



PERRY NUCLEAR POWER PLANT

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SENIOR VICE PRESIDENT
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January 10, 1996
PY-CEI/NRR-2013L

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

Perry Nuclear Power Plant
Docket No. 50-440
License Amendment Request: Surveillance Test
Interval Extension Request - Emergency Change

Gentlemen:

Enclosed please find an application for a change to the Perry Nuclear Power Plant (PNPP) Unit 1 Technical Specifications, reflecting a one-time extension of the performance intervals for certain Technical Specification Surveillance Requirements (SRs). This application supplements License Amendment 75, issued on November 29, 1995 in response to the requests submitted by letter on March 24, 1995 (PY-CEI/NRR-1890L), and supplemented on June 9, 1995 (PY-CEI/NRR1954L), and on June 30, 1995 (PY-CEI/NRR-1961L). This request addresses changes that were discussed in the previous submittals, but not included in the marked-up Technical Specification pages submitted in the application for Amendment 75.

As with the previous requests for surveillance interval extension, the proposed change is requested on a one-time basis only, to support the current schedule for Refueling Outage 5 (RFO-5), presently scheduled to begin January 27, 1996. The existing Technical Specifications, including the recently received Amendment 75, would require a plant shutdown six days prior to the end of the current fuel cycle solely to perform surveillances. Such a plant shutdown would cause an unnecessary outage extension. In addition, the proposed interval extensions that extend into RFO-5 are necessary to maintain the "defense in depth" and critical path of the outage as it is presently planned.

Attachment 1 provides a Summary, Statement of Emergency Circumstances, Safety Analyses, Description of the Proposed Technical Specification Changes, and the Environmental Consideration. Attachments 2 and 3 provide a marked-up copy of the affected Technical Specification pages and the Significant Hazards Consideration, respectively. To justify the extensions, the request incorporates plant specific data and test history to demonstrate the reliability of the affected instrumentation.

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Toledo Edison

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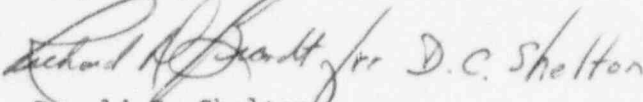
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This request is being submitted under emergency circumstances. The first of the surveillances will go late on January 21, 1996, and would cause a plant shutdown shortly thereafter. These discrepancies were only recently determined to exist during the implementation of Amendment 75, and therefore there has not been sufficient time to permit the normal license change process to apply.

Issuance of the proposed changes is requested by January 20, 1996, so that the early plant shutdown can be averted.

If you have questions or require additional information, please contact Mr. James D. Kloosterman, Manager - Regulatory Affairs at (216) 280-5833.

Very truly yours,

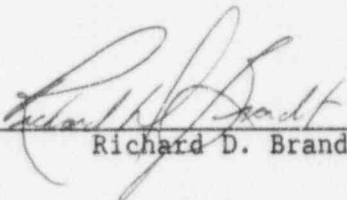

Donald C. Shelton

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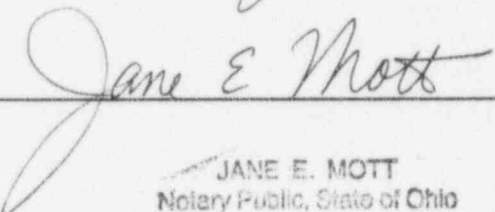
Attachment

cc: Region III Administrator
Resident Inspector Office
NRC/NRR Project Manager
State of Ohio

I, Richard D. Brandt, being duly sworn state that (1) I am General Manager, Perry Nuclear Power Plant Department of the Cleveland Electric Illuminating Company, (2) I am duly authorized to execute and file this certification on behalf of The Cleveland Electric Illuminating Company and Toledo Edison Company, and as the duly authorized agent for 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.


Richard D. Brandt

Sworn to and subscribed before me, the 10th day of January,
1996.


