



Department of Energy
Washington, D.C. 20545

Mr. Kelber
September 26, 1979

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Gentlemen:

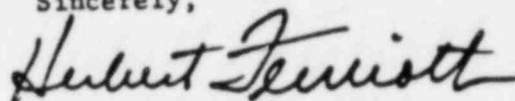
I am enclosing a revised draft of a proposed Memorandum of Understanding for your review and consideration during the next meeting of the Joint Co-ordinating Group scheduled for October 10, 1979 in Washington, D.C. This revised draft incorporates elements of revisions proposed by each organization in commenting on the first draft. I have been unable to incorporate in total the various rewrites sent to me by GPU and NRC, but I have attempted to synthesize the major elements of each rewrite into the revised draft.

I suggest that the agenda for the October 10th meeting include the following items:

1. Review and comment on the enclosed Memorandum of Understanding.
2. Review of results of Technical Working Group report issued on September 21, 1979.

3. Discussion of individual program areas where joint DOE/EPRI funding is being considered to determine mechanisms for interaction.

Sincerely,




Herbert Feinroth, Chief
Nuclear Reactor Evaluations Branch
Division of Nuclear Power
Development

Enclosure

cc:

Milt Levenson, EPRI
W. B. Loewenstein, EPRI
J. W. Crawford, DOE
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R. F. Wilson, GPU
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MEMORANDUM OF UNDERSTANDING

TMI UNIT 2 INFORMATION AND EXAMINATION PROGRAM

1. INTRODUCTION

The TMI Unit 2 accident of March 28, 1979 was and is of great concern to the electric power industry, its customers, regulatory and other government agencies and the country as a whole. While the accident resulted in only limited radiation exposure and no other harm to the population surrounding the power plant, the plant itself suffered extensive damage with high radiation contamination within the nuclear and other supporting systems and facilities. As unfortunate as the accident was, TMI Unit 2 currently presents unequalled opportunities to provide information for the enhancement of nuclear power plant safety and reliability and great generic benefit to nuclear power technology. Direct benefits will flow to the country and to the nuclear industry; both from the normal recovery activities of returning TMI Unit 2 to safe commercial operation, as well as related specific research and development activities. Four organizations, the Electric Power Research Institute (EPRI), the Nuclear Regulatory Commission (NRC), the Department of Energy (DOE), and the General Public Utilities Company (GPU) have a common interest in assuring that this generic information is obtained during the course of recovery. This memorandum of understanding identifies the broad areas of common interests, and objectives to which the signatories subscribe, and lays out in broad terms methods by which the signatories have agreed to interact in an effort to achieve these objectives consistent with the other obligations of the signatories.

2. OBJECTIVES

The TMI Unit 2 accident represented one of the most severe integral tests of nuclear plant safety philosophy and safety systems ever encountered in a light water reactor. The extent of damage to the reactor core and the subsequent release of fission products to the primary system, containment, and elsewhere is the most extensive experienced in any known commercial Light Water Reactor power system. The physical extent and levels of resultant contamination are among the highest experienced by the industry.

The environmental conditions within containment and the reactor system were quite severe. The recovery of TMI Unit 2 back into safe commercial operation will be one of the most technically challenging decontamination and radioactive waste management activities undertaken. These circumstances, the current plant status, as well as required recovery activities represent opportunities for state of the art advancement not available through normal research, development, and test programs. Thus, it is our common belief and our common objective that:

- significant applicable information stemming from the TMI Unit 2 accident be obtained and made available for the general improvement of Light Water Reactor plant safety and reliability, both in the United States and abroad.
- unique data and experience at TMI Unit 2 be integrated into ongoing government and EPRI research and development programs as may be beneficial

- the opportunities to learn and benefit from recovery of TMI Unit 2 to safe commercial operation be exploited for the maximum benefit of the country
- most effective use be made of the combined resources of government and industry
- experience to be gained from recovery of TMI Unit 2 into safe commercial operation be made generally available to others, both here and abroad, that are engaged in the design, construction, operation and maintenance of nuclear power plants.

The signatories believe that the stated objectives above should be pursued to the benefit of the country and are in the best interest of the Nation in this time of great energy uncertainty.

3. COMMON INTERESTS

Major areas of common interests are, and work is expected to be undertaken in the following:

- a) The development and reporting of information on the performance of instrumentation, electrical and mechanical equipment within the reactor containment building during and after the accident. This effort will encompass work on plant systems and components whose performance is of importance to general generic improvements in light water reactor safety and reliability. Information which could lead to improvements in component and system standards and design features will be included.

