Omaha Public Power District

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November 27, 1979

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Reference: Docket No. 50-285

Dear Mr. Denton:

The Omaha Public Power District is in receipt of your October 30, 1979, letter in regard to implementation methods and schedules for NUREG-0578. As discussed in our letter of October 25, 1979, all implementation methods for NUREG-0578 tasks are in accordance with the Staff's requirements, except as described in Attachment 1 to this letter. It is the District's intention to complete these tasks according to schedules provided in NUREG-0578, except that modifications identified in the attachment to our October 25, 1979, letter which require a shutdown to complete and are designated to be implemented by January 1, 1980, or January 1, 1981, will be completed during the 1980* or 1981 refueling outage at the Fort Calhoun Station, as applicable. Attachment 1 contains an explanation for completing tasks during refueling outages. These implementation schedules depend upon the availability of equipment for modifications. We have not identified any tasks which cannot be implemented due to equipment delivery delays at present. However, equipment delivery times are difficult to predict and suppliers have not been identified for all NUREG-0578 tasks.

The District believes that there is just cause for postponing modifications which require a shutdown to complete to the next refueling outage scheduled after the implementation date of the NUREG. This belief is based upon the considerations delineated below.

1. Health and safety impact. The 1980 and 1981 refueling outages are scheduled to commence in January, 1980, and March, 1981, respectively. Implementation of tasks during the 1980 refueling outage would cause the Fort Calhoun Station to be operable without NUREG-0578 short term 1980 tasks implemented for only two weeks past the January 1, 1980, implementation date. The 1981 refueling outage commences approximately 90 days past the NUREG-0578 implementation date for January 1, 1981, tasks. All required modifications would be implemented

*The 1980 refueling outage will commence no later than January 14, 1980.

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prior to unit startup after the respective refueling outage. It is not believed that operating the facility for approximately 100 days without NUREG-0578 tasks completed would jeopardize the health and safety of the public or in any way significantly increase the probability of a nuclear incident occurring at the station.

2. Economic considerations. Performing NUREG-0578 tasks during a scheduled refueling outage would ensure maximum unit availability and minimum power costs to the District's ratepayers. Should the unit be shut down solely to implement NUREG-0578 tasks, more costly replacement power would be needed, possibly originating from oil fired peaking units or purchased from other utilities. It is important to maximize unit availability during the winter months when power usage is at a peak, in order that unforeseen unit shutdowns and/or other contingencies can be handled assuring continued availability of power to our customers.

3. Conservation. A special shutdown of the Fort Calhoun Station to implement NUREG-0578 tasks during the high power demand winter months may require the use of oil fired peaking units to compensate for lost power. In the interest of conservation of oil resources and in adherence with our national energy policy, it would be better to generate with nuclear fuels.

4. Thermal cycling. Performing NUREG-0578 tasks during a refueling outage would minimize the number of required plant outages and resulting thermal stresses on safety-related systems. Thermal stress caused by changing power loads is a known contributor to piping failures.

5. Safety system challenges. Maintaining the plant in a steady state of operation reduces the potential for challenging safety systems. The Commission has expressed a desire through recent correspondence to minimize challenges to safety systems.

6. ALARA. Minimizing the number of shutdowns required is consistent with ALARA policy. Every time the facility is brought to a cold shutdown for a sustained period of time, certain amounts of liquid and gaseous wastes are generated. These wastes must be processed through the radwaste treatment systems and released and/or disposed of in a controlled manner. Waste handling results in an incremental radiation exposure to personnel handling the waste, as well as to the general public. These doses can be eliminated through conscientious management of reactor shutdowns.

In addition, doses would generally be less for performing modifications during a refueling outage than a normal cold shutdown because systems containing radioactivity, which would contribute to radiation dose to workers inside the containment, would normally be drained or flushed during a refueling outage.

7. Manpower availability. Increasing the number of plant outages also increases the amount of time which the District's staff must dedicate to outage planning and general plant operations. These same personnel are also relied upon to respond to the concerns of NUREG-0578, as well as other licensing regulatory concerns. The more time that is dedicated to outage planning and shutdown operations, the greater the amount of time that cannot be dedicated to meeting our regulatory obligations.

In view of the foregoing considerations, it is believed that the TMI-2 Lessons Learned Task Force short term recommendations can be accomplished in a timely, responsible manner through the use of our refueling outages. In so doing, the plant can be run economically, radiation doses can be kept to a minimum, and the safety and health of the public can be maintained.

Sincerely,

W. C. Jones
Division Manager
Production Operations

WCJ/KJM/BJH:jmm

Attachment

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

ATTACHMENT 1

TASK 2.1.1, EMERGENCY POWER SUPPLY REQUIREMENT

Pressurizer Heaters

A cold shutdown is required to perform modifications required by this task, since the modified circuitry can only be tested in a shutdown condition. In addition, modifications to control circuitry should only be performed when the plant is shutdown.

As a compensatory measure for the two week period between January 1, 1980, and commencement of our 1980 refueling outage, adequate overpressure during natural circulation can be provided by use of the pressurizer proportional heaters. These heaters would be available providing either off-site power is available or both diesel generators are operable. The probability of having an incident which requires the use of these heaters and having a simultaneous loss of off-site power and loss of one diesel generator within the two week interim period is believed to be acceptably small.

