

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-440/85088 (DRP); 50-441/85027 (DRP)

Docket No. 50-440; 50-441

License No. CPPR-148; CPPR-149

Licensee: Cleveland Electric Illuminating Company  
Post Office Box 5000  
Cleveland, OH 44101

Facility Name: Perry Nuclear Power Plant, Units 1 and 2

Inspection at: Perry Site, Perry, OH

Inspection Conducted: December 2-6 and December 9-13, 1985

Inspector: *C. H. Scheibelhut*  
C. H. Scheibelhut

12/18/85  
Date

Approved by: *RF Warnick for*  
R. C. Knop, Chief

Reactor Projects, Section 1A

12/26/85  
Date

Inspection Summary

Inspection on December 2-6 and December 9-13, 1985 (Reports No. 50-440/85088 (DRP); 50-441/85027 (DRP))

Areas Inspected: Routine safety inspection by a Regional Inspector of licensee actions on previous inspection findings and evaluation of licensee action with regard to IE Bulletins and confirmatory items called for by a licensing branch site review. The inspection involved a total of 72 inspector-hours onsite by one NRC inspector and includes 0 inspector-hours during off-shifts.

Results: No violations, deviations, or safety significant issues were identified.

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## Details

### 1. Persons Contacted

#### Cleveland Electric Illuminating Company

- \*M. D. Lyster, Manager, Perry Plant Operations Department (PPOD)
- \*F. R. Stead, Manager, Nuclear Engineering Department (NED)
- \*C. M. Shuster, Manager, Nuclear Quality Assurance Department (NQAD)
- \*R. J. Tadych, General Supervisor, PPOD
- \*B. D. Walrath, General Supervising Engineer, NQAD
- \*V. J. Concel, Operations Engineer, Perry Plant Technical Department (PPTD)
- \*B. B. Liddell, Operations Engineer, PPTD
- \*P. A. Russ, Compliance Engineer, PPTD
- \*T. X. Heatherly, Compliance Engineer, PPTD
- \*W. J. Colvin, Operations Engineer, PPOD
- \*B. S. Ferrell, Licensing Engineer, NED

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\*Denotes attendance at the December 13 exit meeting.

The inspector also contacted other licensee and contractor personnel during the course of the inspection.

### 2. Licensee Actions on Previously Identified Items (92701, 92702)

- a. (Closed) Violation (440/84015-02 (DRP)): "Instrument air system cleanliness not verified during testing". In Inspection Report 50-440/85066 (DRP), 50-441/85023 (DRP), the inspector was satisfied with the corrective actions taken by the licensee. However, the NRC Office of Nuclear Reactor Regulation (NRR) had questions concerning an amendment to the FSAR that changed the maximum allowable size of particulate contamination in the air from three micrometers to 40 micrometers. Accordingly, the item was left open until the questions were resolved.

Supplement 7 to the Safety Evaluation Report for the Perry Nuclear Power Plant (NUREG 0887) accepted the change in the maximum allowable size of the particulate contamination. Accordingly, this item is considered closed.

- b. (Closed) Open Item (440/85010-03 (DRP)): "Preoperational tests to satisfy surveillance requirements". The inspector reviewed Perry Administrative Procedure (PAP)-1105, "Surveillance Test Control", Revision 1, dated May 1, 1985. A major purpose of the revision was to provide a controlled means of evaluating to what extent the results of the preoperational testing program could be used to satisfy surveillance program requirements. The inspector concluded that the program appeared adequate. However, the inspector wanted to review a sample of the preoperation test sections approved for surveillance procedure credit during a future inspection to verify proper implementation of the program.

The inspector obtained a current listing of all SVIs (Surveillance Instructions) performed for credit. The listing indicated whether the particular surveillance was performed in accordance with the pertinent SVI or performed during preoperational testing. A review of the list showed a total of 326 SVIs performed for credit. Of these, 186 were performed in accordance with the SVIs. A total of 101 Type B and Type C local leak rate tests depended on preoperational testing results to fulfill the surveillance requirements. Nine other miscellaneous tests relied on preoperational test results. A total of 30 safety/relief valve tests depended on the manufacturer's certified tests of set pressure and reset pressure. Further investigation showed that there are a total of 78 Class 1, 2, and 3 safety/relief valves. Of the 19 Class 1 valves, all were retested in 1985. Of the 61 Class 2 and 3 valves, 29 were retested in 1985. The balance of 30 valves will rely on the manufacturer's test results.

The inspector compared a sampling of the preoperational test procedures with the surveillance instructions for those instances where preoperational test results were used for surveillance credit. In all cases, the comparison showed that the preoperational test procedures were equivalent to the surveillance instructions. In the case of the local leak rate testing, the preoperational test procedures called for the use of the pertinent SVI to perform the test.

