

U. S. NUCLEAR REGULATORY COMMISSION
REGION III

Reports No. 50-440/84-28(DRP); 50-441/84-25(DRP)

Docket Nos. 50-440; 50-441

Licenses 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, Ohio

Inspection Conducted: November 20, 1984 through January 7, 1985

Inspectors: J. A. Grobe

D. E. Keating

G. F. O'Dwyer

Approved By: *R C Knop*
R. C. Knop, Chief
Reactor Projects Section 1C

2-16-85
Date

Inspection Summary

Inspection on November 20, 1984 through January 7, 1985 (Reports No. 50-440/84-28(DRP) 50-441/84-25(DRP))

Areas Inspected: Routine unannounced inspection by resident inspectors of applicant action on previous inspection findings, applicant action on 10 CFR 50.55(e) reportable items, applicant action on I.E. Bulletins and Circulars, electrician qualifications, emergency exercise, safety committee activity, preoperational test program implementation, foreign material in the reactor vessel, control of temporary alterations, structural steel connections, and plant tours. The inspection involved a total of 298 inspection-hours onsite by three NRC inspectors, including 69 inspector-hours onsite during off-shifts.

Results: Of the eleven areas inspected, no items of noncompliance were identified.

8502260185 850220
FDR ADOCK 05000440
Q PDR

DETAILS

1. Persons Contacted

- *M. D. Lyster, Manager, Perry Plant Operations Department
- *F. R. Stead, Manager, Nuclear Engineering Department
- *J. J. Waldron, Manager, Perry Plant Technical Department
- *C. M. Shuster, Manager, Quality Assurance Department

The inspectors also contacted other applicant and contractor personnel during this inspection.

*Denotes those persons attending one or more of the exit interviews conducted on December 20, 1984, and January 4, 1985.

2. Open Inspection Items

Open inspection items are matters which have been discussed with the applicant, which will be reviewed further by the inspector, and which involve some action on the part of the NRC or the applicant or both. Open inspection items disclosed during the inspection are discussed in Section I, Paragraphs 6, 7, and 8.

3. Exit Interviews

The inspectors met with applicant representatives denoted in Paragraph 1 throughout the inspection and at the conclusion of the inspection period on January 4, 1985. The inspectors summarized the scope and results of the inspection and discussed the likely content of this inspection report. The applicant did not indicate that any of the information disclosed during the inspection could be considered proprietary in nature.

Section I

Prepared By: John A. Grobe
and
Gerard F. O'Dwyer

Reviewed By: Richard C. Knop

1. Applicant Action on Previous Inspection Finding

(Closed) Open Item (440/84-22-05(DRP)): Control of temporary instructions. Temporary Change Request No. 5, to be incorporated in the next procedure revision, for Plant Administrative Procedure (PAP)-0507, Revision 0, modified Section 6.8.1 deleting the provisions for expedited approval in "urgent" situations. The inspector has no further concerns in this area.

2. Applicant Action on I.E. Bulletins and Circulars

The I.E. Bulletins and Circulars listed below that were closed for Unit 1 in Inspection Report No. 50-440/84-22, are closed for Unit 2. For detailed closure justification refer to Section I, Paragraph 2, of Inspection Report No. 50-440/84-22.

- a. (Closed) I.E. Bulletin 79-10 (441/79-10-BB): Requalification Training Program Statistics.
- b. (Closed) I.E. Bulletin 79-20 (441/79-20-BB): Packaging Low Level Radioactive Waste for Transport and Burial.
- c. (Closed) I.E. Bulletin 79-22 (441/79-22-BB): Possible Leakage of Tubes of Tritium Gas in Timepieces for Luminosity.
- d. (Closed) I.E. Bulletin 80-18 (441/80-18-BB): Maintenance of Adequate Minimum Flow through Centrifugal Charging Pumps Following Secondary Side High Energy Line Rupture.
- e. (Closed) I.E. Bulletin 80-22 (441/80-22-BB): Automation Industries Model 200-520-008 Sealed-Source Connectors.
- f. (Closed) I.E. Circular 79-06 (441/79-06-CC): Failure to Use Syringe and Bottle Shields in Nuclear Medicine.
- g. (Closed) I.E. Circular 79-08 (441/79-08-CC): Attempted Extortion - Low Enriched Uranium.
- h. (Closed) I.E. Circular 79-14 (441/79-14-CC): Unauthorized Procurement and Distribution of Xe-133.
- i. (Closed) I.E. Circular 79-16 (441/79-16-CC): Excessive Radiation Exposure to Members of the General Public and a Radiographer.

