

Docket No. 50-461

JUL 10 1985

Mr. Frank A. Spangenberg  
Director of Nuclear Licensing &  
Configuration Management  
Clinton Power Station  
P.O. Box 306  
Mail Code V920  
Clinton, Illinois 61727

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Dear Mr. Spangenberg:

SUBJECT: INSTRUMENTATION AND CONTROL SYSTEMS BRANCH SITE VISIT  
AGENDA FOR CLINTON

The Instrumentation and Control Systems Branch (ICSB) has proposed July 29, 30, and 31, 1985 for a site visit to Clinton. The enclosure contains the agenda items that have been selected so that the staff can evaluate the implementation of I&C systems for both standard ICSB review areas (e.g., physical separation between redundant safety related circuits within instrument cabinets), and special interest areas addressed during the licensing review. The site visit will concentrate on those areas which will aid in resolving outstanding and confirmatory issues listed in Chapter 7 (Instrumentation and Controls) of the SER and issues resulting from the CAT inspection.

Please contact your project manager by July 19 regarding the acceptability of the proposed dates for the site visit or on any other matters regarding this visit.

Sincerely,

Original signed by

Walter R. Butler, Chief  
Licensing Branch No. 2  
Division of Licensing

Enclosure:  
As stated

cc: See next page

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BSiegel:lb  
07/11/85

LB#2/DL/BC  
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

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Sincerely,

A handwritten signature in cursive script that reads "Walter R. Butler".

Walter R. Butler, Chief  
Licensing Branch No. 2  
Division of Licensing

Enclosure:  
As stated

cc: See next page

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INSTRUMENTATION AND CONTROL SYSTEMS BRANCH  
SITE VISIT AGENDA FOR CLINTON

1. Control Room

- a. \* Review the nuclear system protection system (NSPS) instrument cabinet wiring (identification of safety related and associated circuits, physical separation provided between redundant safety related circuits and between safety related and non-safety related circuits, isolation provided for interdivisional wiring, etc.).
- b. \* Review the internal wiring of the main control boards and control room back row panels (physical separation between redundant safety related circuits and between safety related and non-safety related circuits, e.g., control and annunciator circuits).
- c. \* Review the PGCC floor sections (metal barriers) used to provide physical separation between redundant safety related circuits and between safety related and non-safety related circuits.
- d. Review all reactor vessel water level indication provided (indicators and recorders; their ranges, safety classification, power supplies, etc.).
- e. Review the safety relief valve position indication required by TMI Action Plan Item II.D.3.
- f. Review the containment pressure, water level, and hydrogen concentration instrumentation required by TMI Action Plan Item II.F.1 (4), (5), & (6).
- g. \* Review the interfaces between the NSPS and the self test system (STS), and the capability for manually testing NSPS circuits independent of the STS (i.e., channel checks, channel functional tests, and channel calibrations). Review how plant personnel interface with the STS via the plant computer using the diagnostic terminal to isolate STS detected faults and to control the STS.
- h. Review ADS instrumentation, including the ADS inhibit switches and the high drywell pressure bypass timers installed to satisfy the requirements of TMI Action Plan Item II.K.3.18.
- i. Review the scram discharge volume high water level trip bypass switches and associated annunciation.
- j. Review the RPS/NS<sup>4</sup> divisional bypass switches and associated indication/annunciation.
- k. Review the CAM system panels and alarms.

1. Review the indication/annunciation provided for the following:
  1. Transfer of control to the remote shutdown panel.
  2. ECCS injection valves low pressure permissive.
  3. RPS sensor trip annunciators.
  4. STS detected failures.
  5. ADS 105 second timers initiated and ADS out of service.
  6. ATWS RPT
2. Shutdown from Outside the Control Room
  - a. Walk from the control room to the remote shutdown panel along the path to be taken by the operators in the event of control room evacuation.
  - b. \* Review the instrumentation provided at the remote shutdown panels, and the locations of the transfer switches.
  - c. \* Review the remote shutdown panel internal wiring (separation between safety related and non-safety related circuits).
  - d. Review how a reactor trip may be accomplished from outside the control room.
  - e. \* Review the operation of Division 2 equipment used to achieve reactor shutdown from outside the control room (Division 1 power is assumed to be unavailable).
3. Reactor Building, Auxiliary Building, and Turbine Building
  - a. Review the safety relief valve (SRV) acoustic monitors installed on the SRV discharge lines.
  - b. Review the NSPS/RPS power supplies (120 Vac RPS buses, inverters, batteries, and chargers; 125 Vdc divisional batteries; 24 Vdc logic power supplies).
  - c. Review the scram discharge instrument volume and associated instrumentation.
  - d. Review the ESF pump rooms (HPCS, RCIC, RHR, LPCS).
  - e. \* Review the instrumentation (instrument lines, transmitters, and associated circuits) used to provide the low reactor pressure permissive interlock function for the redundant low pressure ECCS systems (for both injection valves and the suction valves from the recirculation loop).

f. Review the following plant equipment:

1. ADS solenoids.
2. MSIV solenoids.
3. Diesel generators and local control capability.
4. Backup scram valves.
5. Cable spreading area.
6. Main steamline flow and radiation sensors.
7. CAM system local panels and sampling points.
8. Recirculation pumps, motors, supply breakers (from both 6.9 KV and the LFMG sets), and breakers used to accomplish both EOC and ATWS recirculation pump trips.
9. Instrumentation used to transfer RCIC and HPCS suction from the RCIC storage tank to the suppression pool on storage tank low level.
10. HCU's.

4. Circuit Traces

- a. Trace the circuitry (from sensors to protection system cabinets) used to transfer HPCS and RCIC pump suction to the suppression pool on low RCIC tank temperature or low suction piping temperature.
- b. Trace the circuitry (from sensors to actuated equipment) used to isolate the normal intake dampers and initiate the control room HVAC system on high radiation measured at the outside air intakes.

5. Local Instrument Racks/Piping

- a. Review the physical separation between and the routing of redundant reactor vessel level and drywell pressure instrumentation (from vessel taps to transmitters).
- b. Review the turbine first stage pressure instrument taps, sensing lines, and transmitters.

6. Capability for Testing

- a. \* Walk through the planned testing procedures (channel functional tests, logic tests, etc.) for automatic and manual testing of typical NSPS instrument, logic, and actuation channels, and the surveillance planned for the STS to ensure that it is functioning properly.

\*These items should receive priority.