



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

June 29, 2000

Mr. John K. Wood
Vice President - Nuclear, Perry
FirstEnergy Nuclear Operating Company
P.O. Box 97, A200
Perry, OH 44081

SUBJECT: PERRY NUCLEAR POWER PLANT, UNIT 1 - ISSUANCE OF AMENDMENT
(TAC NO. MA7136)

Dear Mr. Wood:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 113 to Facility Operating License No. NPF-58 for the Perry Nuclear Power Plant, Unit 1. This amendment revises the Technical Specifications in response to your application dated November 1, 1999 (PY-CEI/NRR-2442L), as supplemented by submittal dated May 10, 2000 (PY-CEI/NRR-2495L).

This amendment modifies the frequency of performing Technical Specification Surveillance Requirement (SR) 3.6.1.7.4, verification that each containment spray nozzle is unobstructed. The frequency for performing SR 3.6.1.7.4 has been changed from once every 10 years to conditions following maintenance which could result in nozzle blockage.

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

Douglas V. Pickett, Sr. Project Manager, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-440

Enclosures: 1. Amendment No. 113 to
License No. NPF-58
2. Safety Evaluation

cc w/encls: See next page

June 29, 2000

DISTRIBUTION:

GHill (2)
PUBLIC
PD 3-2 r/f
ACRS
JHannon

OGC
WBeckner, TSB
GGrant, RIII

Mr. John K. Wood
Vice President - Nuclear, Perry
FirstEnergy Nuclear Operating Company
P.O. Box 97, A200
Perry, OH 44081

**SUBJECT: PERRY NUCLEAR POWER PLANT, UNIT 1 - ISSUANCE OF AMENDMENT
(TAC NO. MA7136)**

Dear Mr. Wood:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No.113 to Facility Operating License No. NPF-58 for the Perry Nuclear Power Plant, Unit 1. This amendment revises the Technical Specifications in response to your application dated November 1, 1999 (PY-CEI/NRR-2442L), as supplemented by submittal dated May 10, 2000 (PY-CEI/NRR-2495L).

This amendment modifies the frequency of performing Technical Specification Surveillance Requirement (SR) 3.6.1.7.4, verification that each containment spray nozzle is unobstructed. The frequency for performing SR 3.6.1.7.4 has been changed from once every 10 years to conditions following maintenance which could result in nozzle blockage.

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

/RA/

Douglas V. Pickett, Sr. Project Manager, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-440

- Enclosures: 1. Amendment No. 113 to License No. NPF-58
- 2. Safety Evaluation

cc w/encls: See next page

DOCUMENT NAME: G:\PDIII-2\PERRY\A7136amd.wpd

To receive a copy of this document, indicate in the box: "C" = Copy without enclosures "E" = Copy with enclosures "N" = No copy

OFFICE	PM:PD3-2 339	LA:PD3-2	OGC WBeckner	SC:SPLB	SC:PD3-2
NAME	DPickett	THarris JAH	WYoung	GHubbard*	AMendiola
DATE	06/15/00	06/14/00	06/26/00	05/24/00	06/29/00

*See 5/24/00 memo from GHubbard to AMendiola OFFICIAL RECORD COPY

J. Wood
FirstEnergy Nuclear Operating Company

cc:

Mary E. O'Reilly
FirstEnergy Corporation
76 South Main St.
Akron, OH 44308

Resident Inspector's Office
U.S. Nuclear Regulatory Commission
P.O. Box 331
Perry, OH 44081-0331

Regional Administrator, Region III
U.S. Nuclear Regulatory Commission
801 Warrenville Road
Lisle, IL 60532-4531

Sue Hiatt
OCRE Interim Representative
8275 Munson
Mentor, OH 44060

Gregory A. Dunn
Manager - Regulatory Affairs
FirstEnergy Nuclear Operating Company
Perry Nuclear Power Plant
P.O. Box 97, A210
Perry, OH 44081

William R. Kanda, Jr., Plant Manager
FirstEnergy Nuclear Operating Company
Perry Nuclear Power Plant
P.O. Box 97, SB306
Perry, OH 44081

Mayor, Village of North Perry
North Perry Village Hall
4778 Lockwood Road
North Perry Village, OH 44081