- j. (Closed) I.E. Circular 80-06 (441/80-06-CC): Control and Accountability Systems for Implant Therapy Sources.
- k. (Closed) I.E. Circular 80-17 (441/80-17-CC): Fuel Pin Damage Due to Water Jet from Baffle Plate Corner.
- l. (Closed) I.E. Circular 80-19 (441/80-19-CC): Noncompliance with License Requirements for Medical Licenses.
- m. (Closed) I.E. Circular 80-20 (441/80-20-CC): Changes in Safe-Slab Tank Dimensions.
- n. (Closed) I.E. Circular 80-24 (441/80-24-CC): AECL Teletherapy Unit Malfunction.
- o. (Closed) I.E. Circular 80-25 (441/80-25-CC): Case Histories of Radiography Events.

3. Question Regarding Electrician Qualification-Independent Inspection

On December 18, 1984, the inspector received a telephone call from an unidentified individual who questioned the qualifications of electricians who were installing splices between field installed wiring and Rosemont transmitters. The individual indicated that a course was available from the manufacturer concerning installation of those splices and that electricians were not receiving that training.

The inspector reviewed the L. K. Comstock and Company, Inc., (electrical contractor) Procedure No. 4.3.35, "Installation of Electric Conductor Seal Assemblies and PL Gland Assemblies," revised on 4-6-84, which prescribes the method of installation for those splices. The inspector examined the installed splice on the 1B21-N076D pressure transmitter and observed installation work on a splice in the Unit 1 Reactor Building, outside the drywell on the 599' elevation at 175 degree azimuth. The inspector reviewed the training records for the electricians involved in that splice and found that both individuals had attended training sessions on Procedure No. 4.3.35 and its addenda.

The inspector concluded that the task is well defined in Procedure No. 4.3.35 and is being satisfactorily accomplished with training only to that procedure.

No items of noncompliance or deviations were identified in this area.

4. Emergency Exercise Observation

The inspector observed the evaluated emergency exercise conducted on November 28, 1984, and attended the joint NRC and FEMA public critique of the exercise conducted on November 30, 1984. During the exercise, the inspector observed the functioning of the control room staff in the PNPP simulator, the Technical Support Center (TSC) staff, the Emergency Operations Facility (EOF) staff, the onsite and offsite fire fighting

organizations and the emergency medical response staff. The inspector also observed the integrated operation of and coordination between the control room (simulator), the TSC, the EOF, the Operations Support Center and the Joint Public Information Center. The exercise scenario was sufficiently technically complex and resulted in integrated activation of all of the applicant's emergency response capabilities, including offsite emergency organizations.

No items of noncompliance or deviations were identified.

5. Safety Committee Activity

The inspector reviewed the minutes of Plant Operations Review Committee (PORC) meeting No. 84-32, conducted on November 16, 1984, No. 84-36, conducted on December 17, 1984, and No. 85-01, conducted on January 7, 1985, to verify conformance with PNPP procedures and regulatory requirements. This examination included PORC membership and qualifications quorum at PORC meetings and PORC activities.

No items of noncompliance or deviations were identified in this area.

6. Preoperational Test Program Implementation Verification

- a. The inspector observed control room operation and test coordination, reviewed applicable logbooks and conducted discussions with control room operations and test personnel during the months of November and December 1984 and January 1985 to ensure that test activities were being conducted in accordance with regulatory requirements and facility procedures. Tours of the Unit 1 reactor building, intermediate building, auxiliary building, fuel handling building, control complex and diesel generator building were conducted to observe test and maintenance work in progress, area housekeeping, equipment condition and system cleanliness. The inspector also reviewed the minutes from Test Program Review Committee (TPRC) meetings No. 312 through 330 conducted during this inspection period to verify conformance with Nuclear Test Section Procedures.
- b. During a tour on December 7, 1984, the inspector observed degrading housekeeping conditions in safety related areas. After the inspector brought this condition to the applicant's attention, a number of corrective actions were taken:
 - . The applicant established two individuals, one in construction and one in operations, with responsibility for facility cleanliness. Previously, housekeeping responsibility had not been delegated to specific individuals.
 - . The Construction Quality Section implemented a procedure which requires periodic facility surveillance to verify housekeeping adequacy.

- . The applicant increased the frequency of trash pickup.
- . The applicant established and publicized a "Call for Cleanup" program. This program allows anyone to call the listed site extension and get an area cleaned.

The inspector will monitor the implementation of this program and continue to assess facility housekeeping as a part of the routine inspection program.

