



Omaha Public Power District

1623 HARNEY ■ OMAHA, NEBRASKA 68102 ■ TELEPHONE 536-4000 AREA CODE 402

March 8, 1983

LIC-83-056

Mr. Robert A. Clark, Chief
U. S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Division of Licensing
Operating Reactors Branch No. 3
Washington, D.C. 20555

Reference: Docket No. 50-285

Dear Mr. Clark:

Generic Letter 82-28
Instrumentation for Detection of
Inadequate Core Cooling

Attached is the District's response to Generic Letter 82-28 which requested information on the status of our proposed inadequate core cooling instrumentation (ICCI) system.

The District has purchased and will install the Combustion Engineering heated junction thermocouple system to monitor reactor coolant system inventory. Much of the field preparation and hardware installation for this system and the upgraded core exit thermocouple system will be performed during the 1983 refueling outage. Due to the complex interaction between the requirements of Generic Letter 82-28 and those of NUREG-0737, Supplement 1, schedules for engineering and installation of the ICCI system must be integrated with those for the other requirements. Thus, the schedule for the ICCI system installation and operation will be addressed in the District's response to Generic Letter 82-33 (NUREG-0737, Supplement 1).

Sincerely,

W. C. Jones
Division Manager
Production Operations

8303150222 830308
PDR ADOCK 05000285
P PDR

WCJ/TLP:jmm

Attachment

cc: LeBoeuf, Lamb, Leiby & MacRae
1333 New Hampshire Avenue, N.W.
Washington, D.C. 20036

Mr. L. A. Yandell, NRC
Senior Resident Inspector

A002

Attachment

RESPONSE TO GENERIC LETTER 82-28

Request 1

Within 90 days of the date of this letter, identify to the Director, Division of Licensing, the design for the reactor coolant inventory system selected and submit to the Director, Division of Licensing, detailed schedules for its engineering, procurement and installation. References to generic design descriptions and to prior submittals containing the required information, where applicable, are acceptable.

Response

The District has selected and purchased the Combustion Engineering heated junction thermocouple (HJTC) system (including IE signal processing). Reactor internal modifications and signal processing equipment installation will begin during the 1983 refueling outage. Engineering for a sensor-to-read-out system is not yet complete.

Since this work is directly related to the work being done by the District for Generic Letter 82-33 (Supplement 1 to NUREG-0737, Requirements for Emergency Response Capability), the schedule for completion of the engineering, installation and operation will be provided as part of the District's response to Generic Letter 82-33.

Request 2

Within 90 days of the date of this letter review the status of conformance of all components of the ICC instrumentation system, including subcooling margin monitors, core-exit thermocouples, and the reactor coolant inventory tracking system, with NUREG-0737, Item II.F.2 and submit a report on the status of each conformance.

Response

Appendices 1 and 2 of this section provides the generic information which (based on work done to date) the District believes is applicable to the purchased system. When available, specific information is also cited.

The District believes that, in general, the use of the Combustion Engineering system and the guidance provided in NUREG-0737 will permit a plant specific system to be implemented. The information cited in the generic documents will be factored into the detailed design. When the system design is complete, a final version of Appendices 1 and 2 (and any necessary supporting documents) will be prepared with any deviations noted and analyzed. The schedule for this will be provided with the District's response to Generic Letter 82-33.

As stated in our response to Request 1, the District will factor completion of this requirement for information into the response for Generic Letter 82-33.

Request 3

The installation of the ICC instrumentation system shall be completed during the earliest refueling shutdown consistent with the existing status of the plant and practical design and procurement considerations. It has become apparent, through discussions with owners' groups and individual licensees, that schedules must adequately consider the integration of these requirements with other TMI related activities. In recognition of this and the difficulty in implementing generic deadlines, the Commission has adopted a plan to establish realistic plant-specific schedules that take into account the unique aspects of the work at each plant. Each licensee is to develop and submit its own plant-specific schedule which will be reviewed by the assigned NRC Project Manager. The NRC Project Manager and licensee will reach an agreement on the final schedule and in this manner provide for prompt implementation of these important improvements while optimizing the use of utility and NRC resources.

Response

As detailed in the District's responses to Requests 2 and 3, the schedule for implementing the inadequate core cooling system cannot be removed from the schedule for NUREG-0737, Supplement 1. The inadequate core cooling system must meet the requirements of Regulatory Guide 1.97, have its use incorporated into the new plant specific Emergency Operating Procedures, and meet the criteria of control room design review.

In summary, the District believes a good faith effort is being made to meet the requirements for emergency response. The District has purchased the Combustion Engineering HJTC system and signal processing system for the HJTC and CET's. The information generated by these systems will be monitored by the plant computer and displayed on CRT's.

The District has opted to use its limited staff to make maximum use of the 1983 refueling outage to install much of the field hardware. This effort will (barring delivery or field problems) include installation of upgraded CET's, HJTC probe holder installation, pressure boundaries for the CET's, signal cables for the SPDS and ICC, and new electrical penetrations for the ICC, HJTC and CET cables.