Donna Owens, Director
Ohio Department of Commerce
Division of Industrial Compliance
Bureau of Operations & Maintenance
6606 Tussing Road
P. O. Box 4009
Reynoldsburg, OH 43068-9009

James R. Williams, Executive Director
Ohio Emergency Management Agency
2855 West Dublin Granville Road
Columbus, OH 43235-7150

Perry Nuclear Power Plant, Units 1 and 2

Mayor, Village of Perry
P.O. Box 100
Perry, OH 44081-0100

Harvey B. Brugger, Supervisor
Radiological Assistance Section
Bureau of Radiation Protection
Ohio Department of Health
P.O. Box 118
Columbus, OH 43266-0118

Ohio Environmental Protection
Agency
DERR--Compliance Unit
ATTN: Mr. Zack A. Clayton
P.O. Box 1049
Columbus, OH 43266-0149

Chairman
Perry Township Board of Trustees
3750 Center Road, Box 65
Perry, OH 44081

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



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

FIRSTENERGY NUCLEAR OPERATING COMPANY

DOCKET NO. 50-440

PERRY NUCLEAR POWER PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 113
License No. NPF-58

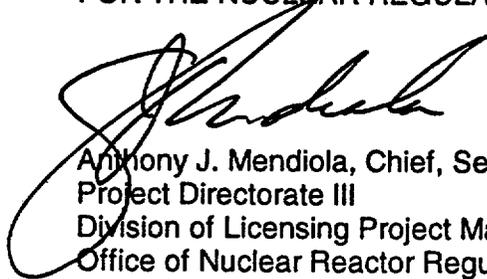
1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the FirstEnergy Nuclear Operating Company (the licensee) dated November 1, 1999, as supplemented by submittal dated May 10, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-58 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 113 are hereby incorporated into this license. The FirstEnergy Nuclear Operating Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented not later than 90 days after issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Anthony J. Mendiola, Chief, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: June 29, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 113

FACILITY OPERATING LICENSE NO. NPF-58

DOCKET NO. 50-440

Replace the following page of the Appendix "A" Technical Specifications with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

Remove

Insert

3.6-25

3.6-25

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.6.1.7.1 -----NOTE----- RHR containment spray subsystems may be considered OPERABLE during alignment and operation for decay heat removal when below the RHR cut in permissive pressure in MODE 3 if capable of being manually realigned and not otherwise inoperable. ----- Verify each RHR containment spray subsystem manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.</p>	<p>31 days</p>
<p>SR 3.6.1.7.2 Verify each RHR pump develops a flow rate of ≥ 5250 gpm on recirculation flow through the associated heat exchangers to the suppression pool.</p>	<p>In accordance with the Inservice Testing Program</p>
<p>SR 3.6.1.7.3 Verify each RHR containment spray subsystem automatic valve in the flow path actuates to its correct position on an actual or simulated automatic initiation signal.</p>	<p>18 months</p>
<p>SR 3.6.1.7.4 Verify each spray nozzle is unobstructed.</p>	<p>Following maintenance which could result in nozzle blockage.</p>



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 113 TO FACILITY OPERATING LICENSE NO. NPF-58

FIRSTENERGY NUCLEAR OPERATING COMPANY

PERRY NUCLEAR POWER PLANT, UNIT 1

DOCKET NO. 50-440

1.0 INTRODUCTION

By letter dated November 1, 1999, and as supplemented by letter dated May 10, 2000, FirstEnergy Nuclear Operating Company (FENOC), the licensee, requested a revision to the Technical Specifications (TSs) for the Perry Nuclear Power Plant (PNPP) Unit 1. The proposed amendment revises Surveillance Requirement (SR) 3.6.1.7.4.

Currently, SR 3.6.1.7.4 requires periodic verification that the containment spray nozzles are free of blockage. This verification is required to be performed once every 10 years to ensure that the Containment Spray System will operate as designed when needed. The verification test is performed by an air or smoke flow test to verify that the spray nozzles are not obstructed. The licensee stated that (1) the air flow test impacts fuel movement in containment, (2) the SR presents a personnel safety risk for the individuals required to access the top of the containment to check the nozzle air flow, (3) performance of the SR is expensive, and (4) operating experience has demonstrated that nozzle blockage is predominately associated with maintenance activities. The licensee is proposing to change the surveillance frequency to those conditions following maintenance which could result in nozzle blockage. The licensee is also proposing that the verification could consist of a visual inspection of the nozzles, in lieu of an air or smoke test.