- c. Inspection Report No. 50-440/84-11(DRS); 50-441/84-11(DRS), issued July 10, 1984, documented a concern that fuses were not specifically included in the scope of electrical devices as defined in the applicant's procedure for controlling lifted leads, jumpers and electrical devices. At that time, Nuclear Test Instruction No. 6-1104 prescribed the controls for lifted leads, jumpers and electrical devices. That concern was tracked as an open item (50-440/84-11-09(DRS); 50-441/84-11-09(DRS)). On July 30, 1984, the applicant revised Nuclear Test Instruction No. 6-1104 to include fuses under the definition of electrical devices and reissued that procedure as Test Program Instruction (TPI)-18, "Control of Temporary Alterations", Revision 0. Based on the issuance of TPI 18, the open item was closed on October 10, 1984, in Inspection Report No. 50-440/84-15; 50-441/84-14. On December 6, 1984, Revision 3 of TPI-18 was issued. Among other things, Revision 3 deleted the word "fuse" from the scope of electrical devices.

During a plant tour on January 4, 1985, the inspector observed eleven 480 volt AC and two 125 volt DC motor control center compartments under Nuclear Test Section (NTS) or Perry Plant Department (PPD) jurisdiction that had the power and/or control fuses removed and no tagging or other indication locally or in the control room that the fuses had been removed. After the inspector expressed concern regarding the level of control over fuses, the applicant reinstalled the fuses on twelve of the thirteen devices and placed a red (danger) tag on the remaining device to document the out of service condition. The applicant further indicated that it had been routine practice, as observed by the inspector, to remove the fuses for equipment that was not being operated. Following discussions with the unit supervisor, shift supervisor and test coordinator, the inspector confirmed that the control of fuses required in TPI-18 from July 30 to December 6, 1984, had not been implemented. The inspector has two concerns regarding this issue: (1) the control of fuses does not appear to be adequate to ensure that fuses of the proper type and size are installed in equipment and that the control room is aware of equipment operational status (Open Item No. 440/84-28-01; 441/84-25-01) and (2) the corrective action established to address the NRC concern was not implemented and was subsequently eliminated without providing equivalent controls in another procedure (Open Item No. 440/84-28-02; 441/84-25-02).

7. Foreign Material in the Reactor Vessel - Independent Inspection

On December 19, 1984, the applicant discovered that two energized underwater lights suspended over the open reactor vessel were uncovered due to decreasing water level, following control rod drive hydraulic system pre-operational testing. These lights then overheated resulting in the Lexan shatter shield melting and dripping into the reactor vessel. Nonconformance Report (NR) No. OQC 1545 was issued on December 19, 1984, to document the problem. Deviation Analysis Report (DAR) No. 219 was issued on December 20, 1984, to analyze the significance of the problem and determine the reportability of the event. To assist in evaluation of the event, Field Deviation Disposition Request (FDDR) KL1-4020 was issued to involve General Electric Company (GE). GE concluded on December 20, 1984, that the quantity of Lexan in the vessel was too small to represent a chemical or corrosive concern; however, GE did not close out FDDR KL1-4020 pending determination of the quantity of Lexan unrecovered from the vessel. DAR 219 was closed out on December 26, 1984, concluding that the event was not reportable pursuant to 10 CFR 50.55(e) or 10 CFR 21 based on the GE analysis in FDDR KL1-4020. On December 20, 1984, the applicant issued NTS Work Procedure No. TWP-M-0528-B13, Revision 0, "Reactor Vessel Inspection", to utilize the underwater viewing tube to inspect the vessel internals and document the location of Lexan particles. The inspector reviewed the procedure and observed selected inspection activities on December 20, 1984, controlled under TWP-M-0528-B13, and verified that the underwater viewing tube provided sufficient resolution for detecting material on both the top and bottom core plates. On December 21, 1984, the applicant issued NTS Work Procedure No. TWP-M-0531-B13, Revision 0, "Clean Reactor Vessel", to utilize the underwater vacuum cleaner to remove the material identified under TWP-M-0528-B13. The inspector reviewed the procedure and observed selected cleaning activities on December 21, 1984, controlled under TWP-M-0531-B13. All identified material was removed and recovered. The recovered material was weighed and the applicant concluded that approximately 86 grams of Lexan material could still be in the vessel. A detailed vessel inspection will be conducted following completion of the control rod drive hydraulic system preoperational test and draining the vessel. At that time, NR OQC 1545 and FDDR KL1-4020 will be dispositioned. The closeout of those documents will be tracked as an open item (440/84-28-03).

