



Omaha Public Power District

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

December 12, 1980

Mr. Darrell G. Eisenhut, Director
U. S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Division of Licensing
Washington, D.C. 20555

Reference: Docket No. 50-285

Dear Mr. Eisenhut:

The Commission's letter dated October 31, 1980, transmitted to all licensees NUREG-0737, representing the most recent clarification of the TMI Action Plan requirements. The Commission's letter also requested that all operating reactor licensees provide confirmation that the implementation dates of NUREG-0737 will be met or provide explanations and justification if they will not be met. Omaha Public Power District has interpreted that implementation dates include all scheduled commitments, whether final implementation or an intermediate step, as specified in NUREG-0737. Accordingly, the District has reviewed all Action Plan requirements and expects to meet all scheduled dates, except as detailed below. It should be noted that the District's letter dated October 6, 1980, described the District's schedule for all TMI Action Plan tasks and these schedules are still valid. However, since NUREG-0737 changed implementation dates and criteria for some tasks, the District is resubmitting our schedules to specifically address NUREG-0737.

The tasks for which the schedules in Enclosure 1 of NUREG-0737 cannot be met are:

- (1) I.C.6 - Guidance on Procedures for Verifying Correct Performance of Operating Activities.
- (2) II.B.2 - Design Review of Plant Shielding for Spaces/Systems Which May be Used in Post-Accident Operations.
- (3) II.E.1.2 - Auxiliary Feedwater System Automatic Initiation.
- (4) II.F.2 - Instrumentation for Detection of Inadequate Core Cooling.
- (5) III.A.2 - Improving Licensee Emergency Preparedness-Long Term.

*Accor
5/1*

Mr. Darrell G. Eisenhut
December 12, 1980
Page Two

A detailed explanation on each of the above tasks providing a summary of task progress, a proposed revised date, justification for delay, and planned compensating measures is enclosed. It should be noted that the District still takes exception to the requirements of Task I.C.6 and a schedule has not been provided. The District requests the Commission's approval of the proposed schedule modifications and/or positions, since these represent the best possible dates that can be met. If the Commission requires additional information or clarification of the District's position, please contact us.

Sincerely,

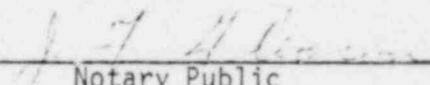

W. C. Jones
Division Manager
Production Operations

WCJ/KJM/TLP:jmm

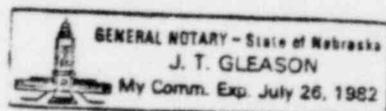
Enclosures

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

Subscribed and sworn to before me
this *Sunday* of *December*, 1980.



Notary Public



TMI Action Plan Task No. I.C.6
Verification of Operational Activities

The Commission's letters of clarification on the TMI-2 Action Plan, dated September 5, 1980, and October 31, 1980, established criteria for Item I.C.6 which the District believes is too expansive in nature. The District presently follows a practice of double verification of safety related systems on startup as required by the nature of the outage. The TMI-2 Action Plan in many cases implies this verification program must encompass the entire balance of the plant. Additionally, the Commission specifies that the "qualified person" for performing required verifications be a licensed operator. Such a requirement would greatly increase the burden of Fort Calhoun's operators, requiring additional overtime or additional licensed operators of which there is a shortage within the industry.

It is the District's recommendation that the Commission review the criteria of Item I.C.6 of the Action Plan and be more specific on the requirements. As interpreted by the District, the requirements as now detailed in NUREG-0737 would greatly impact Fort Calhoun operations, and the District believes this impact could be detrimental to safe operations. Accordingly, the District must take exception to this task as presently described.

TMI Action Plan Task No. II.B.2
Plant Shielding Modification

Discussion

NUREG-0737, issued October 31, 1980, requires that the final design details for plant shielding modifications be available for review by the Commission by January 1, 1981. This information was submitted in response to NUREG-0578 requirements in the District's letter dated December 31, 1979. However, the source term criteria has been relaxed by NUREG-0737; therefore, the design must be reevaluated using the new source terms and it is expected that the radiation and structural design will undergo significant revision. Therefore, the design will not be available for review until July 1, 1981, as detailed below. All other schedules related to Task II.B.2 will be met.

Progress to Date

12-31-79	Developed preliminary design for modifications. Commenced radiation dose and structural analysis.
August, 1980	Structural and dose analysis completed.
8-20-80	Separate bids were requested for supply of hemitite aggregate (long delivery item) for high density shield wall concrete to avoid any construction delay.
8-26-80	Contract for shielding wall construction was released for public bids. The construction was expected to finish on December 31, 1980, as required by NUREG-0578.

