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February 28, 2000
PY-CEI/NRR-2451L

United States Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Perry Nuclear Power Plant
Docket No. 50-440
Supplement to License Amendment Request Pursuant to 10CFR50.90:
Various Minor Changes to the Technical Specifications

Ladies and Gentlemen:

Nuclear Regulatory Commission review and approval of a supplement to a license amendment for the Perry Nuclear Power Plant is requested. The proposed supplement involves minor changes to a previous submittal (letter PY-CEI/NRR-2430L) dated September 9, 1999.

Attachment 1 provides the Summary, Description of the Proposed Technical Specification Changes, Safety Analysis and Environmental Consideration. Attachment 2 provides the Significant Hazards Consideration. The Significant Hazards Consideration originally provided in the letter dated September 9, 1999, was modified to incorporate the minor changes from this supplement. Attachment 3 provides the annotated Technical Specification pages reflecting the newly proposed changes. Attachment 4 provides the annotated Bases page, for information, since the Bases are not a formal part of the Technical Specifications.

There are no regulatory commitments contained in this letter. If you have questions or require additional information, please contact Mr. Gregory A. Dunn, Manager - Regulatory Affairs, at (440) 280-5305.

Very truly yours,

John K. Wood

Attachments

cc: NRC Project Manager
NRC Resident Inspector
NRC Region III
State of Ohio

A001

I, John K. Wood, hereby affirm that (1) I am Vice President - Perry, of the FirstEnergy Nuclear Operating Company, (2) I am duly authorized to execute and file this certification as the duly authorized agent for The Cleveland Electric Illuminating Company, Toledo Edison Company, Duquesne Light Company, Ohio Edison Company, and Pennsylvania Power Company, and (3) the statements set forth herein are true and correct to the best of my knowledge, information and belief.

John K. Wood

Subscribed to and affirmed before me, the 28th day of February, 2000

MOTT
Notary Public, State of Ohio
My Commission Expires Feb. 20, 2005
(Recorded in Lake County)

SUMMARY

The proposed license amendment request involves a supplement to a previously requested revision of the Perry Nuclear Power Plant (PNPP) Technical Specifications (TS). The proposed changes are individually minor in both content and safety significance. The proposed changes are being submitted as a supplement to the letter dated September 9, 1999 (PY-CEI/NRR-2430L), for ease in review and approval.

DESCRIPTION OF THE PROPOSED TECHNICAL SPECIFICATION CHANGES

1. Emergency Core Cooling System Pump Differential Pressure: A request to revise TS SRs 3.5.1.4 and SR 3.5.2.5 was submitted in the letter dated September 9, 1999. This supplement better describes that the differential pressure test in the SRs demonstrates sufficient pump head is available to overcome total system resistance. This change consists of minor wording changes to the previously submitted change.

2. Programs and Manuals (5.5) and Reporting Requirements (5.6): In the previous submittal dated September 9, 1999, a revision was proposed to TS Administrative Controls Reporting Requirement 5.6.1, to clarify the definition of the time period of a report. "Calendar" is being removed from the term "calendar year" to clarify the time period that the Occupational Radiation Exposure Report is required to cover, to be consistent with the wording in 10 CFR 20.1003. Subsequent to the initial submittal, it was identified that Specifications 5.5.4.e, the Radioactive Effluent Controls Program, 5.6.2, the Annual Radiological Environmental Operating Report, and 5.6.3, the Radioactive Effluent Release Report, were similar to 5.6.1 and also should be revised to remove "Calendar". In addition, it was identified that in 5.6.1, the due date of the report had been changed by revision 1 of the Improved Technical Specifications (NUREG-1434) from March 31 to April 30.

   It is proposed that these changes be added to the previously submitted amendment.

Minor wording changes were made to one Bases page as a result of this supplement.

SAFETY ANALYSIS

The proposed revisions are administrative in nature. The first modifies the wording slightly from the previously submitted change for TS SR 3.5.1.4 and 3.5.2.5 (ECCS Pump Differential Pressure). Words are being added to clarify that the Differential Pressure required by the test is that due to total system resistance. This change will make the wording more consistent with the wording in the Bases. The actual pressure used during the field tests will not change as a result of this proposed change. This change will make the documentation describing the differential pressure consistent.