The supplemental information contained clarifying information and did not change the initial no significant hazards consideration determination and did not expand the scope of the original *Federal Register* notice.

2.0 BACKGROUND

NUREG-1434, "Improved Standard Technical Specifications for BWR/6 Reactors," specifies that the containment spray nozzle flow surveillance be performed once every 10 years. The licensee has already performed two of these surveillance tests. The first surveillance was performed during pre-operational testing in August of 1986, and was repeated during Refueling Outage 2, in November of 1990. The results of each of these two tests demonstrated unobstructed flow through each nozzle. These tests confirmed that the system was free from construction debris, and also free from obstructions following start up of the plant.

3.0 EVALUATION

The containment spray system is part of the Residual Heat Removal (RHR) system and consists of two 100% capacity loops (A & B). Each loop consists of 3 spray rings located in the top of the containment dome with 346 spray nozzles in loop A and 344 spray nozzles in loop B. The system, constructed of carbon steel, is maintained dry and is isolated from the water in the RHR system by two motor operated valves (MOVs) located in series. Both MOVs are periodically tested to ensure that they do not leak. A control room alarm is actuated if liquid leaks past the first isolation valve. Instrumentation to monitor leakage is located between the first and second isolation valve, about 45 feet below the lowest spray ring. The instrumentation has a calibration check performed every four years. These design features, combined with the MOV maintenance program, ensure that the spray headers and nozzles stay dry, and thus, minimize corrosion. The location of the nozzles, in the top of the containment dome, limits the possibility of the introduction of foreign material from sources external to the system as well.

Review of industry experience indicates that containment spray systems of similar design are highly reliable and not subject to plugging after testing following construction. The staff reviewed industry experience and found that in general, once tested after construction, containment spray systems have not been subject to blockage. There have been several exceptions identified in containment spray and fire protection systems in which water leakage resulted in corrosion which resulted in some, but not complete, blockage. As described above, the PNPP design precludes this condition.

In a letter dated May 10, 2000, the licensee stated that normal plant operation and maintenance practices at the Perry facility are not expected to trigger the proposed surveillance requirement. Only an unanticipated circumstance would initiate this surveillance, such as an inadvertent spray actuation, or a loss of foreign material control when working within the affected boundary. Per the established corrective action program, either of these events would trigger a high level investigation (e.g., Condition Report). The Condition Report would include remedial actions to ensure the spray nozzles are operable prior to being returned to service, and actions to prevent recurrence would address long term operability.

Current procedures require a pre-job and post-job Foreign Material Exclusion (FME) evaluation of maintenance activities that breach systems. In addition, the Post Maintenance Test Instructions for these sections of the piping systems will specifically address the need for an engineering evaluation to determine whether a Containment Spray Nozzle Test is necessary to ensure the nozzles remain unobstructed. When a test is determined necessary, the licensee has proposed that a visual inspection (e.g., boroscope) of the nozzles could be utilized in lieu of either a smoke or air test. Such inspections would be proceduralized. The licensee committed to the following:

"The Post Maintenance Test Instructions for these sections of the piping systems will specifically address the need for an engineering evaluation, to determine whether a Containment Spray Nozzle Test is necessary to ensure the nozzles remain unobstructed."

The NRC staff finds that reasonable controls for the implementation and for subsequent evaluation of proposed changes pertaining to the above regulatory commitment are best provided by the licensee's administrative processes, including its commitment management program. The above regulatory commitment does not warrant the creation of a regulatory requirement (i.e., an item requiring prior NRC approval of subsequent changes).

The staff concludes that the design of the Perry containment spray system, combined with the commitment to address nozzle blockage when performing maintenance in these piping systems, will minimize the potential for nozzle obstruction. Therefore, the staff finds the licensee's proposal, to modify the frequency of verifying that the containment spray nozzles are unobstructed from once every 10 years to conditions following maintenance which could result in nozzle blockage, to be acceptable.

4.0 STATE CONSULTATION

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

5.0 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 effluent 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 this amendment involves no significant hazards consideration and there has been no public comment on such finding (64 FR 70088). Accordingly, this 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 this amendment.

6.0 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) 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 Contributors: Amira Gill, NRR
Richard Lobel, NRR

Date: June 29, 2000