As stated before, the use of the approved CE designed ICC system should permit compliance with NUREG-0737. The District believes that by maximizing its efforts aimed at hardware installation during the 1983 refueling outage, the final date of compliance will be sooner than if some other course were pursued.

APPENDIX 1

ITEM	GENERIC CEOG DOC. SUBMITTED TO NRC	DEVIATION	SCHEDULE	COMMENTS
1. Description of the proposed final system including:				See response to Request 2.
a. A final design description of additional instrumentation and display	<ul style="list-style-type: none"> •CEN-185 (Section 3) •CEN-185, Suppl. 3 •CEN-181 Question #4 Question #7 Question #8 Question #11 •CEOG letter (6/1/82) to D. Crutchfield Question #1 			
b. Detailed description of existing instrumentation systems				Reference: District's submittal dated December 31, 1979. Implementation completed as planned. RTD's are not LOCA qualified.
c. Description of completed or planned modifications				See discussion of response to Requests 1, 2, & 3 and summary.

APPENDIX 1 (Continued)

ITEM	GENERIC CEOG DOC. SUBMITTED TO NRC	DEVIATION	SCHEDULE	COMMENTS
2. A design analysis and evaluation of inventory trend instrumentation, and test data to support design in Item 1	•CEN-185 (App. A)			See discussion of response to Request 2.
	•CEN-185 (Sect. 6 & Suppl. 1, 2, & 3)			
	•CEN-181			
	Question #2			
	•CEOG letter (6/1/82) to D. Crutchfield			
	Question #1			
	Question #2			
	Question #3			
3. Description of tests planned and results of tests completed for evaluation, qualification, and calibration of additional instrumentation	Question #4			See discussion of response to Request 2.
	•CEN-185 Suppl. 1, 2, & 3			
	•CEN-185 (Section 5)			
	•CEN-181			
	Question #12			

APPENDIX 1 (Continued)

ITEM	GENERIC CEOG DOC. SUBMITTED TO NRC	DEVIATION	SCHEDULE	COMMENTS
4. Provide a table on description covering the evaluation of conformance with NUREG-0737; II.F.2, Att. 1, & Appendix B.	•CEN-185 (Section 8)			Plant specific data will be provided as outlined in response to Request 2.
5. Describe computer, software & display functions associated with ICC monitoring in the plant.	•CEN-185 (Section 3) •CEN-185, Suppl. 3			See discussion of response to Request 2.
6. Provide a proposed schedule for installation, testing & calibration & implementation of any proposed new instrumentation or information displays.				See discussion of response to Request 2.
7. Describe guidelines for use of reactor coolant inventory tracking system, & analyses used to develop procedures.	•CEN-185 (Section 2) •CEN-181 Question #2 •CEOG letter (6/1/82) to D. Crutchfield Question #1 •CEN-152, Rev. 1			Generic Emergency Procedure Guidelines are not yet issued. See discussion of response to Request 2.

APPENDIX 1 (Continued)

ITEM	GENERIC CEQG DOC. SUBMITTED TO NRC	DEVIATION	SCHEDULE	COMMENTS
	Question #2 & Question #3			
8. Operator instructions in emergency operating procedures for ICC & how these procedures will be modified when final monitoring system is implemented.	CEN-152, Rev.			District Submittal of December 31, 1979 New Generic EOP's Not Yet Issued
9. Provide a schedule for additional submittals required.				See Response Item 1 Discussion This includes the additional plant specific Question **B regarding the CE HJTC System

APPENDIX 2

ITEM	GENERIC CEOG DOC. SUBMITTED TO NRC	DEVIATION	COMMENTS
1. Environment Qualilfication	•CEN-185 (Section 5) •CEN-185, Suppl. 3		See Response Item 1
2. Single Failure Analysis	•CEN-181 Question #11 •CEOG letter (6/1/82) to D. Crutchfield Question #4		See Response Item 1 Discussion
3. Class IE power sources			See Response Item 1 Discussion The District will be installing the CET and HJTC Signal Processor using an IE Power Source one from Train A, one from Train B
4. Availability prior to an accident	•CEN-185, Suppl. 3 •CEN-181 •CEOG letter (6/1/82) to D. Crutchfield Question #44		

APPENDIX 2 (Continued)

ITEM	GENERIC CEQG DOC. SUBMITTED TO NRC	DEVIATION	COMMENTS
5. Quality Assurance			See Response Item 1 Discussion
6. Continuous indications	•CEN-185 (Sections 2 & 4)		See Response Item 1 Discussion
7. Recording of instrument outputs.			See Response Item 1 Discussion
8. Identification of instruments			See Response Item 1 Discussion
9. Isolation	•CEQG letter (6/1/82) to D. Crutchfield Question #4		See Response Item 1 for plant specific isolation data schedule