



**CENTERIOR
ENERGY**

PERRY NUCLEAR POWER PLANT

10 CENTER ROAD
PERRY, OHIO 44081
(216) 259-3737

Mail Address:
PO. BOX 97
PERRY, OHIO 44081

Robert A. Stratman
VICE PRESIDENT - NUCLEAR

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U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Perry Nuclear Power Plant
Docket No. 50-440
Response to Bulletin 93-03
Resolution of Issues Related to
Reactor Vessel Water Level
Instrumentation in BWRs

Gentlemen:

Cleveland Electric Illuminating Company received NRC Bulletin 93-03 Resolution of Issues Related to Reactor Vessel Water Level Instrumentation in BWRs on May 28, 1993. The Company's response to the actions requested is contained in the attachment identifying the short term compensatory measures and hardware modifications. The modification to the level instrumentation system to be installed will ensure reliable level indication in the Control Room not only during and after postulated transients and accident scenarios initiated from both high and reduced pressure conditions, but also during normal plant operation and shutdown conditions.

The information contained in this letter also responds to the NRC letter dated May 20, 1993 from Robert J. Stransky to Robert A. Stratman requesting additional information relative to the proposed corrective actions and implementation schedule required by NRC Generic Letter 92-04.

Should you have any questions or require additional information, please contact Kevin Donovan, Manager - Licensing and Compliance at (216) 259-3737 extension 5606.

Sincerely,

Robert A. Stratman

RAS:CSG:ss

Attachment

cc: NRR Project Manager
Senior Resident Manager
USNRC Region III

Operating Companies
Cleveland Electric Illuminating
Toledo Edison

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The following information represents the Cleveland Electric Illuminating Company (CEI) response to the specific Requested Actions in Bulletin 93-03 for the Perry Nuclear Power Plant (PNPP) Unit 1.

Requested Action 1

1. Short Term Compensatory Actions

(a) Within 15 days of the date of this bulletin, each licensee is requested to implement the following measures to ensure that potential level errors caused by reference leg de-gassing will not result in improper system response or improper operator actions during transients and accident scenarios initiated from reduced pressure conditions (Mode 3):

- (1) Establish enhanced monitoring of all RPV level instruments to provide early detection of level anomalies associated with de-gassing from the reference leg.
- (2) Develop enhanced procedures or additional restrictions and controls for valve alignments and maintenance that have a potential to drain the RPV during Mode 3.
- (3) Alert operators to potentially confusing or misleading level indication that may occur during accidents or transients initiating from Mode 3. For example, a drain-down event could lead to automatic initiation of high-pressure emergency core cooling systems (ECCS) without automatic system isolation or low-pressure ECCS actuation.

Facilities that are in cold shutdown during this 15 day period are requested to complete the above actions within 15 days of the date of this bulletin or prior to startup, whichever is later.

(b) By July 30, 1993 each licensee is requested to complete augmented operator training on loss of RPV inventory scenarios during Mode 3, including RPV draindown events and cracks or breaks in piping.

Facilities that are in cold shutdown as of July 30, 1993, are requested to complete this action prior to startup from that shutdown.

All of the short term actions described above shall remain in effect until the hardware modifications described below have been implemented.

Licensee's Response

1.a.1 An alarm was added to the Emergency Response Information System (ERIS) computer to provide enhanced RPV level monitoring to indicate a possible notching event. The alarm involves comparing (present value to time weighted average) signals from level instruments inputting information to the ERIS to determine if any channel has undergone a step increase. Additionally, a consistency check is performed comparing the compensated instrument value to the validated reactor pressure vessel water level value. An ERIS computer alarm will annunciate if conditions indicative of notching occur.

During cooldown and other evolutions which depressurize the Reactor Pressure Vessel (RPV), the Shift Technical Advisor will initiate an ERIS time/history plot of appropriate level instruments to provide increased visibility and monitoring of water level indicator performance. This action was successfully performed during the shutdown/cooldown on July 9, 1993.

Should the ERIS be unavailable during an evolution which depressurizes the RPV, a contingency plan is outlined in Operations Section Standing Instructions to direct appropriate control room personnel to manually perform the comparison check between various RPV level instruments.

- 1.a.2 Procedural enhancements were made to PAP-0201, Conduct of Operations, to provide increased supervision of, or to restrict performance of, valve alignments and maintenance activities that have the potential to drain the RPV during Mode 3 conditions. Exceptions to these restrictions require approval of the Plant Manager. Appropriate precautions were also added to selected System Operating and Integrated Operating Instructions to reinforce the enhancements made to PAP-0201.
- 1.a.3 Licensed operators were alerted to the details and significance of the WNP-2 event and to Bulletin 93-03 via a Standing Instruction.

The above requested actions were completed and in effect by June 12, 1993, in accordance with the NRC request. Additional training was performed at pre-shift briefings. The above actions will remain in effect until the hardware modifications are completed.

- 1.b Augmented operator training is scheduled to be complete by July 30, 1993, except for those individuals on vacation. This training consists of a review of the WNP-2 event and how this phenomenon could affect Perry. Additionally, the short term Compensatory Actions 1.a.1 through 1.a.3 were reinforced with additional emphasis. Operators who are unavailable for training by July 30, 1993 will receive the augmented training prior to assuming shift responsibilities.

Requested Action 2

2. Hardware Modifications

Each licensee is requested to implement hardware modifications necessary to ensure the level instrumentation system design is of high functional reliability for long-term operation. This includes level instrumentation performance during and after transient and accident scenarios initiated from both high pressure and reduced pressure conditions. The hardware modifications discussed are the same as the modifications requested in Generic Letter 92-04. Since the level instrumentation plays an important role in plant safety and is required for both normal and accident conditions, the staff requests that these modifications be implemented at the next cold shutdown after July 30, 1993. If a facility is in cold shutdown on July 30, 1993, each licensee is requested to implement these modifications prior to starting up from that outage.

Licensee's Response

2. Hardware purchases and equipment fabrication for the reference leg backfill modification have been initiated. Shipment of fabricated equipment is currently scheduled to commence on July 30, 1993 and to be complete within one week. Final engineering analyses, preparation, installation, and testing are anticipated to require about five to six weeks to complete.

This modification will be implemented at the next cold shutdown beginning after July 30, 1993. If PNPP Unit 1 is in cold shutdown on July 30, the modification will be implemented prior to starting up from that outage.

Within 30 days of completion of the requested hardware modifications, a written report will be provided to the NRC confirming completion and describing the modification implemented.