8. Control of Temporary Alterations - Independent Inspection

On November 28, 1984, the applicant issued a Stop Work Notice No. 84-04 to stop any work involving lifted leads, jumpers or electrical devices under TPI-18, "Temporary Alterations", after discovery of three instances of improperly controlled temporary power lead installations in the Unit 2 control room. The applicant inspected all of the Unit 1 Power Generating Control Complex (PGCC) panels for improperly controlled temporary alterations and identified and corrected 32 problems. The applicant inspected approximately 65 percent of all electrical panels under NTS jurisdiction (approximately 710 panels) and identified and corrected 27 problems. These problems included administrative paperwork discrepancies as well as lifted-lead, jumper and electrical device hardware deficiencies. The

applicant performed an engineering evaluation of the hardware deficiencies concluding that none of the deficiencies would have resulted in an unacceptable operational condition. On this basis the applicant released the stop work in the Unit 1 PGCC and the balance of the plant.

The inspector examined the results of the inspections in the Unit 1 PGCC and the balance of the plant. In addition to the specific resolution of each deficiency, the applicant took the following actions to ensure long term corrective action:

- . The applicant is encouraging the use of information tags for situations where temporary alterations are controlled under a procedure not requiring the use of a lifted lead, jumper and electrical device tag.
- . A memorandum was issued to the applicant's staff indicating that failure to adhere to TPI-18 would be cause for dismissal.
- . Retraining to TPI-18 was conducted.
- . Continuous audits of the temporary alteration and danger tagging programs are conducted. An individual has been added to the control room staff working for the test coordinator to assist with these tagging programs.
- . The electrical and instrumentation and controls element supervisor meets biweekly with new employees to emphasize the importance of administrative controls over temporary alterations.

The inspector will examine the applicant's engineering analysis that concluded that the improperly controlled alterations did not result in an unacceptable operational condition. The NRC closeout of this stop work notice will be an open item (50-440/84-28-04; 50-441/84-25-03).

Section II

Prepared by: D. E. Keating

Approved by: R. C. Knop

1. Applicant Action on 10 CFR 50.55(e) Reportable Items

- a. (Closed) 10 CFR 50.55(e) Reportable Item (440/80-15-EE) (DAR-044): Standby diesel generators lubricating oil defect. This concerns a potential defect regarding lubrication of the thrust bearings of the turbochargers.

The inspector reviewed the documentation of the modifications made per the recommendation of Transamerica Delaval. These modifications will permit the turbocharger to maintain adequate lubrication for a longer period of time. Based on the review of this documentation and an inspection of diesel Model No. DSRV16 turbocharger this item is considered closed.

- b. (Closed) 10 CFR 50.55(e) Reportable Item (440/82-01-EE; 441/82-01-EE) (DAR-081): Location of governor lube oil cooler for standby diesel generator. The inspector reviewed the document package containing the changes recommended by Transamerica Delaval and the installation records regarding these changes. The inspector also physically examined the installation necessitated by these recommendations. Based on these activities, this item is considered closed.

- c. (Closed) 10 CFR 50.55(e) Reportable Item (440/83-16-EE) (DAR-136): Design of diesel generator exhaust piping. The exhaust piping for the Division I, Division II and High Pressure Core Spray emergency power systems was designed such that back pressures would exceed the manufacturer's recommendations.

The inspector reviewed Gilbert Associates Inc. (GAI) calculations and drawings as well as the installation documentation and determined the redesign and subsequent installation to be adequate. This item is considered closed.

- d. (Open) 10 CFR 50.55(e) Reportable Item (440/83-22-EE; 441/83-22-EE) (DAR-145): Potential defect with engine mounted fuel oil line. Excessive vibration of the fuel oil line between the engine mounted fuel transfer pump and fuel oil header could cause a line failure or fitting failure allowing fuel oil to come in contact with hot engine components thus resulting in a fire which could shut down the engine.

The inspector reviewed the applicant's efforts to correct this deficiency. This included a review of installation and inspection documentation and physical review of the installation of additional fuel line supports. Pending testing of these diesels and inspector's review, this item remains open.

2. Reinspection of Structural Steel Connections

Inspection Report 440/84-22, Section II, Paragraph 1, noted that the applicant was reviewing fifteen (15) General Electric (GE) travelers and that the final document package would be ready for review and closeout the last week in December 1984.

The NRC inspector reviewed the final document package which included the following:

- . Surveillance Inspection Plan (SIP) AR080, Revision 0
- . Field Question (FQ) 41145
- . GE Specification SP-38/39 and Travelers
- . PBI Specification SP-85

The inspector also reviewed the documents for the required signatures and proper date sequence. Based upon this review and the previous inspection, no items of noncompliance or deviations were identified.

3. Plant Tours

The inspector conducted several walkdowns of the plant during normal and off-normal hours. Improvement has been noted in general housekeeping. This activity will continue to be monitored as part of the routine resident inspection program.