



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 16 TO FACILITY OPERATING LICENSE NO. NPF-58

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY, ET AL.

PERRY NUCLEAR POWER PLANT, UNIT NO. 1

DOCKET NO. 50-440

1.0 INTRODUCTION

By letter dated February 12, 1988, the Cleveland Electric Illuminating Company, et al. (licensees), requested an amendment to Facility Operating License No. NPF-58 for the Perry Nuclear Power Plant (PNPP) Unit No. 1. The proposed amendment would revise the limiting conditions for operation (LCO's) for the reactor coolant system leakage detection methods to increase flexibility for continuing operation with one or more leakage detection systems inoperable. Specifically, the proposed amendment would have allowed operation with the drywell air cooler condensate flow rate monitoring system inoperable for an indefinite period of time so long as the drywell floor drain sump was operable. The licensees' basis for this change was to take credit for redundancy between these two systems as all drywell air cooler condensate flow is part of the drywell floor drain sump flow.

The licensees also submitted the proposed amendment under exigent circumstances in accordance with 10 CFR 50.91(a)(6) because the drywell air cooler condensate flow meter had recently become inoperable, placing the PNPP Unit 1 into a 30-day LCO. Insufficient time remained for a full 30-day notice in the Federal Register before the licensees would have been required to shut down the unit. The staff determined that the licensee met the emergency circumstances of 10 CFR 50.91(a)(5), however, the staff intended to offer a reduced (2-week) notice period in the Federal Register for the proposed issuance of this amendment and opportunity for hearing in order to avoid unnecessarily shutting down the plant.

Subsequent to their February 12, 1988 amendment request, Perry Unit No. 1 experienced an unplanned outage of sufficient duration to allow the licensees to repair the drywell air cooler condensate flowmeter. Therefore, the emergency circumstances associated with their request no longer existed. The licensees were informed in an April 21, 1988 request for additional information that the staff intended to wait until expiration of the full 30-day notice period in the Federal Register before taking action on their request.

In response to the staff's request for additional information, by letter dated May 20, 1988 the licensees revised their original amendment request.

2.0 DISCUSSION AND EVALUATION

Regulatory Guide 1.45 (R.G. 1.45) "Reactor Coolant Pressure Boundary Leakage Detection Systems," dated May 1973 provides guidance for meeting General Design Criterion 30, "Quality of Reactor Coolant Pressure Boundary," of Appendix A to 10 CFR Part 50. This guide describes acceptable methods of establishing reactor coolant pressure boundary leakage detection systems for light-water reactors.

Regulatory Position C.3 of R.G. 1.45 states that at least three separate methods of leakage detection should be available. It further provides guidance on which systems should be available so as to provide both diversity and redundancy of leakage detection methods. Regulatory Position C.3 states that two of the three methods of leakage detection should be (1) sump level and flow monitoring and (2) airborne particulate radioactivity monitoring (this provides diversity, one method being a direct measurement of leakage in gallons per minute (gpm), the second being an indirect measure of radioactivity which could be converted to an expected leak rate). The third method may be condensate flow from air coolers or monitoring of airborne gaseous radioactivity (this provides redundancy with one of the two types of leakage detection methods listed above).

The staff has reviewed the licensees' May 20, 1988 submittal against the guidance contained in R.G. 1.45. The revised Technical Specifications require 3 of 4 leakage detection systems (drywell floor drain and equipment drain sump flow monitoring, and two of drywell atmosphere particulate monitoring, drywell atmosphere gaseous activity monitoring, drywell air cooler condensate flow rate monitoring) to be operable, at least one of which will provide direct indication in gpm of indicated leakage. The revised LCO's permit continued operation for 30 days with one of the required systems inoperable under conditions that provide suitable redundancy and diversity. Based upon its review, the staff finds that the licensees' proposed amendment meets the intent of the guidance contained in R.G. 1.45 and is therefore, acceptable.

3.0 COMMENTS RECEIVED

By letter dated March 3, 1988, comments concerning the licensees' submittal (February 12, 1988) were sent to the NRC by Ms. Susan L. Hiatt representing Ohio Citizens for Responsible Energy (OCRE). Ms. Hiatt had two comments. First, OCRE questioned whether a unit shutdown provided sufficient legal basis for classifying an amendment as an emergency or for justifying approval. Secondly, OCRE questioned why the amendment should be of permanent vice temporary duration and why the system could not be repaired or returned to service at the next unplanned shutdown or at the one occurring the previous week.