JANE E. MOTT

Notary Public, State of Ohio
My Commission Expires Feb. 20, 2000
(Recorded in Lake County)

SUMMARY

The Perry Nuclear Power Plant (PNPP), Unit 1 Technical Specification (TS) Surveillance Requirements (SRs) require surveillance testing to be conducted nominally at refueling intervals but at least once every 18 months. Technical Specification 4.0.2 allows a 25% extension of the surveillance interval to 22.5 months, if required, to provide flexibility in cycle lengths.

Amendment 75 to the PNPP Operating License was issued November 29, 1995, in response to letters PY-CEI/NRR-1890L (March 24, 1995), PY-CEI/NRR-1954L (June 9, 1995) and PY-CEI/NRR-1961L (June 30, 1995). This Amendment granted numerous surveillance interval extensions in order to prevent a plant shutdown solely to perform surveillance testing. During the implementation of this Amendment it was determined that due to a discrepancy in the original amendment application, additional surveillance extensions were required.

The discrepancy consisted of items which were discussed in the previous submittals, but were not contained in the marked-up Technical Specification pages provided in the Amendment Request. These include the following:

1. SR 4.1.3.1.4.a.1 and 2 - These items were identified in the March 24, 1995 submittal with the justification presented in Enclosure 1 to that submittal. (See Enclosure 1)
2. SR 4.3.1.2, Table 4.3.1.1-1, Item 12 - This extension was discussed in the March 24, 1995 submittal with the justification presented in Enclosure 17 to that submittal. (See Enclosure 2)
3. SR 4.3.1.2, Table 4.3.1.1-1, Item 13 - This extension was discussed in the March 24, 1995 submittal with the justification presented in Enclosure 1 to that submittal. (See Enclosure 1)
4. SR 4.6.1.4.c.1 - This extension was discussed in the March 24, 1995 submittal with the justification presented in Enclosure 88 to that submittal. (See Enclosure 3)
5. SR 4.6.1.4.d.2 - This extension was discussed in the March 24, 1995 submittal with the justification presented in Enclosure 89 to that submittal. (See Enclosure 4)

These items were therefore justified in the previous submittals. The Significant Hazards Consideration for the March 24, 1995 submittal included the consideration of these extensions.

The first surveillance requirements become late on January 21, 1996, which is six days before the scheduled start of Refueling Outage 5 (RFO-5). If the requested extensions are not granted by this time the plant would be required to shut down solely for the purpose of performing these tests. This would cause an unnecessary and costly extension to the outage. For this reason it is requested that this request be approved by January 20, 1996. Due to the timing involved the request will have to be processed under emergency circumstances. The discussion of the reasons for emergency are given below.

STATEMENT OF EMERGENCY CIRCUMSTANCES

10 CFR 50.91(a)(5) requires that change requests submitted under emergency circumstances be explained. The need for this change request to extend the SRs became apparent on January 3, 1996 during a review of Amendment 75 implementation. The first SR becomes late on January 21, 1996, and would require a plant shutdown by January 22, 1996 if not either performed or extended. Thus, there is not sufficient time for the change request to be processed under the normal review process. As discussed above, justification of these changes had been previously submitted, but appropriate markups were not included as part of the request for Amendment 75. It was the review of this Amendment that resulted in the discovery that additional extensions needed to be requested. The NRC staff permitted a 90 day implementation period from issuance of the Amendment (November 29, 1995). Thus the discovery of these discrepancies occurred during implementation reviews within the 90 day period between issuance and required implementation of the Amendment. This request has been submitted in a timely fashion since discovery that Amendment 75 did not include these required extensions. Therefore, the circumstances surrounding the submittal of this change request at this time could not have been avoided.

SAFETY ANALYSIS

The Technical Specification SRs affected by the change are listed below. The justification for the extension of each SR is provided within the Enclosure noted.

