

50-289



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

June 19, 1997

Mr. James W. Langenbach, Vice President
and Director - TMI-1
GPU Nuclear Corporation
P.O. Box 480
Middletown, PA 17057

SUBJECT: REQUEST FOR PROBABILISTIC RISK ASSESSMENT TMI, UNIT NO. 1 -
(PRA) DATA

Dear Mr. Langenbach:

The U.S. Nuclear Regulatory Commission (NRC) requests that GPU provide an electronic copy of the latest probabilistic risk assessment (PRA) data and information for the Three Mile Island Unit One (TMI-1) plant for inclusion in the NRC's "library" of plants. The databases are being developed for use with the NRC's Systems Analysis Programs for Hands-on Integrated Reliability Evaluations (SAPHIRE) code. These databases are used by the NRC to evaluate significant effects based on plant-specific data, to resolve generic safety issues, and to respond to "what if" type questions. Thus, the databases benefit not only the NRC, but the nuclear industry as a whole.

There are currently 21 plant databases included in the library. Of the 21, full-scope databases have been developed for the Dresden Station, the River Bend Unit 1 plant, and the San Onofre Station. Efforts are currently under way to upgrade some of the earlier SAPHIRE databases and to add new databases for other plants. A full-scope database is defined as one that allows the user to develop all sequence accident cut sets using a direct event tree to fault tree linking approach. There has been no B&W plant in the database, and resolution of certain generic safety issues has been hampered by that lack of completeness. An electronic copy of the Oconee PRA has recently been received, and will be entered into the database shortly. The TMI-1 PRA will be a useful addition for at least two reasons. First, it has already been identified as a superior PRA, and second, analyses will be less traceable to a single plant if there is more than one in the overall database. It may also prove to be useful to use parts of the two PRAs instead of relying on a single one.

While it is not possible to predict what future use would be made of the database, the first use may be to complete resolution of a generic safety issue involving postulated failure of small relief valves in emergency cooling systems. A study using GE, Westinghouse and Combustion Engineering plant PRAs has already been completed.

The databases for the SAPHIRE code are being developed under a subcontract with the Idaho National Engineering Laboratory (INEL). Therefore, it is requested that you provide INEL with the Level 1 PRA data in electronic form, and information needed to develop a database for Three Mile Island Unit One. The PRA data and questions regarding the database development effort should be directed to Mr. Richard D. Fowler of the Lockheed Idaho Technologies Company

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Mr. James W. Langenbach

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(LITCO), MS 3850, P.O. Box 1625, Idaho Falls, ID 83415. It is also expected that GPU may need to provide some limited support to LITCO in resolving questions or concerns regarding the PRA.

GPU will be provided a copy of the database and the SAPHIRE code when the database input is completed. Should you have any questions regarding this matter, we will be pleased to discuss them with you. We appreciate your assistance on this effort.

Sincerely,

Original signed by

Bart C. Buckley, Senior Project Manager
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

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cc: See next page

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Three Mile Island Nuclear Station, Unit No. 1

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