In response to the first comment, 10 CFR 50.91 (a)(5) provides "[w]here the Commission finds that an emergency situation exists, in that failure to act in a timely way would result in derating or shutdown of a nuclear unit, or in prevention of either resumption of operation or of increase in power output up to the plant's licensed power level it may issue a license amendment involving no significant hazards consideration without prior notice and opportunity for a hearing or for public comment." In the case of this particular amendment, since time existed (prior to requiring plant shutdown) for a short duration (2-week) notice in the Federal Register, the Commission chose to publish a 2-week notice prior to issuance of the amendment.

With respect to the second comment, the licensees did fix the component which resulted in the need for consideration of this amendment request as an emergency during the unplanned outage occurring the week prior to OCRE's letter. The reason for this proposed amendment being submitted on a permanent rather than temporary basis is that the design of the air cooler condensate flowmeter is such that clogging of the flowline occurs frequently (twice more prior to amendment issuance). If no unplanned outage were to occur prior to expiration of the 30-day LCO associated with this component, the licensees would be required to shut down or to submit a temporary license amendment request each time this occurred. While numerous temporary license amendments could be processed, it is more desirable to resolve the issue through issuance of a permanent license amendment.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or changes a surveillance requirement. The staff has determined that the amendment involves 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 amendment involves no significant hazards consideration. Public comments were submitted on March 3, 1988 by Susan L. Hiatt representing Ohio Citizens for Responsible Energy and are addressed in this Safety Evaluation. Accordingly, the amendment meets 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 amendment.

4.0 CONCLUSION

The staff 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, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Timothy G. Colburn

Dated: August, 18, 1988

Mr. Alvin Kaplan
The Cleveland Electric
Illuminating Company

Perry Nuclear Power Plant
Unit 1

cc:
Shaw, Pittman, Potts & Trowbridge
2300 N Street, N.W.
Washington, D.C. 20037

Mr. James W. Harris, Director
Division of Power Generation
Ohio Department of Industrial
Relations
P.O. Box 825
Columbus, Ohio 43216

David E. Burke
The Cleveland Electric
Illuminating Company
P.O. Box 5000
Cleveland, Ohio 44101

The Honorable Lawrence Logan
Mayor, Village of Perry
4203 Harper Street
Perry, Ohio 44081

Resident Inspector's Office
U.S. Nuclear Regulatory Commission
Parmlly at Center Road
Perry, Ohio 44081

The Honorable Robert V. Orosz
Mayor, Village of North Perry
North Perry Village Hall
4778 Lockwood Road
North Perry Village, Ohio 44081

Regional Administrator, Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Attorney General
Department of Attorney General
30 East Broad Street
Columbus, Ohio 43216

Frank P. Weiss, Esq.
Assistant Prosecuting Attorney
105 Main Street
Lake County Administration Center
Painesville, Ohio 44077

Radiological Health Program
Ohio Department of Health
1224 Kinnear Road
Columbus, Ohio 43212

Ms. Sue Hiatt
OCRE Interim Representative
8275 Munson
Mentor, Ohio 44060

Ohio Environmental Protection
Agency
361 East Broad Street
Columbus, Ohio 43266-0558

Terry J. Lodge, Esq.
618 N. Michigan Street
Suite 105
Toledo, Ohio 43624

Mr. Phillip S. Haskell, Chairman
Perry Township Board of Trustees
Box 65
4171 Main Street
Perry, Ohio 44081

John G. Cardinal, Esq.
Prosecuting Attorney
Ashtabula County Courthouse
Jefferson, Ohio 44047

State of Ohio
Public Utilities Commission
180 East Broad Street
Columbus, Ohio 43266-0573

Eileen M. Buzzelli
The Cleveland Electric
Illuminating Company
P. O. Box 97 E-210
Perry, Ohio 44081

Mr. Murray R. Edelman
Centerior Energy
6200 Oaktree Blvd.
Independence, Ohio 44131