The second part of the change removes "calendar" from three locations in addition to the location identified in the original submittal and changes the required report submittal date

from March 31 to April 30. These three specifications were not included in the original submittal, but have since been identified as also being radiological in nature, and as such, can also be made consistent with the definition of "Year" given in 10 CFR 20.1003. The definition states, "Year means the period of time beginning in January used to determine compliance with the provisions of this part. The licensee may change the starting date of the year used to determine compliance by the licensee provided that the change is made at the beginning of the year and that no day is omitted or duplicated in consecutive years." The consequence of their removal is the same as the original submittal in that it provides the intended flexibility. In addition, there is no safety significance to delaying the report submittal by one month. Changing the report submittal date makes it consistent with Revision 1 of the Improved Technical Specifications. There is no reporting impact since the entire yearly reporting period is included and will be submitted at a time previously approved by the NRC. Note that the word "Calendar" still remains in Specification 5.6.4 "Monthly Operating Reports". This was retained as it was not covered by 10 CFR 20, and was determined to be an appropriate use of the word.

ENVIRONMENTAL CONSIDERATION

The proposed Technical Specification change request was evaluated against the criteria of 10 CFR 51.22 for environmental considerations. The proposed change does not significantly increase individual or cumulative occupational radiation exposures, does not significantly change the types or significantly increase the amounts of effluents that may be released off-site and, as discussed in Attachment 2, does not involve a significant hazards consideration. Based on the foregoing, it has been concluded that the proposed Technical Specification change meets the criteria given in 10 CFR 51.22(c)(9) for categorical exclusion from the requirement for an Environmental Impact Statement.

SIGNIFICANT HAZARDS CONSIDERATION

The standards used to arrive at a determination that a request for amendment does not involve a significant hazard are included in Commission regulation 10CFR50.92, which states that operation of the facility in accordance with the proposed changes would not:

1) involve a significant increase in the probability or consequences of an accident previously evaluated; or
2) create the possibility of a new or different kind of accident from any accident previously evaluated; or
3) involve a significant reduction in a margin of safety.

The proposed amendment has been reviewed with respect to these three factors and it has been determined that the proposed changes do not involve a significant hazard because:

1. The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

   A summary of the proposed changes is:

   1. (Condensate Storage Tank (CST) Level-Low) The Allowable Values for the CST low water level limits (Technical Specification (TS) Table 3.3.5.1-1 Function 3.d and Table 3.3.5.2-1 Function 3) are being revised from ≥ 59,700 gallons to ≥ 90,300 gallons based on recent revisions to calculations taking into account potential vortex issues. This change also results in raising the TS Surveillance Requirement (SR) 3.5.2.2.b value for the normal CST level limit to ≥ 249,700 gallons.

   2. (Emergency Core Cooling System Pump Differential Pressure) TS SRs 3.5.1.4 and SR 3.5.2.5 are being revised to better describe what the differential pressures listed in the SRs represent at PNPP, in lieu of the phrase "pump differential pressure".

   3. (RCIC/RHR Steam Line Flow-High) The proposed change revises the nomenclature on a table to match the plant-specific instrument nomenclature.

   4. (Containment Average Temperature-To-Relative Humidity) This revision is a clarification to prevent misinterpretation of the Required Actions.

   5. (Containment Vacuum Breakers) TS 3.6.1.11 Required Action A.2 is being revised to clarify the proper actions to take if the required number of vacuum breakers is not operable. Required Action A.2 is being revised to add the word "required".

   6. (Reporting Requirements) TS Administrative Controls Reporting Requirement 5.6.1 is being revised to clarify the definition of the time period of the report. "Calendar" is being removed from the term "calendar year" to clarify the time

period that the Occupational Radiation Exposure Report is required to cover, to be consistent with the revised wording in 10 CFR 20.1003. The submittal date of the report is being revised from March 31 to April 30 which will make it consistent with Revision 1 of the Improved Technical Specifications (NUREG 1434). In addition the term "Calendar" is being removed from Specifications 5.5.4.e, the Radioactive Effluent Controls Program, 5.6.2, the Annual Radiological Environmental Operating Report, and 5.6.3, the Radioactive Effluent Release Report. Removal of "Calendar" from these sections will make them consistent with 10 CFR 20.1003 also.