Pressurizer Level

A plant shutdown is required to perform modifications required by this task because the pressurizer level transmitters are located in an area which is inaccessible during power operation. The present pressurizer level system is adequate for the interim two week period between January 1, 1980, and commencement of the 1980 refueling outage because the modification will only upgrade present level transmitters to safety grade. The pressurizer level indication system is presently powered from emergency power supplies and cables to the transmitters are LOCA qualified. Although the presently installed pressurizer level transmitters are not LOCA qualified, the possibility exists that they could function in a LOCA environment. It is emphasized that most of the requirements of this task will be met by January 1, 1980.

PORV and Block Valve Power Supply

A plant shutdown is required to perform modifications required by this task because areas must be entered which are normally inaccessible during power operation. The presently installed systems provide for an emergency power supply to PORV and block valves. Modifications will be performed only to provide adequate cable separation and separation of power supplies for the block valves. All other requirements of this task are met. Therefore, the as-installed condition provides a sufficiently reliable power supply to these valves for the interim period between January 1, 1980, and commencement of the 1980 refueling outage. It is emphasized that most of the requirements of this task will be met by January 1, 1980.

PORV and Block Valve Power Supply

The presently installed systems provide for an emergency power supply to PORV and block valves. Modifications will be performed only to provide adequate cable separation and separation of power supplies for the block valves. All other requirements of this task are met. Therefore, the as-installed condition provides a sufficiently reliable power supply to these valves for the interim period between January 1, 1980, and commencement of the 1980 refueling outage.

TASK 2.1.2, RELIEF AND SAFETY VALVE TESTING

A program for testing PORV's and safety valves used for primary system pressure control under design bases operating conditions is being developed by the CE Owners Group. These results will be available by January 1, 1980. It is not possible for the District to commit to completing tests on these valves by July of 1981, since it is not currently known what the nature of the testing program will be. The District will make every effort to complete tests by July of 1981. However, the schedule cannot be resolved until the testing program is formulated.

TASK 2.1.3.a, DIRECT INDICATION OF VALVE POSITION, CATEGORY A SAFETY GRADE

A cold shutdown is required to perform modifications required by this task, since primary system relief and safety valves are not accessible during normal operation. It is believed that adequate indication of leakage past these valves exists for the two week interim period between January 1, 1980, and commencement of the 1980 refueling outage. Level and pressure of the pressurizer quench tank can be measured, as well as PORV and safety valve discharge line temperature.

TASK 2.1.3.b, INSTRUMENTATION FOR INADEQUATE CORE COOLING

Procedures to be used by an operator to recognize inadequate core cooling currently exist at the Fort Calhoun Station and address the use of existing instrumentation. (Refer to the District's letters of April 23, 1979, and August 10, 1979, in response to IE Bulletin 79-06B.) The design of new instrumentation to be used for this purpose which describes the functional design requirements for reactor level instrumentation will be submitted to the Commission by January 1, 1980. This design is currently being prepared by our NSSS vendor.

Information required by the Commission's October 30, 1979, letter for this task, along with a description of a subcooling meter intended for use at the Fort Calhoun Station, will be submitted to the Commission by January 1, 1980. Installation of the subcooling meter and new instrumentation other than the subcooling meter must be conducted during a plant shutdown because these systems use sensors which must be placed in areas which are normally inaccessible during power operation. It is believed that existing instrumentation and procedures provide adequate information to plant operators to assess inadequate core cooling conditions for the interim periods of January 1, 1980, to commencement of the 1980 refueling outage and from January 1, 1981, to commencement of the 1981 refueling outage.

TASK 2.1.6.a, INTEGRITY OF SYSTEMS OUTSIDE CONTAINMENT LIKELY TO CONTAIN RADIOACTIVE MATERIALS

By January 1, 1980, the District will submit a summary description of the program to reduce leakage from systems outside containment that could contain highly radioactive fluids during a serious transient or accident. Included will be a list of systems which are excluded from this program. Previous correspondence received from the Commission did not include a requirement to submit this information. These programs will be implemented before January 1, 1980, and will continue thereafter.

TASK 2.1.6.b, PLANT SHIELDING REVIEW

The design review required by this task will be completed by January 1, 1980. Modifications not requiring a plant shutdown will be completed by January 1, 1981. Those modifications that require a plant shutdown will be completed during the 1981 refueling outage. Some modifications are expected to be completed before January 1, 1981, and others after that date. All modifications would be completed prior to startup following the 1981 refueling outage.

TASK 2.1.7.a, AUTOMATIC INITIATION OF THE AUXILIARY FEEDWATER SYSTEM

Control Grade System

A refueling outage is required to perform modifications required by this task, since both auxiliary feedwater trains are required to be removed from service at the same time to perform the required modifications. This would cause the plant to be placed into an unsafe operating condition and would violate Fort Calhoun Station's Technical Specifications. For the interim period between January 1, 1980, and commencement of the 1980 refueling outage (approximately two weeks), a plant operator will be assigned to monitor the auxiliary feedwater controls and take appropriate action as required. This assignment would be the operator's sole responsibility.

