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RES Files
Subject File No. R-2912.01.01
Task No.
Research Request No.
FIN No.
NUREG No.
Docket No.
Rulemaking No.
Other
Return NRC-318 to RES, Yes__ No__

JUN 28 1985

Mr. Vincent S. Boyer
Senior Vice President
Philadelphia Electric Company
2301 Market Street
Philadelphia, Pennsylvania 19101

Dear Mr. Boyer:

The Office of Nuclear Regulatory Research of the Nuclear Regulatory Commission (NRC) is engaged in a task to update the probabilistic risk assessment (PRA) results on five U.S. LWRs. These plants are Surry, Peach Bottom, Sequoyah, Grand Gulf and Zion, and the task is limited to accident sequences resulting from internal initiators. This task will provide part of an information base to be used by NRR to interact with IDCOR in their development of a proposed methodology for resolving severe accident issues for plants without PRAs, and to assist in developing a regulatory position on the appropriate role that risk insights should play in the regulation of nuclear power.

I appreciate very much your voluntary offer to permit our contractor (Sandia National Laboratories--SNL) to conduct a 5-day familiarization visit at your plant for approximately six people. This visit will permit a more realistic evaluation of your plant, including obtaining up-to-date information on any risk-important hardware and procedure modifications that have taken place since the PRA on your plant was completed. Such a realistic evaluation is crucial to the process of drawing accurate, plant-specific perspectives on plant risk and the principal contributors to that risk. The desired dates for this visit are July 22-26, 1985.

Our contractor will be interacting with your plant personnel on this plant familiarization process. The person at SNL responsible for overall management of the five-plant reassessments is Mr. Frederick T. Harper (505-846-1975). The contractor's team leader for your plant is Mr. Alan Kolaczkowski, Science Applications International Corporation, (505-247-8787). I would appreciate your naming a central point of corporate contact within your organization. Also, I need the name of the plant contact for day-to-day interactions. If you could provide these names by telephone, I would appreciate it greatly. Communications between the team leader and appropriate plant personnel should be as direct as possible to facilitate information exchange. However, I would like to be informed of any major problems that might arise that potentially could affect the quality of the work or the timeliness of its completion.

The plant familiarization process involves several aspects:

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1. The team will need access to selected P&IDs, elementary diagrams and emergency operating procedures. A list of items that will be needed is included as Enclosure 1. It would help the team considerably if they were able to get some of these diagrams and procedures prior to the plant visit. The team will be in touch with the plant to discuss these needs.

2. The visit will include a walk through and discussions with selected engineers and operators. Enclosure 2 characterizes the type of personnel that the team will need to talk to. Again, the team will discuss their specific needs with the plant.

3. Examples of the types of questions that will be asked are provided as Enclosure 3. The team will provide a list of specific questions prior to the plant visit.

4. The team will need a continuing informal communications channel with the plant after the visit to answer quick turnaround questions.

5. After the analyses are completed (3 or 4 months after the plant visit), a revisit will be scheduled to confirm those plant features and procedures that appear to be most important to risk.

The above identifies the minimum needs to provide reasonable assurance that the team uses the proper information in the analyses. If you wish to provide even more support to this project to ensure as realistic an assessment of your plant as possible in the limited time available, we would certainly be agreeable. For example, it would be very useful to have a knowledgeable engineer or operations person spend a couple of weeks with the team at Albuquerque, New Mexico to provide prompt, first-hand support to the analysts.

Thank you again for your cooperation. The result of the plant visit will clearly be important to the accuracy, quality, and realism of the analyses and will definitely have a subsequent potential impact on regulation. We look forward to working with you on this demanding task.

Sincerely,

/S/

Malcolm L. Ernst, Deputy Director
Division of Risk Analysis and Operations
Office of Nuclear Regulatory Research

Enclosures:
As stated

cc: Fred Harper, SNL
Tony Eng, NRC

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Enclosure 1

Procedures and Diagrams Necessary for Peach Bottom Analysis*

Procedures

1. Loss of Station Power
2. Station Blackout
3. Loss of One AC Bus (safety only) 4160 volt
4. Loss of One DC Bus
5. Loss of Power Conversion System (loss of feedwater, condenser vacuum, ...)
6. Turbine Trip
7. Loss of Cooling Water (RBCCW, ESWS, HPSWS, ...)
8. Loss of One 120 VAC Vital Bus
9. Loss of Instrument Air
10. Inadvertent SRV Opening
11. MSIV Closure Event
12. Containment Venting
13. LOCA Event
14. Any other specific procedures/guidelines impacting the plant's specific implementation of the EPG's
15. Maintenance/test (human reliability expert will elaborate)

Elementary Wiring Diagrams (one-lines and/or schematics)

1. AC/DC Distribution System
2. Emergency AC (including DC power, air...for diesels)
3. For systems that we need P&IDs except HVAC, Instrument Air, PCS

Piping and Instrumentation Diagrams and Functional Control Diagrams

1. NSSS Instrumentation
2. Residual Heat Removal (including Low Pressure Coolant Injection)
3. High Pressure Coolant Injection/High Pressure Core Spray
4. Reactor Core Isolation Cooling System
5. Low Pressure Core Spray System
6. Automatic Depressurization System
7. Control Rod Drive System
8. Standby Liquid Control
9. Service Water Systems (RBCCW, ESWS, HPSWS ...)
10. HVAC Systems that support systems above as well as electric power
11. Instrument Air
12. PCS (from Steam to Feedwater)

List of Post-TMI Modifications (and post PRA)

Layout Drawings--Reactor Building and Control Building

(Only to determine accessibility to areas for recovery and potential common modes from a HVAC point of view.)

*Additional request by our human reliability and data experts may follow.

Enclosure 2

Plant Personnel that We Need to Meet with During Plant Visit

- System engineers
- Instrumentation and electrical engineers
- T&M personnel
- Operators
- Maintenance Personnel
- Anyone utility recommends to answer types of questions listed in Enclosure 3 for systems of interest.

Enclosure 3

Types of Questions to be Addressed on Plant Visit

Will focus on verification of:

- General system layout
- Specific component dependencies (power by bus, cooling water, air, ...)
- Loads--particularly for support systems (power, air, cooling water, HVAC ...)
- Success criteria under different conditions
- Actuation specifics--(what automatically starts system, what stops or isolates system, what is normally running, what is normally standby, what can be manually controlled from control room, what is locally controlled?
- Timing considerations (e.g., How long can component run without cooling? How long do batteries last without charging?...)
- Are there other success paths not known to us?
- Maintenance/operational tendencies--(stagger tests, preventive maintenance, specifics of system operation ...)