7. (High Radiation Area) TS Administrative Control 5.7 is being revised to update the titles of individuals responsible for radiation protection. The term "health physics" is being revised to "radiation protection" to be consistent with plant terminology.

8. (ECCS Instrumentation) Required Action E.1 Note 1 is being revised for consistency with other Specifications. The word "in" is being added.

9. (Electrical Power Systems) In TS 3.8.3, the word "continued" is being added to the bottom of the page for consistency with other Specifications.

The CST level change is adjusted in a conservative direction, as recommended by NRC inspectors during a Safety System Functional Inspection (SSFI) that was conducted in the spring of 1997. The current setpoints were reviewed and determined to be adequate, however it was suggested that some additional margin should be added. The "low level" limits are being raised to move the setpoint further away from the level at which vortexing would begin, and the normal water level limit is also being raised to ensure that at least 150,000 gallons of water would be available for HPCS and RCIC. Since the existing limits are already considered adequate, and the proposed changes are in the conservative direction, the proposed change does not involve a significant increase in the probability or radiological consequences of an accident previously evaluated.

The other eight proposed changes are administrative only, and can have no effect on any previously evaluated accident scenario. These eight changes have no effect on plant hardware, plant design, safety limit settings, or system operation and therefore do not modify or add any initiating parameters that would significantly increase the probability of an accident previously evaluated, or the radiological consequences of an event.

2. The proposed changes would not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed changes will raise the Condensate Storage Tank level, which is conservative, and also includes some administrative changes to improve clarity, update titles or terminology. None of these changes can create the possibility of a new or different kind of accident from any accident previously evaluated.

3. The proposed changes will not involve a significant reduction in the margin of safety.

   The Condensate Storage Tank level change increases the margin of safety by providing more margin between the setpoint that causes the HPCS and RCIC suctions to shift from the CST to the Suppression Pool and the beginning of the formation of a vortex at their pump suctions. The other administrative changes have no effect on the margin of safety. Therefore the proposed change will not involve a significant reduction in the margin of safety.

Based on the above considerations, it is concluded that a significant hazard would not be introduced as a result of this proposed change. Also, since NRC approval of this change must be obtained prior to implementation, no unreviewed safety question can exist.

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.1.1	Verify, for each ECCS injection/spray subsystem, the piping is filled with water from the pump discharge valve to the injection valve.	31 days
SR 3.5.1.2	----------NOTE---------- Low pressure coolant injection (LPCI) subsystems may be considered OPERABLE during alignment and operation for decay heat removal with reactor steam dome pressure less than the residual heat removal cut in permissive pressure in MODE 3, if capable of being manually realigned and not otherwise inoperable. ---------- Verify each ECCS injection/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.	31 days
SR 3.5.1.3	Verify ADS accumulator supply pressure is ≥ 150 psig.	31 days
SR 3.5.1.4	Verify each ECCS pump develops the specified flow rate with ~~the specified pump differential pressure~~ total system resistance which includes the Reactor to Containment Wetwell Sufficient pump total head to overcome the specified reactor to containment wetwell differential pressure ~~PUMP~~ DIFFERENTIAL PRESSURE SYSTEM / FLOW RATE / DIFFERENTIAL PRESSURE LPCS: ≥ 6110 gpm / ≥ 128 psid LPCI: ≥ 7100 gpm / ≥ 24 psid HPCS: ≥ 6110 gpm / ≥ 200 psid	In accordance with the Inservice Testing Program

This Submittal

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.5.2.5	Verify each required ECCS pump develops the specified flow rate with ~~the specified pump~~ ~~differential pressure.~~ Sufficient pump total head to overcome the specified reactor to containment wetwell differential pressure. total system resistance which includes the ~~PUMP~~ Reactor to Containment wetwell SYSTEM / FLOW RATE / DIFFERENTIAL PRESSURE LPCS / ≥ 6110 gpm / ≥ 128 psid LPCI / ≥ 7100 gpm / ≥ 24 psid HPCS / ≥ 6110 gpm / ≥ 200 psid	In accordance with the Inservice Testing Program
SR 3.5.2.6	----------NOTE---------- Vessel injection/spray may be excluded. ---------- Verify each required ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal.	18 months

