

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-440/85084(DRS)

Docket No. 50-440

License No. CPPR-148

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

Facility Name: Perry Nuclear Power Plants, Unit 1

Inspection At: Perry Site, Perry, OH

Inspection Conducted: December 3, 1985 through January 10, 1986

Inspectors: J. H. Neisler

JH Neisler

3/4/86
Date

FJ Witt for
F. J. Witt, NRR

3/4/86
Date

Approved By: J. W. Muffett, Chief
Plant Systems Section

James W Muffett

3/5/86
Date

Inspection Summary

Inspection on December 3, 1985 through January 10, 1986 (Report No. 50-440/85084(DRS))

Areas Inspected: Followup inspection on allegations: RIII-85-A-0171, RIII-85-A-0206 and RIII-83-A-0089. The inspection involved a total of 58 inspector-hours by one Region III inspector and eight hours by one NRR reviewer.

Results: No violations or deviations were identified.

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DETAILS

1. Persons Contacted

Principle Licensee Employees

- *C. Shuster, Manager Quality Assurance
- E. Riley, General Supervisor, Construction Quality Section
- *M. Kritzer, Unit Supervisor, CQS Civil
- *S. Tulk, Unit Supervisor, CQS Electrical
- *E. Parker, Unit Supervisor, CQS Pipe/I&C
- *V. Higaki, Unit Supervisor, OQS
- *T. Boss, Supervisor QAD
- *R. Reifsnnyder, Quality Engineer CQS
- *K. Cimorelli, Lead Quality Engineer, Electrical
- *R. Matthys, Lead Quality Engineer, Piping/I&C
- B. Ferrell, Licensing Engineer, NED
- *T. Heatherly, Compliance Engineer, PPTD

The inspector also contacted other quality, craft, engineering and contractor personnel during the inspection.

*Denotes those persons attending the exit interview.

2. Previous Inspection Items

(Closed) Open Item (440/85034-01): Coatings test to resolve questionable application to be performed at Oak Ridge National Laboratory. This item will be tracked as Unresolved Item (440/85084-01).

3. (Closed) Allegation RIII-85-A-0171:

The NRC received anonymous allegations relative to deficiencies in coating application at Perry on October 16, 1985 and subsequently on two other occasions. The NRC provided the technical details on five of these allegations in a letter to the licensee on November 4, 1985. The licensee responded to the technical content of these allegations on December 13, 1985. The NRC reviewed the results of the licensee's inspection of the five allegations and did a selected independent review of numbers 2, 3, 4 and 5 to collaborate the licensee's findings. The NRC's review of these allegations is independent of the licensee's review. The NRC also reviewed those aspects of the allegations that were not submitted to the licensee for their review. The technical aspects of the allegations which follow are considered to be closed.

a. Allegation

White Carboline HB paint was applied to power tool cleaned surfaces without first applying a prime coat.

NRC Review

The paint referred to by the allegor is Carboline 191HB coating. The NRC staff determined by review of applicable documentation that Carboline 191HB was applied directly to bare steel for repair of damaged paint areas between October 13, 1983, and April 15, 1985. The application of 191HB to bare steel was authorized by ECN 7433-64-44, Revision F, based on a Carboline letter dated July 21, 1980, that described the application of 191HB direct to SP-10 cleaned steel areas as an alternate procedure for coating repair. The licensee's Construction Quality Section (CQS) issued Stop Work Notice 85-01 on April 16, 1985, prohibiting the use of 191HB coating on bare steel and issued nonconformance report CQC 3784 on April 23, 1985, to resolve the stop work notice. Both the stop work notice and the nonconformance report were issued as a result of a CQS finding that proper documentation was not available to prove the coating application met design basis accident requirements in the drywell. The licensee prepared samples of Carboline 191HB coating on bare steel and submitted the samples to Oak Ridge National Laboratory (ORNL) for testing to resolve the nonconformance report. This item is unresolved pending the NRC review of the licensee analysis of the results of the ORNL coating sample test (440/85084-01). The licensee issued ECN 26607-64-78 Revision A to prohibit the use of 191HB coating on bare steel to satisfy the conditions of Stop Work Notice 85-01.

Conclusion

Although this allegation was substantiated, the licensee's QA program has identified this problem and had initiated corrective action on this problem some six months prior to being identified by the allegor.

b. Allegation

QC inspectors checked liner temperatures with temp sticks and that readings were off scale high (greater than 150°F). Application of coatings was permitted by QC in violation of engineering and procedural requirements that the temperature be 80°F or less on containment dome.

