Commonwealth Edison Company
1400 Opus Place
Downers Grove, IL 60515

April 7, 1995

ComEd

Mr. John B. Martin
Regional Administrator
U.S. Nuclear Regulatory Commission
Region III
801 Warrenville Road
Lisle, Illinois 60532-4351

Subject: Byron Station Unit 1
Request for Notice of Enforcement Discretion from
Technical Specification 3.7.1.2
NRC Docket Number 50-454

Dear Mr. Martin,

The purpose of this letter is to document the results of a teleconference between Commonwealth Edison Company (ComEd) and the Nuclear Regulatory Commission (NRC) Staff on April 7, 1995, in which ComEd requested issuance of a Notice of Enforcement Discretion (NOED) from Technical Specification 3.7.1.2.a for Byron Unit 1.

On April 6, 1995, at 0839 (CDT) Byron Unit 1 entered the Technical Specification 3.7.1.2.a Limiting Condition for Operation Action Statement due to an inoperable Auxiliary Feedwater Pump (1B) with a damaged Power Take Off unit.

The basis of the request for Enforcement Discretion is provided in the Attachment and includes:

- The Technical Specification that will be violated;
- The circumstances surrounding the condition;
- Proposed compensatory measures(s);
- The safety basis for the request that enforcement discretion be exercised, including an evaluation of the safety significance and potential consequences of the proposed course of action;
- Justification for the duration of the request;

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- The basis for the conclusion that the request will not have a potential adverse impact on the public health and safety and that a significant safety hazard is not involved; and

- The basis for the conclusion that the request will not involve adverse consequences to the environment.

ComEd requested that Enforcement Discretion be in effect until April 11, 1995, at 0839 hours, at which time if the pump is not restored to its operable status, Unit 1 will follow the shutdown requirements of Technical Specification 3.7.1.2.a. A Notice of Enforcement Discretion was verbally granted by Region III at 1645 hours on April 7, 1995.

This request for Enforcement Discretion has been reviewed and approved by the Byron On-Site Review Committee, in accordance with station procedures.

ComEd sincerely appreciates the Staff's effort and participation in the review of this request. Please direct any questions or comments to this office.

Sincerely,

Denise M. Saccomando
Nuclear Licensing Administrator

Attachment

cc: NRC Document Control
G. Dick, Byron Project Manager-NRR
H. Peterson, Senior Resident Inspector-Byron

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REQUEST FOR ENFORCEMENT DISCRETION
BYRON STATION
UNIT 1
April 7, 1995

1. TECHNICAL SPECIFICATION OR LICENSING CONDITION THAT WILL BE VIOLATED:

A. Summary of the relief request.

Byron is requesting enforcement discretion from Technical Specification 3.7.1.2, Auxiliary Feedwater System. This specification requires that with one auxiliary feedwater pump inoperable, restore the required auxiliary feedwater pump to the OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. Currently the 1B auxiliary feedwater pump is inoperable with a damaged Power Take Off unit.

The 1B auxiliary feedwater pump was declared inoperable on April 6, 1995 at 0839 (CDT). The 72 hour Allowed Outage Time will expire on Sunday April 9, 1995 at 0839 (CDT) at which time the action required to meet the intent of the Technical Specification is to place the unit in Hot Standby. Byron is requesting an extension of the Auxiliary Feedwater System Allowed Outage Time requirement until Tuesday, April 11 at 0839 (CDT), in order to avoid placing Byron Unit 1 in an unnecessary shutdown condition, and cycling Unit 1 through an unnecessary thermal transient. With the replacement parts in route to the site the pump's return to the operable status should be within this extended time.

B. The current licensing requirement(s).

The Auxiliary Feedwater System Limited Condition for Operation is given in Technical Specification 3.7.1.2, requiring at least two independent steam generator auxiliary feedwater pumps and associated flow paths shall be OPERABLE with :

a. One motor driven auxiliary feedwater pump capable of being powered from an ESF Bus, and

b. One direct drive diesel auxiliary feedwater pump capable of being powered form a direct-drive diesel engine and an OPERABLE Diesel Fuel Supply System consisting of a day tank containing a minimum of 420 gallons of fuel.

