expeditious actions consistent with ensuring public health and safety. Currently, we maintain professional staffs, located at both headquarters and the TMI site, who are dedicated to quick reviews of cleanup proposals made by the licensee. The Commission will ensure that this kind of NRC attention to TMI-2 cleanup efforts remains a high priority in this agency throughout the cleanup.

[1] Mr. Ahearne would also have no objection to appropriate agencies continuing to allow GPU to defer dividends on common stock. He believes that both actions would be necessary and should be strongly supported, i.e., allowing some portion of TMI-2 clean-up costs to be recovered in rates and a reduction in stockholder return to help fund the clean-up.

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

CHAIRMAN

October 20, 1980

A-2

The Honorable Charles W. Duncan
Secretary of Energy
Washington, D. C. 20545

Dear Mr. Secretary:

As progress is made in the cleanup of TMI-2, additional information becomes available about the nature of the radioactive wastes involved. Through this learning process, it has become evident to the NRC staff that some of the high specific activity wastes resulting from the cleanup operations will be unsuitable for routine disposal at commercial licensed burial grounds. It has been apparent for some time that the spent fuel in the damaged core will have to be considered as high-level waste. In addition, it now appears that other wastes will have some characteristics very similar to high-level waste; typical materials that likely will fall into this category are some of the wastes that will result from processing the reactor building sump water and the reactor coolant system water. The NRC staff considers disposal of these wastes at commercial licensed burial grounds, even with very special provisions, to be unfeasible or unacceptable. The only short-term avenue available for removal of these wastes from the site is transferral to suitable DOE facilities.

The NRC staff believes that the handling and processing of wastes at the TMI site should be limited to well-established operations, such as immobilization of low-level wastes. The site should not become a research, development, and demonstration facility for handling and processing high specific activity wastes which are quite different from normal reactor plant wastes, but which in many ways resemble wastes handled frequently by DOE facilities. Attempting any such advanced operations on site would seriously overburden the utility's technical and management capabilities and could cause unnecessary delays in completing the cleanup. Accordingly, the NRC staff has been working closely with the DOE staff in establishing both short-term and long-term programs to develop information and technology of generic value for radioactive waste management from the TMI-2 cleanup operations. In addition, two meetings have been held with the DOE Assistant Secretary for Nuclear Energy. However, all activities presently being considered by DOE appear to be limited in scope to DOE performing research and development work on limited quantities (10%-20%) of the wastes involved in order to characterize waste processing problems or to develop potential solutions. We understand present DOE planning assumes that the

responsibility for actual waste handling, processing into final disposal forms, and disposal of the bulk of the waste remains with the licensee. If they are not transferred to DOE facilities, we anticipate that the high specific activity wastes which are unique to TMI-2 may have to be retained at the TMI-2 site for tens of years until suitable waste immobilization processes, containers, and facilities are available for the disposal of such wastes.

The staff has serious concerns about the long term stability of the high specific activity (i.e., > 1000 Ci/ft^3) wastes anticipated to be generated at the Three Mile Island site from future cleanup activities. This waste may be in the form of high specific acitivity spent resins or evaporator bottoms from the processing of reactor building sump water. (This waste will also include damaged fuel elements or pieces of fuel elements which will require storage in specially designed sealed containers to preclude the potential spread of radioactivity outside the storage container.) The staff has reservations whether suitable storage containers for spent resins or evaporator bottoms will be able to withstand the macroscopic effects of corrosion, pH change, and gas formation during extended storage (i.e., tens of years).

We do not believe that long term onsite storage of loose resin materials or evaporator bottom slurries is comparable to routine storage of undamaged spent fuel in a fuel pool of a normally operating reactor. In the staff's view, it would be necessary to immobilize the contained activity in the collected solid waste into a solid monolithic form as expeditiously as practicable to eliminate the potential for onsite exposure due to subsequent container failure. This immobilization can best be carried by experienced personnel in a facility designed for that purpose, namely, at one of the existing DOE high level waste handling and processing facilities.

The NRC presently believes that it may be undesirable for radioactive wastes in the forms likely to be produced as a result of cleaning up TMI-2 to be stored at the TMI site for long periods. We are concerned that certain key options for the handling, storage, treatment, or disposal of such wastes are precluded from consideration by the limited scope of activities presently being considered by the DOE staff. In order to further the resolution of the scope of DOE's participation in the management of these wastes, I suggest that we meet in the near future to address these issues in the context of the House Appropriations Committee recent position: "[T]he Department [of Energy] has an overriding public responsibility to assist NRC, the State of Pennsylvania and the utility, as necessary to resolve as quickly as possible an acceptable process to isolate and remove the wastes to a safe disposal site."

Sincerely,

John F. Ahearne