- TS SR 4.1.3.1.4.a.1 (Enclosure 1)
- TS SR 4.1.3.1.4.a.2 (Enclosure 1)
- TS SR 4.3.1.2, Table 4.3.1.1-1, Item 12 (Enclosure 2)
- TS SR 4.3.1.2, Table 4.3.1.1-1, Item 13 (Enclosure 1)
- TS SR 4.6.1.4.c.1 (Enclosure 3)
- TS SR 4.6.1.4.d.2 (Enclosure 4)

DESCRIPTION OF THE PROPOSED TECHNICAL SPECIFICATION CHANGE

Refer to Attachment 2 for a marked-up copy of the affected Technical Specification pages. As stated above, a one-time change to surveillance intervals is being requested to allow the tests to be extended through RFO-5. The surveillance frequencies to be extended are being annotated to permit the tests to be performed during RFO-5.

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 increase the types and amounts of effluents that may be released offsite, does not significantly increase individual or cumulative occupational radiation exposures, and as discussed in Attachment 3, 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.

ENCLOSURE 1
 JUSTIFICATION FOR SURVEILLANCE INTERVAL EXTENSION
 LOGIC SYSTEM FUNCTIONAL TESTING FOR
 TECHNICAL SPECIFICATION SR 4.3.1.2, TABLE 4.3.1.1-1, ITEM 13,
 SR 4.1.3.1.4.a.1 AND SR 4.1.3.1.4.a.2
 REACTOR PROTECTION SYSTEM MANUAL SCRAM AND
 SCRAM DISCHARGE VOLUME VENT AND DRAIN VALVE OPERABILITY
 REACTOR PROTECTION SYSTEM

Technical Specification SR 4.3.1.2 requires a LSFT and simulated automatic actuation of all channels of the Reactor Protection System (RPS) at least once per 18 months (with a maximum allowable surveillance interval extension of 4.5 months per TS 4.0.2). The Manual Scram functional unit (TS Table 4.3.1.1-1, Item 13) provides for manual initiation of the RPS logic including closure and opening (upon logic reset) of the Scram Discharge Volume (SDV) Vent and Drain Valves, as required by TS SRs 4.1.3.1.4.a.1 and 4.1.3.1.4.a.2. The Manual Scram functional unit of TS Table 4.3.1.1-1 and the SDV Vent and Drain Valves closure within 30 seconds and opening per TS SRs 4.1.3.1.4.a.1 and 4.1.3.1.4.a.2, respectively, require a surveillance interval extension for a nominal period of 24 days to reach the most conservative projected start of RFO-5. However, in that the Manual Scram functional unit is required to be OPERABLE in Operational Conditions 1, 2, 3, 4 and 5, a total extension of the surveillance interval for this functional unit to the most conservative projected end of RFO-5 for a nominal period of 116 days is required.

As stated in the NRC Safety Evaluation Report (dated August 2, 1993) related to extension of the Peach Bottom Atomic Power Station, Unit Numbers 2 and 3, surveillance intervals from 18 to 24 months:

"Industry reliability studies for boiling water reactors (BWRs), prepared by the BWR Owners Group (NEDC-30936P) show that the overall safety systems' reliabilities are not dominated by the reliabilities of the logic system, but by that of the mechanical components, (e.g., pumps and valves), which are consequently tested on a more frequent basis...Since the probability of a relay or contact failure is small relative to the probability of mechanical component failure, increasing the logic system functional test interval represents no significant change in the overall safety system unavailability."

The SDV Vent and Drain Valves are required to be cycled at least once per 92 days by TS SR 4.1.3.1.1.a thereby verifying that the valves are capable of closing and opening. The logic providing input to close the valves within 30 seconds and open the valves is the only remaining portion of the SRs which requires extension. In that this logic is the subject to the evaluation above, and the valves are cycled periodically during the operating cycle, the extension of the surveillance intervals for SRs 4.1.3.1.4.a.1 and 4.1.3.1.4.a.2 for a nominal period of 37 days to reach the most conservative projected start of RFO-5 is justified.