Safety Grade System

A refueling outage is required to perform modifications required by this task for the same reason as noted above under "Control Grade System". The control grade system is believed to provide adequate protection for the interim period from January 1, 1981, to commencement of the 1981 refueling outage (approximately 90 days).

TASK 2.1.7.b, AUXILIARY FEEDWATER FLOW INDICATION

All requirements of this task are met for the control grade indication system. Safety grade indication system requirements will be met by performing modifications in two phases. The first phase will be performed during the 1980 refueling outage and will consist of replacing steam generator level transmitters and auxiliary feedwater flow transmitters with safety grade transmitters.

TASK 2.1.7.b, AUXILIARY FEEDWATER FLOW INDICATION (Continued)

Phase two will consist of upgrading auxiliary feedwater flow indication cabling to meet separation requirements. Steam generator level cabling is LOCA qualified and already meets separation requirements. Auxiliary feedwater flow indication cabling is LOCA qualified. Cable upgrading will be completed prior to January 1, 1981.

It should be noted that the District intends to use steam generator level indication as the redundant indication to auxiliary feedwater flow indication. Each auxiliary feedwater flow path will be equipped with a single flow indication channel and each steam generator will be equipped with four separate level indication channels.

TASK 2.1.8.a, POST-ACCIDENT SAMPLING

It was the District's intention to supply the design review, procedures, and description of plant modifications required by this task by January 1, 1980. However, the Commission's letter of October 30, 1979, contains a clarification which significantly increases the scope of the original requirement. As such, it is uncertain at this time that information in regard to dissolved gas, pH, and containment hydrogen can be supplied by January 1, 1980. However, a good faith effort will be made to meet this schedule.

Modifications required by this task will be completed to the extent possible prior to January 1, 1981, providing a plant shutdown is not required. A plant shutdown will be required to tie these systems into containment, since containment integrity must be breeched. Current post-accident sampling techniques are believed to be adequate for the interim period between January 1, 1981, and commencement of the 1981 refueling outage to provide for this function.

TASK 2.1.8.b, HIGH RANGE RADIATION MONITORS

The proposed monitoring system designs will be submitted to the Commission for review by October 1, 1980. Effluent and in-containment monitoring capabilities described in the NUREG will be achieved prior to heatup following the 1981 refueling outage. These modifications require entry to areas which are normally inaccessible during power operation.

It was the District's intention to implement by January 1, 1980, procedures for estimating noble gas and radioiodine releases, if existing effluent instrumentation goes off scale. However, the Commission's letter of October 30, 1979, contained clarification for this task which significantly increased the scope of work required, causing the District's implementation schedule to be uncertain at this time. These procedures, when developed, will be sufficient to estimate releases for the interim period between January 1, 1981, and commencement of the 1981 refueling outage.

TASK 2.1.8.c, IMPROVED IN-PLANT IODINE INSTRUMENTATION

The District intends to meet the requirements of this task by January 1, 1980. Portable iodine instrumentation will be procured by that date, provided equipment is available. Equipment availability has not been investigated to date.

TASK 2.2.1.b, SHIFT TECHNICAL ADVISOR

It is intended that Shift Technical Advisors will provide an operating experience assessment function as well as an accident assessment function.

TASK 2.2.2.b, ON-SITE TECHNICAL SUPPORT CENTER

The permanent center will be established and operable prior to January 1, 1981.

CONTAINMENT WATER LEVEL INDICATION

This task must be performed during a reactor shutdown because the containment sump is inaccessible during power operation.

The Commission's clarification letter of October 30, 1979, required a range of 600,000 gallons for the wide range channel versus 500,000 as originally required. As described in the District's response of October 25, 1979, the modified system would conform to the existing level channel, providing a maximum indication of approximately 550,000 gallons. The potential sump volume following a LOCA is approximately 367,000 gallons. Based upon the estimated LOCA volume, it is believed that the 550,000 gallon maximum indication level would provide adequate level measurement.

It is believed that for the interim period between January 1, 1981, and commencement of the 1981 refueling outage existing containment water level indication capability, as described in our October 25, 1979, letter, is sufficient to provide compensatory indication.

CONTAINMENT HYDROGEN MONITOR

A refueling outage is required to perform the modifications required by this task, since containment integrity must be violated. Since the Fort Calhoun Station is currently equipped with a hydrogen monitor, it is believed that sufficient hydrogen monitoring capability exists for the interim period between January 1, 1981, and the 1981 refueling outage to provide compensatory hydrogen monitoring capability.

CONTAINMENT PRESSURE MONITOR

A refueling outage is required to perform this task because containment integrity must be violated in order to install equipment. Modifications will be completed prior to January 1, 1981, to the extent possible.

RCS VENTING

This modification which requires breeching of the reactor coolant system boundary will be performed during the 1981 refueling outage. A normal plant shutdown would probably not be adequate to install a valve on the reactor head. A refueling outage would be required. The 1981 refueling outage is the first refueling outage following completion of the design for this task.