With one auxiliary feedwater pump inoperable, restore the required auxiliary feedwater pump to the OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

C. Basis for the license requirements

The OPERABILITY of the Auxiliary Feedwater System ensures that the Reactor Coolant System can be cooled down to less than 350°F from normal operating conditions in the event of a total loss-of-offsite power.

The motor-driven auxiliary feedwater pump is capable of delivering a total feedwater flow of 740 gpm at a pressure of 1450 psig to the entrance of the steam generators. The diesel-driven auxiliary feedwater pump is capable of delivering a total feedwater flow of 740 gpm at a pressure of 1450 psig to the entrance of the steam generators. Either pump has capacity sufficient to ensure that adequate feedwater flow is available to remove decay heat and reduce the Reactor Coolant System temperature to less than 350°F when the RHR System may be placed into operation.

2. CIRCUMSTANCES SURROUNDING THE SITUATION:

3/27/95 - During ASME surveillance on 1B AF Pump, a higher than normal vibration was observed on the engine driven SX booster pump.

3/29/95 - During the monthly surveillance on 1B AF Pump, vibration measurements were again taken on the SX booster pump and were within the alert range but below the required action limit. This left the pump operable, but in double-test frequency. The monthly surveillance was completed and the operating shift notified of the concern. Later that day, the engine was run again with Mechanical Maintenance personnel present with the same noted increase in vibration. The source of the vibration seemed to be at the pump end of the engine.

3/30/95 - A meeting was held to analyze data and determine a troubleshooting scope and schedule.

3/31/95 - The pump was run again with a diesel vendor representative present to evaluate the vibration and make troubleshooting recommendations. The Engine supplier was also contacted for recommendations.

4/3/95 - Another planning meeting was conducted to incorporate vendor recommendations into the troubleshooting plans and finalize the schedule.

4/4/95 - The clutch assembly was visually inspected and no damage was evident. The pump was run again and speed was varied to determine the effect of load/speed on vibration.

4/6/95 - As a function of troubleshooting, the engine was declutched from the pump. During the ensuing engine runs in both the clutched and declutched configurations, the clutch mechanism failed. It was later determined that the cause of the failure was the clutch operating shaft pilot bearing. The failure of the bearing was aggravated by the declutching during troubleshooting.

The pump was declared inoperable at 0839 and Action Statement 3.7.1.2.a was entered.

3. COMPENSATORY ACTIONS:

- Minimize perturbations to the condensate and feedwater systems, such as swapping a pump or performing a surveillance, that would possibly cause an actuation of the auxiliary feedwater system.

- Avoid high risk activities with the potential to cause a Reactor trip.

- Maximize availability of power to the 1A auxiliary feedwater pump. The 1A diesel generator surveillance was completed successfully on April 5, 1995, and the 2A diesel generator surveillance was completed successfully on April 7, 1995. No further surveillances will be performed on the diesel generators for the duration of the extension of the allowed outage time. If necessary, the 4.16 kV system unit crosstie may be used so that the 2A diesel generator may be used as an alternate power supply to bus 141 and the 1A auxiliary feedwater pump.

- Refrain from performing surveillances on electrical systems that have the potential for causing a loss of offsite power. This restriction would be similar to restrictions that apply when the grid status is red. This includes all surveillances or operating activities that have the potential for entering any 72 hour LCOAR.

- Refrain from allowing any switching activities in the switchyard. In addition, Bulk Power Operations has been notified to refrain from switching activities that may affect the stability of the Byron switchyard.

- No load changes on Unit 1 are planned during the pump repair activities.

- Conduct a High Level Awareness briefing with shift personnel.