The evaluation above is applicable to PNPP and the surveillance interval extension for the TS Table 4.3.1.1-1, Item 13 functional unit (Manual Scram) for a nominal period of 116 days is bounded by the interval accepted on the Peach Bottom docket; therefore, the surveillance interval extension is justified.

ENCLOSURE 17
JUSTIFICATION FOR SURVEILLANCE INTERVAL EXTENSION
LOGIC SYSTEM FUNCTIONAL TESTING FOR
TECHNICAL SPECIFICATION SR 4.3.1.2, TABLE 4.3.1.1-1, ITEM 12 AND
CHANNEL FUNCTIONAL TESTING FOR
TECHNICAL SPECIFICATION SR 4.3.6.1, TABLE 4.3.6-1, ITEM 7
REACTOR MODE SWITCH SHUTDOWN POSITION
REACTOR PROTECTION SYSTEM AND
CONTROL ROD BLOCK INSTRUMENTATION

Technical Specification SR 4.3.1.2 requires a LSFT and simulated automatic actuation of all channels of the Reactor Protection System at least once per 18 months (with a maximum allowable surveillance interval extension of 4.5 months per TS 4.0.2). Technical Specification SR 4.3.6.1 requires a Channel Functional Test Control Rod Block trip systems and instrumentation at least once per 18 months (with a maximum allowable surveillance interval extension of 4.5 months per TS 4.0.2). The Reactor Mode Switch Shutdown Position functional unit (TS Table 4.3.1.1-1, Item 12 and TS Table 4.3.6-1, Item 7) requires a surveillance interval extension for this functional unit's portion of the LSFT and Channel Functional Test for a nominal period of 24 days to reach the most conservative projected start of RFO-5. However, in that this functional unit is required to be OPERABLE in Operational Conditions 1, 2, 3, 4 and 5, a total extension of the surveillance interval to the most conservative projected end of RFO-5 for a nominal period of 116 days is required.

As stated in the NRC Safety Evaluation Report (dated August 2, 1993) related to extension of the Peach Bottom Atomic Power Station, Unit Numbers 2 and 3, surveillance intervals from 18 to 24 months:

"Industry reliability studies for boiling water reactors (BWRs), prepared by the BWR Owners Group (NEDC-30936P) show that the overall safety systems' reliabilities are not dominated by the reliabilities of the logic system, but by that of the mechanical components, (e.g., pumps and valves), which are consequently tested on a more frequent basis...Since the probability of a relay or contact failure is small relative to the probability of mechanical component failure, increasing the logic system functional test interval represents no significant change in the overall safety system unavailability."

The Channel Functional Test for the Control Rod Block trip function of the Reactor Mode Switch Shutdown Position provides a verification of the logic (alarm and trip functions) within the channel. Therefore, the evaluation above is applicable to the Channel Functional Test for the Control Rod Block instrumentation.

The evaluation above is applicable to PNPP and the surveillance interval extension for a nominal period of 116 days is bounded by the interval accepted on the Peach Bottom docket; therefore, the surveillance interval extension is justified.

ENCLOSURE 88
JUSTIFICATION FOR SURVEILLANCE INTERVAL EXTENSION
FUNCTIONAL TEST FOR
TECHNICAL SPECIFICATION SR 4.6.1.4.C.1
MSIV LEAKAGE CONTROL SYSTEM

Technical Specification SR 4.6.1.4.c.1 requires that a functional test, including simulated actuation throughout the operating sequence, be performed on the MSIV Leakage Control subsystems at least once per 18 months (with a maximum allowable surveillance interval extension of 4.5 months per TS 4.0.2). The functional test also includes verification that each automatic valve in the flow path actuates to its correct position and the blower starts. This SR requires extension of the surveillance interval for a nominal period of 21 days to reach the most conservative project start of RFO-5.