This Submittal

5.5.4 Radioactive Effluent Controls Program

This program conforms to 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. The program shall be contained in the ODCM, shall be implemented by procedures, and shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

a. Limitations on the functional capability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM;

b. Limitations on the concentrations of radioactive material released in liquid effluents to unrestricted areas, conforming to ten times the concentration values in 10 CFR 20, Appendix B, Table 2, Column 2;

c. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.1302 and with the methodology and parameters in the ODCM;

d. Limitations on the annual and quarterly doses or dose commitment to a member of the public from radioactive materials in liquid effluents released from the unit to unrestricted areas, conforming to 10 CFR 50, Appendix I;

e. Determination of cumulative and projected dose contributions from radioactive effluents for the current ~~calendar~~ quarter and current ~~calendar~~ year in accordance with the methodology and parameters in the ODCM at least every 31 days;

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5.0 ADMINISTRATIVE CONTROLS

5.6 Reporting Requirements

The following reports shall be submitted in accordance with 10 CFR 50.4.

5.6.1 Occupational Radiation Exposure Report

A tabulation on an annual basis of the number of station, utility, and other personnel (including contractors), for whom monitoring was required, receiving exposures > 100 mrem/yr and their associated man rem exposure according to work and job functions, (e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling). This tabulation supplements the requirements of 10 CFR 20.2206. The dose assignments to various duty functions may be estimated based on pocket dosimeter, thermoluminescent dosimeter (TLD), or film badge measurements. Small exposures totalling < 20% of the individual total dose need not be accounted for. In the aggregate, at least 80% of the total whole body dose received from external sources should be assigned to specific major work functions.

The Occupational Radiation Exposure Report covering the activities ~~of the~~ unit for the previous ~~calendar~~ year shall be submitted by ~~March 31~~ April 30 of each year. Previous Submittal

5.6.2 Annual Radiological Environmental Operating Report

The Annual Radiological Environmental Operating Report covering the operation of the unit during the previous ~~calendar~~ year shall be submitted by May 1 of each year. The report shall include summaries, interpretations, and analyses of trends of the results of the Radiological Environmental Monitoring Program for the reporting period. The material provided shall be consistent with the objectives outlined in the Offsite Dose Calculation Manual (ODCM), and in 10 CFR 50, Appendix I, Sections IV.B.2, IV.B.3, and IV.C.

The Annual Radiological Environmental Operating Report shall include the results of analyses of all radiological environmental samples and of all environmental radiation measurements taken during the period pursuant to the locations specified in the table and figures in the ODCM, as well as summarized and tabulated

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5.6.2 Annual Radiological Environmental Operating Report (continued)

results of these analyses and measurements in the format of the table in the Radiological Assessment Branch Technical Position, Revision 1, November 1979. In the event that some individual results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted in a supplementary report as soon as possible.

5.6.3 Radioactive Effluent Release Report

The Radioactive Effluent Release Report covering the operation of the unit during the previous ~~calendar~~ year shall be submitted by May 1 of each year. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit. The material provided shall be consistent with the objectives outlined in the ODCM and process control program and in conformance with 10 CFR 50.36a and 10 CFR 50, Appendix I, Section IV.B.1.

5.6.4 Monthly Operating Reports

Routine reports of operating statistics and shutdown experience, including documentation of all challenges to the main steam safety/relief valves, shall be submitted on a monthly basis no later than the 15th of each month following the calendar month covered by the report.

5.6.5 Core Operating Limits Report (COLR)

a. Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, and shall be documented in the COLR for the following:

1. LCO 3.2.1, Average Planar Linear Heat Generation Rate (APLHGR),

2. LCO 3.2.2, Minimum Critical Power Ratio (MCPR),

3. LCO 3.2.3, Linear Heat Generation Rate (LHGR), and

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SR 3.5.1.4 (Continued)

The ~~ECCS pump~~ differential pressure for each listed system in the Surveillance Requirements (SRs) 3.5.1.4 and 3.5.2.5, is the difference between the containment wetwell pressure and the RPV pressure assumed in the LOCA analyses at the time of injection/spray. In addition to this listed differential pressure, the ECCS pumps also need to overcome elevation head loss and piping system friction loss at the required flow rate. This safety analysis value is determined by engineering calculation. In addition, pump operability may be limited by the ASME "required action" range value for these pumps.