NRC Review

The NRC inspector reviewed QC inspection reports indicating surface temperatures measured on the containment dome for coatings application. The measurements were made with a contact thermometer, not a temp stick. The maximum temperature recorded was 116°F. According to the QC inspection report, coating application began four and three-quarters hours later when the surface temperature was 92°F. The coatings used for this application were Carbonzinc No. 11 and Carboline 191HB. Surface temperature limits for the application of these coatings listed in Metalweld coating procedure WI 210 were: Carbonzinc No. 11, 40°F minimum, 110°F maximum; and Carboline 191HB, 50°F minimum, 110°F maximum. QC records indicate that coatings application were not performed when temperatures were outside these limits.

Conclusion

Based on the review of coatings application records and the coatings procedures, this allegation was not substantiated.

c. Allegation

Painters have used tungsten carbide tipped drill bits (pencil grinders) on their buffing and grinding tools to prepare weld surfaces for coating application thereby removing excessive weld metal from coated items such as snubber brackets, pipe supports, pipes, etc. The alleger did not identify specific locations where the use of tungsten carbide tipped drill bits occurred.

NRC Review

The inspector reviewed documentation of the licensee's inspection of the coatings contractor storage areas and tool cribs, and applications' tool boxes. No tungsten carbide tipped bits were found. Interviews with quality control personnel indicated that deburring tools are used to remove sharp edges on structural steel. Use of these devices is permitted by the Steel Structures Painting Council and contractor procedures. None of the personnel interviewed was aware of the use of these tools on welds, supports or pipes in a manner that could lead to excessive metal removal. A general visual inspection of brackets, supports and pipes revealed no excessive base or weld metal that had been removed by use of these tools.

Conclusion

Based on the inspector's review of available documentation, interviews with personnel, and the lack of specific information as to where the tungsten carbide drill bits were used this allegation was not substantiated.

d. Allegation

Paint cracks on welds on crane box beam were due to cracks in welds.

NRC Review

Cracked welds on the polar crane box girder (beam) were previously reviewed as Allegation No. RIII-85-A-0125 and are as documented in Inspection Report No.440/85078. Paint was removed from the areas of alleged cracked welds and the welds were nondestructively examined using the magnetic partical examination method. No crack indications were observed in the box girder welds.

Conclusion

Based on previous NRC inspection of allegations related to cracked welds on the polar crane this allegation was not substantiated.

e. Allegation

Coating defects on spray header of 689 elevation.

NRC Review

The inspector reviewed nonconformance report CQCS-111, dated November 1, 1985. The nonconformance report identified the coating defects. All the spray headers were inspected and defects corrected. The NRC visually inspected the repaired area (calculated by the licensee to be about 0.75 square foot), the other headers, and the containment wall in the vicinity of the headers. No defects were observed.

Conclusion

Based on the licensee's identification and correction of the defects in the spray header coating prior to the allegation and the NRC's inspection in this area this allegation was not substantiated. The licensee had previously identified and corrected coating defects on the spray header. The allegation was received subsequent to the licensee's correction of the deficiencies. The NRC inspection of the area subsequent to the licensee's correction of the deficiencies showed that the allegation could not be substantiated.

f. Allegation

Paint is peeling and rust is visible on the fuel handling bridge platform.

NRC Review

The inspector examined the platform and observed areas of rust on the painted surfaces. The rust had previously been identified by the licensee on nonconformance report MW 1230-2/3 dated September 11, 1985. The nonconformance report disposition was to rework the paint on the platform. Rework activities including sandblasting and painting was observed by the inspector during the inspection.

Conclusion

Since the licensee had previously identified rust on the fuel handling bridge platform and had initiated adequate corrective measures as indicated by the above nonconformance report, this allegation did not identify an unknown nonconformance.

g. Allegation

The allexer stated that the shop steward would arrange for the hiring of unqualified people. The person applying for the position would attempt to qualify by painting a test panel and the shop steward would touch up the panels after the applicant was finished but before the panels were inspected for qualification. This activity was alleged to have occurred from January to March 1980.

NRC Review

The inspector ascertained that the painting contractor, Metalweld Incorporated, did not arrive onsite until August 1980 and would not have been qualifying personnel onsite during January to March 1980.

Since Metalweld was not onsite during January to March 1980, the inspector elected to review applicator qualifications for January through March 1981 and 1985. During January through March 1981 seven persons passed the qualification test and approximately 200 persons were certified as passing in the January through March 1985 period. The qualification tests were witnessed by a quality control inspector and results were evaluated in both wet and dry coating conditions. In addition to contractor quality control witnessing the performance of the quality tests, licensee quality assurance personnel perform periodic surveillances of the testing and review all test results.