In most instances, the operability of a Class 2 or 3 system does not depend on the operability of a safety/relief valve installed in the system. Therefore, the use of manufacturer's test data was considered appropriate.

In an interview with SVI test personnel, it was found that preoperational test data will not be used for required surveillance of active valves and pumps.

Based on the above, the inspector concludes that PAP-1105 is being properly implemented.

- c. (Closed) Open Item (440/85010-05 (DRP)): "Security Plan Instructions approved by PORC being written to an unapproved security plan". During attendance at a Plant Operating Review Committee (PORC) meeting, the inspector noted that three security implementing procedures (instructions) were being recommended for approval even though the security plan had not received the required NRC Office of Nuclear Reactor Regulation (NRR) approval. The inspector was concerned that the plan finally approved may differ from the submitted plan thereby possibly invalidating the implementing procedures. The inspector was also concerned that the situation may occur with respect to other plans requiring NRR approval.

When NRR approval has been given for a plan, the licensee reviews the plan and the implementing procedures to assure that they are in agreement. If they are not, the procedures are revised to bring them into agreement with the plan.

Inspection Report 50-440/85065 delineates the results of an inspection conducted by Region III inspectors of the agreement between the NRR approved security plan and the implementing procedures. They were found to be in agreement.

The Emergency Plan and the Process Control Program have received NRR approval and review of the approved plans and implementing procedures to assure agreement has taken place. These reviews are contained in memorandum, J. D. Anderson to S. F. Kensicki, dated November 11, 1985. The remaining plan requiring NRR approval, the Offsite Dose Calculation Manual (ODCM) has not been submitted to NRR for approval. In memorandum, S. J. Wojton to S. F. Kensicki, dated December 9, 1985, a commitment was made to review all applicable procedures/instructions to verify agreement with the approved ODCM.

The inspector reviewed the Inspection Report and memoranda and concludes that the implementing procedures required by NRR approved plans are in agreement and that the implementing procedures for the ODCM will be in agreement with the plan.

- d. (Closed) Open Item (440/85022-48 (DRP)): "SRIA and RHR as-built discrepancies". During a walkdown of systems to compare the plant as-built condition with site controlled P&IDs, the inspector noted several discrepancies in the Safety Related Instrument Air (SRIA) system and in the Residual Heat Removal (RHR) system. These discrepancies included missing pipe caps, missing permanent valve identification tags, and missing relief valve discharge pipe stubs.

The licensee determined that the relief valve discharge pipe stubs were never intended to be installed and were not shown on the piping drawings. They were shown on the P&ID as a convention, since the valves discharge to the atmosphere. The operations section had a program in progress to identify all plant system valves shown on the P&IDs and assure that they were correctly tagged. An independent verification program was then implemented to assure that all valves were properly tagged. The verification process is essentially complete for all systems and is complete for safety-related systems. The licensee issued Work Authorization (WA)-NTS-85-1021 to walkdown the three RHR loops from suction to discharge and install any missing pipe caps. This WA was also entered into the Master Deficiency List (MDL). The missing pipe caps were installed and the installation witnessed by quality control inspectors. In the SRIA system, the pipe caps had been removed to perform a preoperational test. They had not been reinstalled because the system had to be retested. Their removal had been entered into the MDL. They have subsequently been reinstalled with the installation witnessed by quality control inspectors.

The inspector made a plant inspection and by sampling areas of the RHR and SRIA systems, found all pipe caps and permanent valve identification tags installed. Based on the verification programs in progress and the evidence, the inspector considers the item closed.

- e. (Closed) Open Item (440/85033-17 (DRP)): "Battery maintenance practices prior to service and performance testing in conflict with IEEE-450-1975". The inspector found that the licensee's procedures for performing service and performance tests on the safety-related batteries required the performance of an equalizing charge and routine preventive maintenance prior to the tests. IEEE Standard 450-1975 (and -1980), "Recommended Practice for Maintenance, Testing and Replacement of Large Lead Storage Batteries for Generating Stations and Substations", specifically prohibits the performance of an equalizing charge and routine preventive maintenance prior to running performance and service tests.

The licensee revised the following surveillance instructions:

SVI-R42-T5211, "Service Test of Battery Capacity - Division 1".  
SVI-R42-T5212, "Service Test of Battery Capacity - Division 2".  
SVI-E22-T5213, "Service Test of Battery Capacity - Division 3".  
SVI-R42-T5215, "Performance Test of Battery Capacity - Division 1".  
SVI-R42-T5216, "Performance Test of Battery Capacity - Division 2".  
SVI-E22-T5217, "Performance Test of Battery Capacity - Division 3".

