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October 14, 1986

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

Subject: LaSalle County Station Unit 1
Proposed Amendments to Technical
Specification for Facility Operating
License NPF-11 - Diesel Generator Lube
Oil Modification Submittal
NRC Docket No. 50-373

References (a): License Condition NPF-18 2.(C).12.(b).

(b): March 12, 1984, letter from J. Norris (NRR) to D. L. Farrar regarding Similar Amendments to the Zion Technical Spectification.

(c): Draft NUREG-1032 on Station Blackouts.

(d): UFSAR Figures 8.1-1 and 8.1-2.

(e): W. Butler letter to D. L. Farrar dated November 13, 1985.

Dear Mr. Denton:

Pursuant to 10 CFR 50.90, Commonwealth Edison proposes to amend Appendix A, Technical Specification, to Facility Operating License NPF-11. These amendment changes are being submitted for your staff's review and approval to permit continued Unit 1 operation during the installation of a modification to the lube oil system of the 2A Diesel Generator. This modification is required to satisfy one of the License Conditions contained in License NPF-18 (Reference (a)).

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Attachment A provides background and discussion. The proposed revised change is enclosed in Attachment B. The attached change has received both On-Site and Off-Site review and approval. We have reviewed this amendment request and find that no significant hazards consideration exists. Our review is documented in Attachment C. Attachment D is the station blackout assessment and Attachment E is a loss of off-site power transient analysis.

Commonwealth Edison is notifying the State of Illinois of our request for this amendment by transmitting a copy of this letter and attachments to the designated State Official.

These one-time changes will allow installation of the diesel generator lube oil modification by extending the present ten-day period to thirty days during which, with Unit 2 in Cold Shutdown, Refuel Mode, or defueled, only three diesel generators would be required to satisfy the standby AC on-site power requirement for Unit 1.

During the Unit 1 first refuel outage, CECo modified the 0, 1A and 1B diesels. During the Unit 2 first refuel outage, CECo will modify the 2A and 2B diesels. This satisfies the license conditions for the respective units. The Unit 2 refuel outage is expected to begin in January, 1987.

The requested extension on the out-of-service time for the "2A" diesel generator is required to prevent the shutdown of Unit 1 within a maximum of 10 days ("2A" diesel generator T.S. 3.8.1.1 action f, with standby gas treatment being declared inoperable after 72 hours). This shutdown would be required to be maintained for the duration of the modification.

Please note that your approval of this change is required prior to the installation of these modifications. Commonwealth Edison requests that you consider this be a high priority item, to be concluded at the earliest possible date. This change is similar to that already reviewed and approved by Amendment 16 to License NPF-18.

Please direct any questions you may have concerning this matter to this office. In accordance with the provisions of 10 CFR 50.30, three (3) signed and affirmed originals and forty (40) copies of this letter and attachments are enclosed.

A fee remittance in tne amount of $150.00 is enclosed in compliance with 10 CFR 170.

Very truly yours,

C. M. Allen
Nuclear Licensing Administrator

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Attachments

cc: Dr. A. Bournia
Resident Inspector - LSCS
M. C. Parker - IDNS

SUBSCRIBED AND SWORN to
before me this 14th day
of October, 1986

Notary Public

2250K

ATTACHMENT A

TECHNICAL SPECIFICATION CHANGE REQUEST

LASALLE COUNTY STATION UNIT 1

SUBJECT: LaSalle County Station Unit 1
Diesel Generator Lube Oil Modification
Temporary Change to the Technical
Specifications

BACKGROUND AND DISCUSSION:

This proposal revises section 3.8.1.1. of the Technical Specifications to allow one of the three ESF Division 1 or 2 diesel generators (0, 1A, and 2A) to be inoperable for a 30 day period without requiring both units to be in cold shutdown and without requiring the other operable diesels to be tested every 8 hours. With this change the station will be able to install the EMD M.I. 9644 lube oil modification on diesel 2A without suffering a large economic loss. This modification is required by reference (a).

Entensive changes to the lube oil system are required for this modification. A 3 gpm pump, two oil pressure alarm switches, and new lines must be added to the system, and several existing lines modified. Upon completion of the installation, the Architect Engineer must perform a seismic analysis of the piping and the station must perform numerious tests such as hydrostatic tests on the piping, detailed and functional tests of the lube oil system with the diesel shutdown and running, and start and load tests on the diesel generator. Recent modifications to the "0" and "1A" diesel generators took a large portion of the 30 days allowed.