The functional test provides a testing of the logic and functional components of the MSIV Leakage Control System. The functional components, consisting of the valves and blowers, are tested periodically during the operating cycle in accordance with TS SRs 4.6.1.4.a and 4.6.1.4.b. Therefore, the functional test provides for testing of the logic in conjunction with the functional components.

As stated in the NRC Safety Evaluation Report (dated August 2, 1993) related to extension of the Peach Bottom Atomic Power Station, Unit Numbers 2 and 3, surveillance intervals from 18 to 24 months:

"Industry reliability studies for boiling water reactors (BWRs), prepared by the BWR Owners Group (NEDC-30936P) show that the overall safety systems' reliabilities are not dominated by the reliabilities of the logic system, but by that of the mechanical components, (e.g., pumps and valves), which are consequently tested on a more frequent basis....Since the probability of a relay or contact failure is small relative to the probability of mechanical component failure, increasing the logic system functional test interval represents no significant change in the overall safety system unavailability."

The simulated actuation test is supplemented during the operating cycle by tests performed on instrumentation and mechanical components of the system. These include CHANNEL CHECKS, CHANNEL FUNCTIONAL TESTS, Inservice Testing and other component verification surveillances as specified by the TS. In that the simulated actuation test is required to assure system operability during the operating cycle, and periodic testing is performed during the operating cycle, the requested extension to the surveillance interval is justified.

The LSFT evaluation above is applicable to PNPP and the surveillance interval extension for a nominal period of 21 days is bounded by the interval accepted on the Peach Bottom docket. The simulated actuation test is supplemented during the cycle to assure operability. Based on these considerations, the surveillance interval extension is justified.

ENCLOSURE 89
JUSTIFICATION FOR SURVEILLANCE INTERVAL EXTENSION
TECHNICAL SPECIFICATION SR 4.6.1.4.d.2
REACTOR VESSEL PRESSURE
CALIBRATION
MSIV LEAKAGE CONTROL SYSTEM INSTRUMENTATION

Technical Specification SR 4.6.1.4.d.2 requires the MSIV Leakage Control System Reactor Vessel Pressure Instrumentation to be demonstrated OPERABLE by performance of a channel calibration at least once per 18 months (with a maximum allowable extension of 4.5 months per TS 4.0.2). The pressure transmitters, Rosemount Model 1153 level transmitters, will require an extension of the SR interval cited in TS Table 4.6.1.4.d.2 for a nominal period of 52 days to reach the most conservative projected start of RFO-5.

In February 1990, Rosemount published a report, "30 Month Stability Specification For Rosemount Model 1152, 1153, 1154 Pressure Transmitters" (Rosemount Report D8900126, Revision A) [accepted by NRC Safety Evaluation Report dated August 2, 1993 on the Peach Bottom Atomic Power Station, Units 2 and 3 docket.] This report supported the extension of the calibration interval for the transmitters from 18 months to 30 months based on a reduction in the drift allowance from 0.29% URL (2 sigma) for 18 months to 0.20% URL (2 sigma) for 30 months. In addition, applicable setpoint calculations assumed 18 month calibration of the trip interval for trip units. However, the trip units are calibrated either monthly or quarterly, depending on the TS requirement for channel functional testing.

The MSIV Leakage Control System is a manually initiated system. The Reactor Vessel Pressure transmitters and trip units provide a permissive and trip function for operation of the Leakage Control System blowers and valves. The setpoint for transmitters and trip units was established based on the time that the Leakage Control System should be shutdown, if operating. The allowable value for this setpoint was established as 1.5 times the Leave-As-Is-Zone to provide a reasonable operability limit for the transmitters and trip units.

Sufficient margin exists between the Nominal Trip Setpoint and the site-established Allowable Value to justify the surveillance interval extension. The margin is significantly greater than the 30 month transmitter drift and trip unit drift uncertainty values applicable to the Rosemount instruments. Therefore, the requested extension is justified.