The inspector reviewed Metalweld Procedure WP-007A, Revision 1 dated August 21, 1980, "Method for Qualifying Journeyman Applicators (Test Panel)." This procedure requires all journeyman applicators who apply coatings under the requirements of ANSI N101.4 to be qualified in accordance with this procedure prior to that individual's applying production coatings. At Perry, there are no prequalified applicators.

Conclusion

This allegation was not substantiated. Since the contractor was not at Perry during the time frame identified by the allexer other time periods were chosen for review. The inspector's review of qualification test results revealed the tests were witnessed by quality control while the coating was being applied to the panel and inspected wet. Therefore, the shop steward would not have had an opportunity to touch up the samples. Since all painters are considered to be unqualified until tested, whether or not the shop steward arranged for certain persons to be hired has no safety significance.

4. (Closed) Allegation (AMS No. RIII-85-A-206)

The NRC received the following allegations relative to instrument air lines and tubing via an anonymous telephone call on December 18, 1985.

a. Allegation

Incorrect drawings were issued for initial field work and the numerous design changes and rework have caused the as-built drawings to be incorrect and not accurately reflect the field conditions.

NRC Review

Region III inspectors performed walkdown inspections on instrument pipe and tubing to compare the as-built field conditions with the as-built drawings during inspections documented in Inspection Reports 50-440/85028 and 50-440/85038. Instrument tubing was inspected and documented in Inspection Reports 50-440/84007. Installation records including drawings were inspected and documented in Inspection Report 50-440/84018. No violations of licensee commitments were identified during any of the above inspections. The inspector examined documentation of the licensee field verification and as-built drawing review of instrumentation systems. At final turnover all identified deficiencies had been corrected.

Conclusion

Based on numerous NRC inspections this allegation was not substantiated in that deficiencies had been identified and appropriate corrective actions initiated.

b. Allegation

The allegor mentioned inaccuracies in instrument line seismic support spacing criteria.

NRC Review

Improper use of seismic support spacing criteria was reported to the NRC pursuant to 10 CFR 50.55(e) and was tracked by Region III as 10 CFR 50.55(e) report 440/85017-EE. The licensee's corrective action was inspected and closed in Region III Inspection Report No. 50-440/85072. During inspection No. 50-440/85072, the inspector verified that the architect/engineer had performed a seismic support spacing design review, reviewed 100 percent of the support installation and fabrication packages, issued guidelines in the form of ECN 13239 to clarify the support spacing criteria and provided retraining for personnel involved in seismic support spacing reviews.

Conclusion

Based on the licensee's reporting the deficiency and the NRC review and acceptance of the licensee's corrective action prior to receipt of the allegation this allegation was not substantiated.

c. Allegation

The slope of instrument lines was not in compliance with design requirements.

NRC Review

Instrument line slope deficiencies were addressed in NRC Region III Inspection Report No. 50-440/85028 conducted May 13-17, 1985, and identified as Open Item 440/85028-02. The open item was closed in Inspection Report No. 50-440/85062. The licensee documentation indicated that they issued Corrective Action Requests to address these deficiencies during September 1984. In addition, the licensee established a slope verification program to identify and document instrument line slope deficiencies. Nonconformance reports were issued to identify and effect corrective action for each slope deficiency. The inspector verified that the slope deficiencies were being corrected as systems were preoperationally tested.

Conclusion

Based upon the NRC's and the licensee's identification and the corrective actions being performed previous to the receipt of the allegation, this allegation was not substantiated.

d. Allegation

The total instrument air system was full of contaminants and water as the system had been flooded for more than six months. Deviation Analysis Report No. 268 was written on the condition; however, that report was being kept low key and deemed not reportable to the NRC.

NRC Review

The Deviation Analysis Report (DAR) Number documenting moisture in the safety-related instrument air system was DAR-259, not DAR-268 the DAR was reported to the NRC as a construction deficiency pursuant to 10 CFR 50.55(e) and is being tracked by Region III as item 440/85023. Instrument air dryers had been turned off, for an unknown period time, during preoperational testing causing moisture levels within the air system to rise above design levels. The air system was cleaned according to specifications and procedures were implemented to assure that the air dryers are kept in operation.

Conclusion

Based on the licensee's previous identification of this deficiency, proper reporting and the NRC inspector's verification of the licensee's actions, this allegation was not substantiated.

e. Allegation

Approximately 500 nonconformance reports were written for nonconforming instrument line slope conditions. Corrective action reports, trend analyses and corrective actions have not been done on this condition. This too was not reported to the NRC.