We have concluded that the proposed change will not endanger the health and safety of the public provided the following conditions are met before a diesel is taken out of service for modification and while the diesel is being modified:

1. Unit 2 must be in Cold Shutdown, Refuel Mode or defueled before DG-2A is declared inoperable.

2. Both system auxiliary transformers are operable.

3. No maintenance is to be performed on the other diesels required for unit operation while the diesel is being modified.

4. The other diesels needed for unit operation shall be demonstrated to be operable immediately prior (within 48 hours) to taking the diesel out of service and shall be verified to be operable at least once a day during the 30 day period. Please note that verify does not specifically mean to test.

5. The 0, 1B, and 1A diesel generators will be started during the 30 day period at approximately the 14th day of the period. If a diesel fails to properly start, the appropriate Technical Specification actions would be taken.

6. Immediately prior to and during the diesel outage, the control circuit for the unit cross-tie circuit breakers between 4kV buses 142Y and 242Y shall be temporarily modified to remove the interlocks with the DG output and main feed breakers. This change will allow that unit tie breakers to be manually closed while the DG is feeding the bus.

The first condition minimizes the exposure period with one diesel inoperable and the consequences of a Loss of Off-Site Power (LOSP) transient. The next three conditions reduce the probability that an ESF bus will be without power, and the last condition ensures that power will be available to at least one of the ESF Division 2 buses following a LOSP event.

The proposed Technical Specification changes are justifiable for the following reasons:

1. The probability that a station blackout will occur during the 30 days is extremely unlikely.

2. The operating unit can be safely shutdown following a LOSP transient even if one of the remaining diesels fail.

The chances that a station blackout will occur is negligible due to the high reliability of the Commonwealth Edison Company transmission network, the LaSalle switchyard, and its diesel generators. Based on operational experience, the reliability of these systems is considerably higher than the industry average. The average nuclear power plant experiences about one LOSP event every ten years (reference (c)). Part of the reason for our high reliability is that the switchyard is designed so that a single failure can not cause a LOSP. It is connected to four 345 KV transmission lines and is arranged in a ring-bus configuration with ten circuit breakers (reference (d)). Thus, any system fault or equipment failure is quickly located and isolated.

We have reviewed the auxiliary power bus fast transfer schemes as utilized at LaSalle and have concluded that the design feature which caused a bus transfer failure at Dresden Unit 2 on August 16, 1985 does not exist at LaSalle

The LaSalle diesels also have a higher than average reliability. The average emergency diesel generator has a reliability of 0.98 (reference (c)), and those at LaSalle have a reliability that exceeds 0.99. According to station records the LaSalle diesels have been started over 450 times with only three valid failures, since the start of 1984.

We have calculated that the probability of losing offsite power during a 30 day period is approximately 9.5×10^{-4}. If the unit auxiliary transformer on the unit in shutdown is energized, the probability of a LOSP event drops to 1.5×10^{-4} since there are now three connections between the station and the switchyard. The combined probability that one or both of the remaining ESF Division 1 and 2 diesels fail is about 2.6×10^{-2}, and the chances that both of them will fail is 2.1×10^{-3}. Therefore, the probability that a LOSP will occur concurrent with an additional diesel failure is 2.5×10^{-5} if the UAT is de-energized or 4.0×10^{-6} if the UAT is energized. The chances that no electrical power will be available to the ESF Division 1 and 2 buses ranges from 2.0 to 0.32×10^{-6}. Our calculations are shown in Attachment D.

Attachment E summarizes the results of our analysis of a LOSP event with one unit at full power and one diesel inoperable. Even if one of the remaining diesels fails (worst case single failure), we have determined that the unit can be safely shutdown because RCIC, ADS, and at least three ECCS loops would be available. Therefore, the consequences would be similar to that described in sections 15.2.6 and 15.2.9 of the UFSAR.

If a LOSP to Unit 1 occurs the operator could manually close the unit tie breakers between 4kV buses 142Y and 242Y so that the Unit 2 System Auxiliary Transformer can provide power to bus 142Y. In addition the 1A diesel generator will be able to power either bus 141Y or 241Y as needed if normal offsite power is not available to either bus.

Marked-up copies of the Technical Specifications are attached (Attachment B). A similar change to the Unit 2 Technical Specifications to support modification of the "0" and "1A" diesel generators was approved previously (reference (e)).