



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 109 TO FACILITY OPERATING LICENSE NO. NPF-11 AND
AMENDMENT NO. 94 TO FACILITY OPERATING LICENSE NO. NPF-18
COMMONWEALTH EDISON COMPANY
LASALLE COUNTY STATION, UNITS 1 AND 2
DOCKET NOS. 50-373 AND 50-374

1.0 INTRODUCTION

By application dated June 8, 1995, Commonwealth Edison Company (ComEd, the licensee) requested changes to the Technical Specifications (TS) for the LaSalle County Station, Units 1 and 2. The proposed changes would revise TS 3/4.8.1 by (1) replacing Table 4.8.1.1.2-1, "Diesel Generator Test Schedule," with a single surveillance interval of at least once per 31 days, and (2) deleting TS 4.8.1.1.3, "Reports." The NRC provided guidance on the proposed TS changes in Generic Letter (GL) 94-01, "Removal of Accelerated Testing and Special Reporting Requirements for Emergency Diesel Generators," dated May 31, 1994.

The proposed amendments would also use the guidance of GL 93-05 to revise the ACTION statements of TS 3.8.1.1 as follows:

1. ACTION "a" would be revised to delete the requirement to demonstrate the operability of the remaining diesel generators that have not been successfully tested within the previous 24 hours by performing Surveillance Requirement 4.8.1.1.2.a.4 for each such emergency diesel generator (EDG), separately, within 24 hours.
2. ACTION "b" would be revised to eliminate testing requirements when a diesel generator becomes inoperable due to an inoperable support system, independently testable component, or preplanned maintenance testing. The proposed change would also require the licensee to perform Surveillance Requirement 4.8.1.1.2.a.4 if the EDG becomes inoperable due to any cause other than those just listed.
3. ACTION "c" would be revised to eliminate testing when an EDG becomes inoperable due to an inoperable support system, an independently testable component, or preplanned maintenance or testing. The proposed change would also require the licensee to perform Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours, unless the absence of any potential common mode failure for the remaining EDG is demonstrated.

4. ACTION "d" would be revised to delete the requirement to perform Surveillance Requirement 4.8.1.1.2.a.4 if the diesel generator were to become inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned maintenance or testing. The proposed change would also require the licensee to perform Surveillance Requirement 4.8.1.1.2.a.4 within 24 hours, unless the absence of any potential common mode failure for the remaining EDG is demonstrated.
5. ACTION "e" would be revised to delete the requirement to perform Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours.
6. ACTION "g" would be revised to delete the requirement to demonstrate the operability of remaining AC power sources by performing Surveillance Requirement 4.8.1.1.2.a.4 if the diesel generator were to become inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned maintenance or testing. The proposed change would also require the licensee to perform Surveillance Requirement 4.8.1.1.2.a.4 within 24 hours unless the absence of any potential common mode failure for the remaining EDG is demonstrated.
7. The time requirement associated with the fast load test of Surveillance Requirement 4.8.1.1.2.a.5 would be changed from "...within 60 seconds" to "...in accordance with the manufacturer's recommendations." The 60 second reference in the footnote associated with this item would also be deleted.
8. Surveillance Requirement 4.8.1.1.2.d.8 would be revised to require that Surveillance Requirement 4.8.1.1.2.a.4, as opposed to Surveillance Requirements 4.8.1.1.2.d.4.a).2) and b).2), be performed within 5 minutes after completing the 24 hour run. The footnote associated with this item would also be changed.

2.0 EVALUATION

The surveillance interval for the testing of EDGs is currently governed by TS 3.8.1.1 which gives a diesel generator test schedule based on the number of EDG failures experienced in the last 20 and 100 tests. The practice of increasing the testing frequency with the number of failures is commonly referred to as accelerated testing. Accelerated testing is begun when an EDG experiences two or more failures in the last 20 tests or five failures in the last 100 tests. This increased test frequency continues until seven failure-free tests have been performed and the number of failures in the last 20 tests is reduced to one or zero.

As stated in GL 94-01, the staff has concluded that implementing the provisions of 10 CFR 50.55, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants" (the Maintenance Rule), including the applicable regulatory guidance, will ensure reliable EDG performance.

Measures to be implemented in accordance with the maintenance rule include detailed root cause analysis of individual EDG failures, corrective actions to individual EDG failures, and implementation of EDG preventive maintenance. The staff has determined that the implementation of these measures will justify removing the accelerated testing requirements.