The revised SVIs delete the requirement for performance of the equalizing charge and routine preventive maintenance prior to running the tests.

The inspector reviewed the revised SVIs listed above and found they met the service and performance tests requirements found in IEEE-450-1975 and -1980.

- f. (Closed) Unresolved Item (440/85046-01 (DRP)): "A. Variance between ANSI and PNPP definition of Plant Manager. B. Four examples of qualifications discrepancies for operations staff." During a detailed review of the operational staffing plan delineated in the FSAR, the inspector noted two areas of discrepancy between the plan and the requirements of ANSI Standard N18.1-1971, "Selection and Training of Nuclear Power Plant Personnel".

- A. The structural location of the Radiation Protection and Technical Sections in the organization structure resulted in operational autonomy of these sections from the individual classified in the FSAR as "Plant Manager".
- B. The qualifications of four individuals designated in the FSAR and staffing plan appeared to be at variance with the requirements of N18.1-1971 and Regulatory Guide 1.8, Revision 1, "Personnel Selection and Training".

The licensee took the following actions to resolve these discrepancies:

- A. The licensee amended (Amendment 21) the FSAR to update and clarify the plant organization. It also furnished two operating procedures (POP-0105 and PAP-01C4) which showed that the Manager of the Perry Plant Operations Department has the



authority to fulfill the responsibilities of "Plant Manager" with the authority at any time to direct any and all resources or other elements within the Nuclear Operations Division for the safe operation of the plant.

- B. The licensee replaced one of the people that did not have appropriate qualifications with one that did have the qualifications. The licensee also provided additional information on the other three people to show that they were qualified. This information was submitted to NRR along with the amendment indicated in "A" above.

In Supplement 7 to the Perry Plant Safety Evaluation Report (NUREG 0887), the staff accepted Amendment 21 to the FSAR and the supplemental information contained in the two operations procedures and staff qualifications. Therefore, this item is closed.

- g. (Closed) Open Item (440/85053-04 (DRS)): "Awaiting NRR action on licensee planned submittal to delete startup testing requirements for Main Steam Isolation Valve Leakage Control System". During the test program review, the inspector noted that there was no existing or planned startup test procedure for the Main Steam Isolation Valve Leakage Control System (MSIVLCS) to correspond to the testing commitments contained in the Final Safety Analysis Report (FSAR).

Since the MSIVLCS was tested during the preoperation testing program (F32 System Preoperational Test 1E32-POOL, Rev. 1, results approved April 29, 1985) the licensee amended the FSAR (Amendment 21) to delete the startup testing requirement. Surveillance Instruction (SVI)-E32-T0397, "MSIV Leakage Control System Function Test", was written and approved to provide periodic testing of the MSIVLCS during the life of the plant to assure operability.

Supplement 7 to the Safety Evaluation Report for the Perry Nuclear Power Plant (NUREG 0887) accepted the deletion of the MSIVLCS test from the startup test program because the test objectives were completed during the preoperational test program. This acceptance was predicated on routine performance of surveillance testing of the system.

The inspector determined that the preoperational test did demonstrate operability of the MSIVLCS and a review of the SVI showed that performance of the SVI would continue to demonstrate operability in a timely manner.

- h. (Closed) Open Item (440/85056-02 (DRP)): "Nonconformance Tracking for Augmented Quality Systems". During a review of the licensee's corrective action system documentation, the inspector noted three Deficiency Reports (DRs) addressing fire protection system hardware. The licensee's quality assurance program indicates that the fire protection system, although classed as a nonsafety-related system, would be covered under an augmented quality assurance program commensurate to the system's importance to nuclear safety of the plant. Under the augmented program it appeared that those fire

protection system deficiencies should have been resolved through the Nonconformance Report (NR) system instead of the DR system.

The licensee agreed that NRs should have been used instead of DRs during the installation of the fire protection system. To ensure the use of NRs for handling fire protection deficiencies during construction of Unit 2, Plant Administration Procedure (PA)-0202, "Fire Protection Quality Assurance", has been revised. The revision clearly requires the use of NRs to handle construction deficiencies. During operations Perry Operations Procedure (POP)-1501, "Identification and Control of Deficient Items", requires the use of the NR system to cover deficiencies in all systems. The use of DRs is not recognized. To determine if the deficiencies identified by DRs during the construction of the Unit 1 fire protection system were reportable to the NRC under 10 CFR 50.55(e) criteria, the licensee reviewed all of the DRs issued against fire protection systems, structures, and components. Of the 158 DRs reviewed, none were determined to be reportable.