4. EVALUATION OF THE SAFETY SIGNIFICANCE AND CONSEQUENCES:

Operation of Unit 1 with the 1B auxiliary feedwater pump inoperable does not create an immediate threat to safety when the remaining auxiliary feedwater pump is operable. The auxiliary feedwater system continues to be capable of performing its intended safety function. The design basis of the auxiliary feedwater system is to ensure that the reactor coolant system can be cooled down to less than 350°F from normal operating conditions in the event of a total loss-of-offsite power. This basis continues to be met.

The Byron Individual Plant Evaluation (IPE) model includes plant specific data for the 1B auxiliary feedwater pump. The pump's unavailability was conservatively assumed to be 108 hours per year. A review of the pump's operating history shows that the pump has been unavailable for 8.38 hours in the last 12 months. This NOED request would represent an increase of 20.38 hours over the baseline IPE assumption (108 hours), which leads to a net increase of 1.6E-06 in cumulative core damage frequency (CDF) over the baseline CDF of 3.54E-05.

In the event that this NOED expires, or it becomes apparent that the AFW Pump can not be repaired within the 48 hours requested by this NOED, Unit 1 will follow the shutdown requirements of Technical Specification 3.7.1.2.

5. JUSTIFICATION FOR THE DURATION OF THE REQUEST:

Byron is requesting to increase the allowed outage time of 72 hours by 48 hours. Parts needed for the required repair were not immediately available, and there is some uncertainty in the estimated duration for aligning the clutch assembly. The location and configuration of the equipment require special rigging and procedures to move equipment in order to inspect and assemble it. Therefore, it is not possible to make the required repairs and return the pump to service within the time allowed by Technical Specifications. The 48 hour extension will allow for the repair to be made, and, if necessary, allow time for manufacturing shims required for alignment.

6. EVALUATION OF SIGNIFICANT HAZARDS CONSIDERATION:

ComEd has evaluated the proposed relief request and determined that it involves no significant hazards considerations. According to 10CFR50.92(c), the proposed relief involves no significant hazards considerations if operation of the facility in accordance with the relief request would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated; or

2. Create the possibility of a new or different kind of accident from any accident previously evaluated; or

3. Involve a significant reduction in a margin of safety.

A. The proposed relief request does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The cumulative core damage frequency incremental increase was determined to be 1.6E-06/year. Allowing the additional 48 hours for the repair of the pump is acceptable since one train of the auxiliary feedwater system remains capable of performing its intended function. During the extended maintenance and test period, appropriate compensatory actions are being implemented. Therefore, the consequences of an accident related to or dependent on auxiliary feedwater system operation will not be significantly affected.

B. The proposed relief request does not create the possibility of a new or different kind of accident from any accident previously evaluated.

There are no new failure modes or mechanisms associated with plant operation for an extended period to perform maintenance on the 1B auxiliary feedwater pump. Extended operation with an inoperable pump does not involve any modification in the operational limits or physical design of the involved systems. There are no new accident precursors generated due to the extended maintenance period.

C. The proposed relief request does not involve a significant reduction in a margin of safety.

Operation for an additional 48 hours with the inoperable pump does not adversely affect the margin of safety. During the extended maintenance period, the one available auxiliary feedwater train maintains the ability to perform the safety function. Compensatory actions will remain in effect to assure that the safety margins are maintained.

Therefore, based on the above evaluation, Commonwealth Edison has concluded that this request for enforcement discretion does not involve significant hazards consideration.

7. ENVIRONMENTAL ASSESSMENT:

Commonwealth Edison has evaluated the proposed request against the criteria for identification of licensing and regulatory actions requiring environmental assessment in accordance with 10CFR51.21. It has determined that the proposed request meets the criteria for categorical exclusion as provided for in 10CFR51.22(c). This determination is based on the fact that this request is being proposed as relief to a license issued pursuant to 10 CFR 50, and the proposed relief involves components located within the restricted area, and the relief involves no significant hazards considerations. In addition, there is no change in the amount or type of releases made offsite, and there is no significant increase in individual or cumulative radiation exposure.

8. APPROVAL BY ONSITE REVIEW:

This request has been reviewed and approved by the Byron On-Site Review Committee in accordance with station procedures.