In its application dated June 8, 1995, the licensee committed to implement, within 90 days of issuance of the license amendment, an "Alternative Approach" to 10 CFR 50.65 for the EDG system. The licensee's approach is considered an "Alternative Approach" because it makes two exceptions to the regulatory interpretation of industry guidelines. First, the licensee's approach considers the system boundaries to be those outlined in Figure 1 of Regulatory Guide (RG) 1.9 as opposed to all systems related to the EDG. Second, the licensee's approach does not specifically account for evaluating the impact on safety when the EDG is removed from service. This section of the Maintenance Rule is not specific to the EDG and will be implemented in 1996 along with the implementation of the Maintenance Rule for all affected systems, structures, and components. The staff finds the licensee's "Alternative Approach" to be acceptable; furthermore, on the basis of the licensee's commitment to implement this maintenance program, the staff finds acceptable the proposed changes to (1) TS 3/4.8.1 to remove reference to Table 4.8.1.1.2-1 for test intervals, and (2) to remove accelerated testing requirements for EDGs.

The licensee proposes to delete TS 4.8.1.1.3, which requires licensees to report EDG failures to the NRC. The reporting requirements of TS 4.8.1.1.3 are associated with guidance contained in RG 1.108, "Periodic Testing of Diesel Generator Units Used as Onsite Electric Power Systems at Nuclear Power Plants." In developing GL 94-01, the staff determined that existing reporting requirements, such as those of 10 CFR 50.73, are adequate to ensure that the NRC learns of significant problems with EDG performance; therefore, the staff finds the deletion of TS 4.8.1.1.3 to be acceptable.

The licensee proposes to relocate Surveillance Requirement 4.8.1.1.2.d.1, which requires, at least once per 18 months during shutdown, subjecting the diesel to an inspection in accordance with the procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service to the licensee maintenance program. The licensee states that vendor recommended inspections will continue as part of the overall maintenance program implemented as their "alternate approach" to 10 CFR 50.65 for the EDG system. The relocated provision for performing the inspection would be controlled in accordance with the programs and procedures governing the EDG maintenance program. As discussed above, the staff has concluded that such maintenance programs adequately ensure reliable EDG performance. In addition, existing surveillance testing is retained in the technical specifications in order to ensure that the EDGs are capable of performing their safety functions. The staff finds the proposed change acceptable.

The licensee proposes several changes under the guidance of GL 93-05. This GL provided guidance for implementing line-item TS improvements proposed by NUREG-1366, "Improvements to Technical Specification Surveillance

Requirements." The licensee's proposed changes modify several sections of TS 3.8.1.1, (1) to eliminate the requirement to perform diesel starts from ambient conditions under various circumstances; (2) to remove the requirements for diesel testing when another diesel is inoperable due to an inoperable support system, an independently testable component, or preplanned maintenance; (3) to replace a requirement for generator loading and stabilization "within 60 seconds" with a requirement for loading and stabilization "in accordance with the manufacturer's recommendations," and (4) to replace the requirement for a 5 minute run test following the 24-hour EDG surveillance with a requirement for a hot start test.

The staff has reviewed these proposed changes (described in Subparagraphs 1-8 of Section 1.0 of this report) and has determined that they are generally consistent with the guidance of NUREG-1366 and of GL 93-05. The licensee has proposed an exception to the NUREG-1366 recommendation related to action statements related to the testing of EDGs in response to the inoperability of other EDGs. In lieu of testing remaining EDGs within 8 hours of determining an EDG is inoperable, as recommended in NUREG-1366, the licensee has proposed to retain current TS requirements that generally require tests within 24 hours for single reductions in electrical power sources (onsite) and require testing within 8 hours for multiple reductions in electrical power sources (onsite and/or offsite). The staff finds that the licensee's proposed retention of current action statement requirements is adequate to provide confidence in the supply of redundant electrical supplies to plant equipment. In regard to the replacement of the TS 4.8.1.1.2.a.5 requirement for loading to 2400 kW to 2600 kW "within 60 seconds" with "in accordance with manufacturer's recommendations", the licensee's proposed change is consistent with NUREG-1366 recommendations for limiting EDG degradation due to testing practices. The ability of the EDGs to sequence to its associated electrical bus under simulated emergency conditions is retained as an 12-month surveillance requirement. As discussed in NUREG-1366, the hot-restart test following the 24-hour performance test is performed to verify that the diesel generator does not have, in any way, impaired performance following operation at full load or equilibrium temperature. NUREG-1366 recommended that the hot-start test following the 24-hour EDG test should be a simple EDG start test. As discussed in NUREG-1366 and the licensee's submittal, the required scheduling of tests in the existing TS complicate activities during refueling outages and is unnecessary, compared to performing separate testing for each functional requirement, to ensure adequate EDG performance. The proposed TS continue to require that each functional requirement of the EDG (including extended EDG operation, hot-restart, and EDG sequencing requirements) are periodically tested. The staff finds the proposed changes acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Illinois State official was notified of the proposed issuance of the amendments. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (60 FR 45176). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

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