



Commonwealth Edison

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Address Reply to: Post Office Box 767
Chicago, Illinois 60690

August 28, 1985

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

Subject: LaSalle County Station Unit 2
Proposed Amendments to Technical
Specification for Facility Operating
License NPF-18 - Diesel Generator Lube
Oil Modification Revised Submittal
NRC Docket No. 50-374

- References (a): License Condition NPF-11 2.(C).21.(b).
- (b): March 12, 1984, letter from J. Norris (NRR) to
D. L. Farrar regarding Similar Amendments to the
Zion Technical Specification.
- (c): Draft NUREG-1032 on Station Blackouts.
- (d): March 25, 1982, letter from C. W. Schroeder
to A. Schwencer regarding Diesel Generator
Starts.
- (e): April 9, 1982, letter from C. W. Schroeder
to A. Schwencer regarding Diesel Generator
starts.
- (f): UFSAR Figures 8.1-1 and 8.1-2.

Dear Mr. Denton:

This submittal revises our request of August 23, 1985 regarding the same subject. Pursuant to 10 CFR 50.59, Commonwealth Edison proposes to amend Appendix A, Technical Specification, to Facility Operating License NPF-18. These amendment changes are being submitted for your staff's review and approval to permit the installation of a modification in accordance with one of the conditions contained in the licenses.

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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. Attachments D and E were included with our August 23, 1985 submittal.

Commonwealth Edison is notifying the State of Illinois of our revised request for this amendment by transmitting a copy of this letter and revised Attachments A, B, and C to the designated State Official.

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

During the Unit 1 outage, CECO will modify the 0, 1A and 1B diesels. During the Unit 2 first refuel outage, CECO will modify the 2A and 2B diesels. This will satisfy the respective license conditions. The Unit 2 outage is expected to begin late summer 1986. The required Unit 1 tech spec changes to support Unit 2 diesel generator lube oil modifications will be submitted at a later date.

The requested extension on the out-of-service time for the "1A" and "0" diesel generators is required to prevent the shutdown of Unit 2 within 72 hours ("0" diesel generator T.S. 3.8.1.1 action a) or within a maximum of 10 days ("1A" 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 prior to the end of October, 1985.

Please direct any questions you may have concerning this matter to this office.

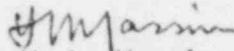
H. R. Denton

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Three (3) signed originals and thirty-seven (37) copies of this transmittal and its attachments are provided for your use.

Very truly yours,


H. L. Massin

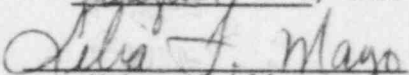
Nuclear Licensing Administrator

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Attachments A: Background and Discussion
B: Technical Specification Change to NPF-18
C: Evaluation of Significant Hazards Consideration
D: Station Blackout Assessment
E: Loss of Off-Site Power Transient Analysis

cc: Region III Inspector - LSCS
A. Bournia - NRR
M. Parker - State of Ill

SUBSCRIBED AND SWORN to
before me this 28th day
of August, 1985


Notary Public

0571K

ATTACHMENT A

TECHNICAL SPECIFICATION CHANGE REQUEST

LASALLE COUNTY STATION UNIT 2

SUBJECT: LaSalle County Station Unit 2
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, or 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 modifications on these diesels without suffering a large economic loss. This modification is required by reference (a).

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:

1. Unit 1 must be in cold shutdown, refueling mode or defueled before DG-1A or 0 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. 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 Offsite 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 1 or 2 buses on the operating unit in the event one of the remaining operable diesels fails 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 fails.

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 (f)). 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 600 times with only seven failures, and within the last three years only one failure has occurred.

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.

The worst case is when Unit 2 is at full power with DG-0 inoperable. If a LOSP occurs and "2A" diesel generator fails, the operator would have to manually close the unit tie breakers between 4kV buses 142Y and 242Y so that "1A" diesel generator can provide power to bus 242Y. After re-energizing the bus, the operator could start an RHR loop. With one Unit shutdown the diesel generator can feed both buses without overloading as long as all non-essential loads such as the primary containment water chiller, CRD pump, turbine generator auxiliary equipment, cleanup recirculation pump, etc., are not immediately energized. In any case, HPCS, RCIC and ADS would be immediately available with both diesels not operating.

Based on the above analysis, we have concluded that not only is the proposed temporary change justifiable, but a permanent revision to the Technical Specifications is justifiable. A permanent change would allow the station to perform future modifications or extensive maintenance which would increase the reliability of the diesels. However due to the need for an expedited review of this amendment, only a temporary change is requested at this time.

Marked-up copies of the Technical Specifications are attached (Attachment B). This submittal also clarifies the requirements of Unit 1 License Condition NFP-11 2.C.(21).b with respect to DG-2A since it would be preferable from a safety and construction viewpoint to install the lube oil modification on DG-2A during the first Unit 2 refueling outage.