- b) The development of information on fission product behavior, transport and disposition, particularly as this may contribute to a better understanding of nuclear plant accident scenarios.
- c) The development of information and the development and testing of new technology of potential industry wide application in the fields of
 - plant, system and equipment decontamination
 - radioactive waste processing and disposal methods and systems
 - post-accident pressure vessel component testing and qualification technology
 - removal, packaging, transportation, storage and disposal of substantial quantities of damaged nuclear fuel.
- d) The development and reporting of information on the nature and extent of physical damage to surfaces, structural components and equipment within the reactor containment building as a result of the accident.
- e) The establishment and effective utilization of a common data bank for all information generated during the recovery and related examination efforts.
- f) The development and reporting of information on the nature and extent of core damage, with the objective of understanding the chemical, metallurgical and physical behavior of fuel, clad and core components during and after the accident.

Recognizing that other areas of common interest may arise, that the possibility exists for discovering conditions not previously anticipated, or of new questions arising at some future time not presently being considered, the signatories agree that an archival system be established under which specimens of hardware or other samples may be stored off-site for possible future examination and testing.

4. COORDINATING GROUP

To provide a forum for effectively guiding and reconciling, where necessary, the various activities which may be undertaken in association with TMI recovery, a Coordinating Group will be formed to which each signatory will appoint one senior representative. The group will act to provide an integrated overview of activities associated with TMI, to provide a means for priority assessment of the expected large numbers of peripheral data and technology tasks, and to provide a means for the review and integration of activities ancillary to the recovery of the Unit. The Coordinating Group will function to permit the fullest necessary management interaction of the parties. It will serve as one means to identify facility, equipment, personnel and financial resources for the accomplishment of common goals.

The Joint Co-ordinating Group will meet periodically (initially about once every two months) to consider policy matters, with responsibility for chairing each meeting alternating between the EPRI and the DOE representatives.

The Co-ordinating Group will develop a charter to implement the general understandings contained in the memorandum, and to form such subgroups or interact with such other parties as to facilitate common interests herein identified.

5. TECHNICAL WORKING GROUP

To assist the Co-ordinating Group in its efforts, the signatories agree to establish a Technical Working Group. The purpose of this group is to help define the technical work that should be done in furthering the objectives of this memorandum of understanding, to recommend the technical scope of work that should be done to the Joint Co-ordinating Group, and to oversee the technical work as it progresses and recommend necessary changes and additions.

Each signatory shall appoint three members to the technical working group. Meetings shall be chaired by EPRI and DOE representatives and shall be held periodically as needed to perform its functions.

6. INTEGRATION OF INFORMATION GATHERING AND TECHNOLOGY DEVELOPMENT ACTIVITIES

In furtherance of the objectives of this memorandum, it is expected that specific activities will be conducted on-site to secure data and equipment for examination and to demonstrate the use of new technologies of generic interest. The following understandings will govern these "on-site" activities.

- a) All work within the reactor and auxiliary buildings will be arranged for and controlled and executed by GPU and its contractors.

- b) A single "Technical Integration" office will be established who will interface with GPU and its recovery contractor and represent the interests of the Joint Co-ordinating Committee in securing data and equipment samples and seeing that they are properly dispersed.
- c) The "Technical Integration Office" will be responsible to:
- acquire data that may be made available by GPU or its contractors and assure that this data gets incorporated into the data base;
 - issue periodic reports to the member organizations on data being obtained;
 - arrange to monitor and observe the acquisition of data, subject to the approval and control of GPU; and
 - take possession of equipment removed by GPU and its contractors, where prior contractual agreement has been arranged, and arrange to ship this equipment to archival storage or an examination site as appropriate.
- d) The Department of Energy will take the lead in establishing this "Technical Integration Office." The General Public Utilities agrees to make space available, on a reimbursable basis, to provide office space for up to _____ persons to staff this office.
- e) As a general rule, any on-site work desired by NRC and agreed to by the parties will be arranged through the DOE and the "Technical Integration Office."

- f) Work sponsored by the EPRI to be conducted on site will be arranged separately by EPRI, but every effort will be made to involve the "Technical Integration Office" in the acquisition and dispersal of data and equipment to be examined.

7. STATEMENT OF LIMITATIONS

It is understood that the TMI Unit 2 owners and customers have a strong interest in the return to safe commercial service of TMI Unit 2. Each party to this memorandum of understanding will continue to implement their own individual programs. Further, this memorandum of understanding is not intended to be contractually binding nor is anything intended to act to relieve or compromise the licensing responsibilities of the Metropolitan Edison Company (a member of the GPU System). Nothing is intended to affect, modify or to act to change the internal management, structure or responsibilities of each of the participating groups individually.

Signed:

DOE

NRC

EPRI

GPU