

December 22, 1982

Docket Nos: 50-329
and 50-330

APPLICANT: Consumers Power Company
FACILITY: Midland Plant, Units 1 and 2
SUBJECT: SUMMARY OF MEETING HELD WITH CONSUMERS POWER
ON MIDLAND SYSTEMS INTERACTION PROGRAM -
NOVEMBER 23, 1982

On November 23, 1982, the NRC staff met in Bethesda, Maryland with Consumers Power Company to discuss details of the systems interaction program that has been implemented by the Midland Project. This meeting was called at the request of the Reliability and Risk Assessment Branch (RRAB). A list of meeting attendees is attached as Enclosure 1. Enclosure 2 is a compilation of the handouts and visual aids used in the course of the meeting.

SUMMARY

During the ACRS Subcommittee meeting on June 2, 1982, Consumers Power Company (CPCo) described a systems interaction program that was in progress for the Midland Plant. This program is briefly addressed in Chapter 19 of Supplement No. 1 to the Midland Safety Evaluation Report. The staff has requested that CPCo provide a summary report on the results of the program for staff review. The results will also be reported to the ACRS. This meeting constituted an intermediate review of progress and methodology.

CPCo has followed the systems interaction issue since 1980, particularly activities at the ACRS, the AIF, and the NRC. Most of the terms and the general tenor of the approach in their program are consistent with the current language and approach taken by the Systems Interaction Section, RRAB. The program is built upon the relevant portions of the Midland FSAR plus the efforts described during the meeting.

The applicant (R. Harshe) described the efforts to address proximity (spatially coupled) interactions. Excluded are those spatial couplings created by failure modes of plant equipment that are already addressed in the FSAR. CPCo is performing visual inspections during construction (about 80% complete) and plans to repeat the visual inspections once construction is complete.

During the meeting, Mr. Harshe noted that the systems interaction program is not based upon the PRA being performed on Midland.

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Mr. Harshe discussed the allocation of resources among the pieces of their program. Their total efforts exceed 60 man-years. Two portions, the proximity search and the control systems search, consume over 90% of this effort. It was agreed that February/March 1983 would be the best time window for Systems Interaction Section personnel to observe the conduct of their visual inspections.

RH
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Enclosures:
As stated

cc: See next page

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MEETING AGENDA
SYSTEMS INTERACTION

NOVEMBER 23, 1982

- I. OVERVIEW - PHILOSOPHY
- II. SCOPE - SLIDES
- III. LEVEL OF EFFORT
- IV. SCHEDULES
- V. DISCUSSION/QUESTIONS

SYSTEMS INTERACTION SCOPE

- **SAFETY GRADE - SAFETY GRADE INTERACTIONS**
- **NONSAFETY GRADE - SAFETY GRADE INTERACTIONS**

SYSTEMS INTERACTION SCOPE

- **SAFETY GRADE - SAFETY GRADE INTERACTIONS**
- **NONSAFETY GRADE - SAFETY GRADE INTERACTIONS**

HUMAN INTERACTIONS

- **ADDRESSED BY:**
 - **Operator Training**
 - **Control Room Design Review**
 - **Risk Assessment**
 - **Operational Experience Review**

SYSTEMS INTERACTIONS

- **THREE TYPES**
 - **Spatial**
 - **Functional**
 - **Human**

SPATIAL INTERACTIONS

(Addressed by Plant Walkdowns)

- **PROXIMITY**
- **SEISMIC II/I**
- **FLOODING**
- **HELBA**

SPATIAL INTERACTIONS (Additional Plant Walkdowns)

- **THERMAL GROWTH**
- **STRESS**
- **FIRE PROTECTION**
- **TURNOVER**

FUNCTIONAL INTERACTIONS

- **ADDRESSED BY:**
 - **Design Controls**
 - **Risk Assessment**
 - **Control Systems Failure Evaluation**
 - **Preoperational Testing**
 - **Operating Experience Review**

SPATIAL SYSTEMS INTERACTION

Name	Purpose	Scope	Conduction/ Schedule/Status
1. Proximity & Seismic Category II/I	Identify and Resolve Interactions Due to SSE.	All Safety-Related Equipment and Commodities.	Conducted by Bechtel Engineering (Licensing and Safety Group) Initial: 6/1/82-5/31/83 Final: 2/1/83-11/15/83
2. HELBA	Verify the HELB Effects Analyses Which Have Been Performed Based on Design Drawings and Documented in Calculations. Identify Safety-Related Conduit Targets.	Safety-Related Areas That Contain High Energy Piping.	Conducted by Bechtel Engineering (Nuclear Group). Phase I: 5/1/81-1/30/83 Phase II: 1/1/83-5/15/83
3. Internal Flooding	Verify the Flooding Analyses Which Have Been Performed Based On Design Drawings And Documented in Calculations.	Walkdown of All Auxil- iary Bldg, Diesel Gen Bldg, Solid Radwaste Bldg, and Service Water Pump Structure Rooms/ Areas that Contain Flood Sources and All Rooms Which Communicate With These Rooms.	Conducted by Bechtel Engineering (Nuclear Group). 3/1/83-10/15/83.
4. Internal Missiles	Verify the Missile Analyses Which Have Been Performed Based On Design Drawings and Documented in Calculations. Identify Safety- Related Commodities in Missile Trajectory Zones That Are Not Within the Scope of the Calculations.	Physical Inspection of Safety-Related Areas That Contain Postulated Missiles.	Conducted by Bechtel Engineering (Nuclear Group). 2/1/83-9/15/83

MEETING SUMMARY DISTRIBUTION

December 22, 1982

Docket No(s): 50-329/330

NRC/PDR

Local PDR

NSIC

PRC System

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