Expected Completion

As required by NUREG-0578, the initial analysis for shielding included 100% of noble gases inventory in the depressurized, diluted primary coolant in the containment sump. NUREG-0737 defines the staff's final position that for recirculated, depressurized cooling water the noble gases inventory need not be included in the source term. The District finds the following areas of concern to meet the schedule:

- (1) The preliminary dose rate analysis with no noble gases in the containment spray recirculation pipes indicates that the dose rates in the vital areas may be reduced to levels below GDC-19 criteria by using ordinary concrete (145 lb/ft³) for the shield walls, instead of high density concrete (235 lb/ft³). The use of ordinary concrete would give substantial relief to the existing walls and floor slabs which indicate near structural saturation locally, if high density shield wall is installed. In addition, the vertical pumping of high density concrete is difficult while maintaining the slump. As a result, voids may be formed or sagging of the aggregate during erection of the shield wall. Therefore, the radiation analysis and structural analysis have to be redone to ensure the best modification approaches are selected.

TMI Action Plan Task No. II.B.2
Plant Shielding Modification
(Continued)

- (2) NUREG-0737 also requires the safety equipment, as referenced in IE Bulletin 79-01B, to be qualified for post-accident radiation level using NUREG-0578 source terms. In essence, a new radiation dose analysis has to be performed for the entire plant.

The scope and schedule for this work are listed as follows:

<u>Item</u>	<u>Expected Completion</u>
i) Dose Rate Analysis/ Shielding Design Structural Analysis Complete	July 1, 1981
ii) Construction Contract/ Erection of Shield Walls, if needed	December 1, 1981

Based upon the above schedule, the District expects to comply with the proposed implementation date of January 1, 1982, as defined in NUREG-0737.

Compensatory Measures

There are none required, since it is anticipated the actual modifications will be completed by the Commission's scheduled date.

TMI Action Plan Task No. II.E.1.2
AFW Initiation - Safety Grade

Discussion

Although the District may have all materials on hand to commence installation of the automatic initiation circuitry by July 1, 1981, the District is requesting this task be delayed until the scheduled September, 1981, refueling outage. The justification for the District's proposal is provided below.

Progress to Date

- 12-31-79 Submitted preliminary design to the Commission.
 Detailed design and specifications started.
- 8-7-80 Purchase Order (PO) submitted to Foxboro for four instrument racks and power supplies to reserve production line time.
 Detailed design identified need for additional Class 1E panel space in the control room and water column height of steam generator wide range level transmitters for 1E specification.
- 10-3-80 Submitted specification and request for quote to Foxboro on instrumentation to complete logic.
- 11-14-80 Quote back from Foxboro on instrumentation.
- 11-15-80 New panel location approved.
 Started detailed design and specification for new panels.

Present Status

1. Awaiting quotation on level transmitters from Foxboro.
2. Detailed design in progress.

Expected Completion

- 12-15-80 Submit PO to Foxboro for instrumentation. Expected delivery is May 1, 1981.
- 12-31-80 Submit PO to Foxboro on new wide range level transmitters. Expected delivery is April-May, 1981.

TMI Action Plan Task No. II.E.1.2
AFW Initiation - Safety Grade
(Continued)

12-31-80 Design for new IE panels complete. PO issued in January, 1981, with delivery in May, 1981, at the earliest.

Environmental qualification of Foxboro transmitters expected to be complete.

May 31, 1981 All materials received. This is anticipated to require a six to eight week outage which would extend into the peak demand period. Electric generation from the Fort Calhoun Station is vital during the summer months of 1981, and the District and its customers have great need that the outage be postponed to the scheduled September, 1981, refueling outage.

Summary

Significant problems encountered in meeting task due date have been the unavailability of qualified vendors (transmitters for wide range level indication still undergoing qualification tests) and identification of the need for new panels in the control room late in the design process requiring redesign effort.

Compensatory Measures

The control grade system is installed and provides automatic AFW initiation using the same parameters and same logic as the safety grade system. However, the control grade system does not provide automatic isolation in the event of a steam generator rupture. Manual isolation is available. Therefore, the District believes the incremental gain in plant safety does not warrant immediate shutdown for installation upon receipt of materials, since the plant refueling outage will commence three months after receipt of all materials.

TMI Action Plan Task No. II.F.2
Instrumentation to Detect Inadequate Core Cooling

Discussion

The District supports and is actively participating with the Combustion Engineering Owners Group (CEOG) to develop a system to provide unambiguous indication of inadequate core cooling (ICC). This includes a detailed assessment of the response of existing and proposed instrumentation to detect ICC and development of a reactor vessel level monitoring system (RVLMS) to indicate reactor water level. If the District's evaluation confirms the need for the RVLMS, it is anticipated that this system could be installed by the fall 1982 refueling outage at the earliest.

Progress to Date

The report on ICC instrumentation will be available to the CEOG members in January, 1981. The heated junction thermocouple RVLMS development is continuing. The proof of concept testing is complete. A full scale prototype test facility is to be built, with prototype testing scheduled for the beginning of the third quarter of 1981. The District has also received information from CE that the lead time for delivery of a heated junction thermocouple RVLMS is 14 months. The CEOG has discussed the need for ICC instrumentation system qualification and licensing.

