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File TMI-2

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

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MEMORANDUM FOR: R. Vollmer, Acting Assistant Director
for Systematic Evaluation Program

THRU: C. Kelber, Assistant Director
for Advanced Reactor Safety Research

FROM: R. Foulds, Assistant Chief
for Gas-Cooled Reactor Safety Research

SUBJECT: TMI-2 POST ACCIDENT EXAMINATION MEMORANDUM OF
UNDERSTANDING (AMONG DOE, EPRI, GPU & NRC)

Enclosed for your information and comment is a copy of the latest draft version of the subject "MOU," revised as agreed upon among the Joint Coordination Group meeting October 26, 1979. NRC attorneys have commented that a statement ought to be included which would negate liability of the MOU parties for any injury received under the proposed activities. Except for such small changes this is likely a final draft, ready for signature consideration.

Please note that each of the four concerns you expressed about the earlier draft in your November 2, 1979 memorandum to S. Levine have, in our opinion, been satisfied in this new version.

Ronald B. Foulds

Ronald B. Foulds, Assistant Chief
Experimental Gas-Cooled Reactor
Safety Research Branch

Enclosure: Draft Memorandum of
Understanding

MEMORANDUM OF UNDERSTANDINGTMI UNIT 2 INFORMATION AND EXAMINATION PROGRAM1. 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 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. TMI Unit 2 currently presents opportunities to provide information for the enhancement of nuclear power plant safety and reliability of generic benefit to nuclear power technology. Four organizations, the Department of Energy (DOE), the Electric Power Research Institute (EPRI), the General Public Utilities Company (GPU), and the Nuclear Regulatory Commission (NRC), have a common interest in assuring that this 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 commercial 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 light water reactor power system.

The environmental conditions within containment and the reactor system pose one of the most technically challenging decontamination and radioactive waste management situations ever encountered. These circumstances represent opportunities for state of the art advancement not available through normal research, development, and test programs. Thus, it is our common objective that:

- significant applicable information stemming from the TMI Unit 2 accident be obtained and made available or the general improvement of light water reactor plant safety and reliability.
- unique data and experience at TMI Unit 2 that will be obtained during the plant decontamination and assessment of status be integrated into ongoing government and EPRI research and development programs as may be beneficial. This information will be made generally available to others engaged in the design, construction, operation and maintenance of nuclear power plants.
- information and experience of value to all parties be obtained during GPU's planned return to service program.

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. To this end, most effective use should be made of the available resources of government and industry.

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 and auxiliary buildings 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 designs and standards and plant operability, especially under abnormal conditions will be included.
- b) The development of information on fission product behavior, transport and deposition, 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 and other primary coolant system pressure boundary testing and qualification technology
 - removal, packaging, transportation, storage and disposal 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 and auxiliary buildings as a result of the accident.
- e) The establishment and effective utilization of a common data bank for all information gathered under this agreement.
- 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, core components, and related reactor internals 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. JOINT 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 Joint 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 Joint Coordinating Group will function to permit the most 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 Coordinating 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 Coordinating 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 Joint Coordinating Group, the signatories agree to establish a Technical Working Group (TWG) whose functions are:

- (a) define the technical work to be done and prepare an integrated plan for such work.
- (b) to provide detailed technical scope of work for specific tasks to be performed under the plan, and
- (c) to provide technical oversight of such work, including recommendations for necessary changes and additions.

The TWG shall consist of technical experts appointed by each signatory. Three members shall initially be appointed by each signatory but the composition may be changed to meet specific needs or altered conditions. The TWG shall meet periodically as needed and the meetings shall be chaired by DOE and EPRI representatives. The results of these meetings shall be reported to the Joint Coordinating Group.

6. TECHNICAL INTEGRATION OFFICE

To assist the Joint Coordinating Group, the signatories further agree to establish a Technical Integration Office (TIO) with functions as noted below. Since some of these functions are expected to involve onsite work, the parties agree to the following understandings regarding such onsite activities:

- (a) All work within the reactor and auxiliary buildings will be arranged for, controlled, and executed by GPU and its contractors.
- (b) GPU will make office space available, on a reimbursable basis, within or proximate to the site boundary, for the Technical Integration Office.

The functions of the Technical Integration Office shall include:

- (a) The TIO shall be the interface between GPU and its contractors on the one hand, and the Joint Coordinating Group and its representatives on the other, for all matters related to work carried on pursuant to this agreement. This shall in no way be interpreted to extend to the normal requirements for information required for licensing or inspection and enforcement activities of the NRC, where existing channels shall continue to be used as appropriate.
- (b) In coordination with GPU, the TIO shall assist in identifying the schedule of specific activities to be conducted onsite pursuant to this agreement, arranging for the carrying out of these activities, the monitoring of these activities, and the reporting of data, selection and shipment of samples, etc.

- (c) Review, in coordination with TWG and GPU, proposed procedures related to activities conducted pursuant to this agreement so as to assure high likelihood of success of task objectives.
- (d) For all activities, whether onsite or offsite, actually carried out pursuant to this agreement, provide for the systematic collection and collation of information obtained so that such information may be freely accessible to any interested party. To this end, the TIO will maintain liaison with the TWG to define data to be collected, report format, and reporting schedule.
- (e) Work performed pursuant to this agreement which is sponsored by the Government shall be contracted for by the TIO.
- (f) Work performed pursuant to this agreement which is sponsored by EPRI shall be contracted for by appropriate means and the TIO shall be fully cognizant of the contractual arrangements so that it can perform its other integration, scheduling, interface, and information collection functions listed above.
- (g) The TIO shall establish, and maintain, a system for controlling changes to the work scope that may arise from time to time. This system shall be approved by the TWG.

The TIO will be established, manned and funded by DOE. Representatives of organizations in the TWG may be attached to the TIO to assist in administering the functions of the TIO, including technical oversight of specific tasks conducted pursuant to this agreement.

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 of this memorandum of understanding will 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 responsibilities of the General Public Utilities Company or its subsidiaries under their licenses from Government agencies. 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

EPRI

GPU

NRC