The inspector reviewed PA-0202 and determined that the use of NRs is required to handle construction deficiencies during the installation of the fire protection system in Unit 2. The inspector also reviewed POP-1501 and determined that NRs will be used to cover all deficiencies discovered during the operation of Unit 1. A sample review of fire protection system DRs based on DR titles indicated that none was reportable under 10 CFR 50.55(e) criteria. The primary difference between the DR and NR system of deficiency reporting and resolution was the lack of review for 10 CFR 50.55(e) applicability under the DR system. Since their review has been made and no reportable instances found, it is concluded that the installation of the fire protection system in Unit 1 is satisfactory.

1. (Closed) Open Item (440/85073-01 (DRP)): "Diesel Generator Control Circuit Wiring Changes Incomplete". An allegation had been made concerning diesel generator control circuit design deficiencies. The allegation was closed (see Inspection Report 50-440/85073) based on a review of an Engineering Change Notice (ECN) that corrected the design deficiencies. An item was opened to track the completion of the work described in the ECN.

Work Order (W.O.) number 85000-9193 was written to perform the work. The work and circuit testing have been completed.

The inspector reviewed the quality control records associated with the circuit testing performed at the completion of the work and concludes that the circuit deficiencies have been corrected.

No violations or deviations were identified.

### 3. Licensing Review Follow-up Inspection Items (92701)

The Office of Nuclear Reactor Regulation, Division of Systems Integration, Instrumentation and Controls Systems Branch (ICSB), has requested that Region III inspectors follow up on the applicant's activities in

certain areas identified in a report transmitted on May 31, 1985, documenting a site review by ICSB personnel. One such item is verified below.

(Closed) Open Item (440/85033-07 (DRP)): "Verify that heat tracing has been installed on the safety-related sensing lines located in the outdoor bunker that is adjacent to the condensate storage tank (ICSB trip report, Section 4.a)".

Work order numbers 85000-5362, -5536, -5537, -5538, -5820, -5822, and -6728 covered the installation of heat tracing on the sensing lines and sensors located in the outdoor bunker adjacent to the condensate storage tank. Work order numbers 85000-5871, -5873, -5882, -5890, and -5902 covered the insulation of the above heat tracing.

The inspector reviewed the above completed work orders and found them satisfactory. The inspector also visited the work site after the heat tracing was installed and before the bulk of the insulation was applied and found the heat tracing installed in accordance with the drawings and specifications.

No violations or deviations were identified.

4. Evaluation of Licensee Action with Regard to IE Bulletins (92703)

For the IE Bulletins listed below, the inspector verified that the Bulletin was received by licensee management and reviewed for its applicability to the facility. If the Bulletin was applicable the inspector verified that the written response was within the time period stated in the Bulletin, that the written response included the information required to be recorded, that the written response included adequate corrective action commitments based on information presented in the Bulletin and the licensee's response, that the licensee's management forwarded copies of the written response to the appropriate on-site management representatives, that information discussed in the licensee's written response was accurate, and that corrective action taken by the licensee was as described in the written response.

- a. (Closed) IE Bulletin 85-01 (440/85001-BB, 441/85001-BB): "Steam Binding of Auxiliary Feedwater Pumps". The Bulletin referenced problems in operating Pressurized Water Reactors (PWRs) wherein high pressure hot feedwater leaked back through check valves into auxiliary feedwater pumps. This rendered the pumps inoperable because of steam binding.

While the Perry Plant utilizes a Boiling Water Reactor (BWR) that does not utilize auxiliary feedwater pumps, the Emergency Core Cooling Systems (ECCS) are arranged to pump cooling water into the reactor vessel through check valves. However, each ECCS system also contains a normally closed, motor operated gate valve in the injection line. Because of the proven integrity of the gate valves, and the fact that the backflow problem has not been found in operating BWRs, the licensee considers the Bulletin to be not applicable.



The inspector agrees with the licensee's decision.

- b. (Closed) IE Bulletin 85-02 (440/85002-BB, 441/85002-BB): "Undervoltage trip attachments of Westinghouse DB-50 type reactor trip breakers". The Bulletin references recent reactor trip breaker reliability problems with Westinghouse type DB-50 breakers. The breakers and similar breakers with mechanical undervoltage trip attachments have been the subject of earlier IE Bulletins (83-01, 83-04, and 83-08).

The licensee reiterated that there are no breakers installed anywhere in the Perry Plant that have mechanical undervoltage trip attachments. Therefore the Bulletin is not applicable. The inspector agrees with this assessment.

No violations or deviations were identified.

5. Exit Interview

This inspector met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on December 13, 1985. The inspector summarized the scope and findings of the inspection. The licensee acknowledged the inspector's findings. The licensee did not indicate that any of the information disclosed during the inspection could be considered proprietary in nature.