Status

The District intends to install a system with proven capability and licensability to detect ICC. The District is currently assessing a three instrument system consisting of the subcooled margin meter, the heated junction thermocouple RVLMS, and the core exit thermocouples. However, as stated below, the RVLMS prototype testing, RVLMS qualification testing, integration of the instrument into a system, and licensing work remain to be done. Until progress is made in these areas, the District cannot give a definitive commitment for installation of an ICC instrumentation system. In addition, the schedule for the prototype testing and lead time on RVLMS procurement make it impossible to install the system during our fall 1981 refueling outage and to meet your January 1, 1982, deadline. It is the District's position that the RVLMS can only be installed during a refueling outage without imposing a massive financial penalty on the District and its customers.

The District knows of no manufacturer of core exit thermocouples compatible with the Fort Calhoun Station Unit No. 1 which meet the specified requirements. When a qualified instrument becomes available, the District intends to replace the present incore instrument assemblies with the qualified instruments on a normal maintenance replacement schedule, if they are required as part of the ICC indication system. The District feels experience at TMI-2 shows the existing thermocouples have a very high probability of working correctly in an adverse environment.

TMI Action Plan Task No. II.F.2
Instrumentation to Detect Inadequate Core Cooling
(Continued)

Expected Schedule

The District intends to fully assess the CEQG report on ICC instrumentation prior to deciding upon the instrument system needed to unambiguously indicate the approach to ICC. A report on our position will be provided to you by April 1, 1981, with a preliminary design scheduled for submittal by June 1, 1981. Assuming approval of our approach is received from the Commission by August 1, 1981, the District intends to order any required additional instrumentation on a schedule to support our 1982 refueling. This outage is currently scheduled for the fall of 1982.

Compensatory Measures

During the interim period until an ICC instrumentation system can be installed, the District will continue to use the existing subcooled margin meters, using the RTD's, and the core exit thermocouples, currently calibrated from 70^oF to 1600^oF, to detect an approach to ICC. In addition, the District commits to making the following modifications by January 1, 1982, to enhance our ability to detect ICC.

1. Using the existing computer system:
 - a. Provide a spatially oriented core map available on demand to show the temperature at each operable core exit thermocouple location.
 - b. Provide a continuous on demand core exit thermocouple temperature display for all instruments.
 - c. Extend the core exit thermocouple range to 1800^oF.
 - d. Provide trend capability to show the temperature-time history of selected core exit thermocouples to be available on demand.
 - e. Provide a subcooled margin program using selected core exit thermocouples.
2. Provide a procedure for obtaining core exit thermocouple readings in the event of a computer failure.

The District will continue to actively participate with the CEQG in developing an ICC detection system. The District is committed to installing a workable and licensable system to provide an unambiguous indication of ICC.

TMI Action Plan Task No. III.A
Improved Emergency Preparedness - Long Term

Discussion

The final regulations on emergency planning which became effective on November 3, 1980, require all licensees and local entities to submit radiological emergency plans revised to the criteria of NUREG-0654, Revision 1, by January 2, 1981. It should be noted that this revision to NUREG-0654 has not been received by the District at this time. NUREG-0737 has added the requirements that implementing procedures for the licensee's revised plan must be submitted to the Commission by March 1, 1981, and the plan must be completely implemented by April 1, 1981, except for installation of an Early Notification System (ENS) and upgrading of meteorological instrumentation. The ENS must be installed by July 1, 1981. For the meteorological instrumentation upgrade, all licensees must meet a phased implementation schedule with full upgrade to be completed by June 1, 1983. The District anticipates meeting all requirements as scheduled in NUREG-0737, except for the ENS. Additionally, the meteorological instrument upgrade is contingent upon finalization of emergency response facility criteria, and delays in this finalization could impact the District's ability to make the specified schedules. It should also be noted that the state of Iowa and local Iowa entities anticipate a month delay in completing their plan revisions to comply with NUREG-0654.

Progress to Date

To date, the District has completed an ENS design using a 100% area coverage siren system. The area surveys are complete and requests for quotes on hardware are presently being issued. Additionally, the District is concurrently pursuing right-of-ways to support the installation of the sirens.

Proposed Schedule

Discussions with the available siren vendors indicate that the most optimistic lead time from date of order to delivery of the first sirens is six months, and delivery of all sirens to be completed four months later. Allowing two months for installation, the earliest expected implementation for ENS is January 1, 1982.

Compensatory Measures

The District presently has agreements with local fire and police departments for initiating emergency actions, including emergency notification. Additionally, the major population areas within ten miles of the Fort Calhoun Station have installed sirens for tornado warnings. Therefore, the District is confident that a large majority of the population within ten miles of the plant will receive prompt warning if required.