NRC Review

The NRC inspector reviewed the 1982 trend analysis report of the instrument line slope nonconformances. Nonconformance reports and corrective actions regarding line slope were addressed by the NRC in Inspection Reports 50-440/85028 and 50-440/85062. A walkdown inspection was performed prior to turnover, the designer and the installer established an instrument line slope verification program to assure proper slope prior to system turnover to plant operations. The inspector verified the nonconformances were trended by CQS, corrective actions were effected and that appropriate inspections were performed to verify that the slope nonconformances were corrected. The item was not considered to be reportable pursuant to 10 CFR 50.55(e) when reviewed by the licensee.

Conclusion

Based on the NRC inspectors' review of trend analysis reports, nonconformances, corrective actions and the licensee's slope verification programs, this allegation was not substantiated.

5. Closed Allegation (RIII-83-A-0089)

The NRC office of investigations informed Region III of the results of interviews relative to previous allegations regarding the L. K. Comstock document review task force. The allegations and the results of the NRC's inspection of the allegations are discussed below:

a. Allegation

Document check lists used by the task force that identified errors in work packages were subsequently removed from the packages.

NRC Review

Subsequent to the task force review, and prior to turnover, each document package was reviewed by L. K. Comstock QC document reviewers. Additionally, the licensee construction quality section performed a 100 percent review of the Comstock document packages at turnover. The NRC inspector reviewed 86 work packages that had been assembled before the task force review during this inspection. In addition, the inspector had reviewed document packages during a previous inspection in November 1985. Each package with task force concerns contained a task force document review checklist listing

the concerns and a checklist of steps taken to resolve the task force concerns. In the document packages that contained no identified task force concerns, the QC document reviewers had included a master checklist of all task force concerns. The document package was reviewed against the master checklist to ensure that all task force concerns and the required sign-offs had been considered during the turnover review. The document packages reviewed by the NRC inspector had identified and resolved the task force concerns. During the inspector's review of the document packages no packages were identified where task force review checklists had been removed, nor did the inspector identify a case where removal of the task force checklist would have had a negative impact on the quality assurance document program.

Conclusion

Based on the inspectors review of a sampling of L. K. Comstock document packages, checklists and procedures, this allegation was not substantiated.

b. Allegation

"NRC did not address task force concerns of improper and no QC documentation covering conduit pulls." The allegor did not identify a specific task force concern relative to conduit pulls.

NRC Review

The NRC inspector reviewed the task force transmittals of concerns from the task force contractor, Energy Consultants Incorporated, to L. K. Comstock. No conduit pull documentation concerns were identified in the transmittals. However, the task force did identify concerns relative to swabbing of conduit after cables are pulled through; including the size of conduit on inspection documents; and inspection criteria for inspection of conduit bushings. The NRC inspector verified by review of QC inspection reports and licensee surveillance reports that these conduit concerns had been addressed and corrective actions completed. During the review of document packages, the inspector ascertained that those cable pulls through conduit had been inspected according to procedure. Each cable pull package indicated that the conduit had been inspected, pull tensions calculated and the cable pull witnessed by QC according to the appropriate procedure.

Conclusion

Based on the inspector's review of documentation attesting to the adequacy of the corrective action relative to identified conduit concerns, task force concern transmittals and cable pull document packages, this allegation was not substantiated.

c. Allegation

How does one become a Level III in an inspection discipline in which he/she has not met the minimum experience or educational requirements for, i.e., overall Level III of the L. K. Comstock QC Manager?

NRC Review

The L. K. Comstock QC Manager identified by the allegor is no longer employed at Perry. The NRC inspector's review of those portions of the QC managers personnel file that remained onsite indicated that he did not have "Overall Level III qualification." Review of the QC manager's resume of experience indicated that he had been certified as a Level III by two previous employers at nuclear construction sites. His qualifications (in 1983) listed in the resume included nine years nuclear quality experience, four years related experience in aircraft maintenance/inspection and five years related experience in parts/components for a scheduled airline. Education included high school and technical training courses. NRC regulations and ANSI standards list no qualification requirements for construction QC managers; however, based on records available at the time of the inspection, the NRC inspector concluded that the QC managers experience and education was adequate for ANSI N45.2-6-1978 Level III certification in those areas in which he was certified Level III.

Conclusion

Since the QC manager did not have an overall Level III certification and his experience and education meets ANSI N45.2-6-1978 requirements for those areas in which he was certified, this allegation was not substantiated.

d. Allegation

NRC did not address AR-260. Allegers comment on NRC Inspection Report 440/83008.

NRC Review

The audit report identified by the allegor was not AR-260 but AFR-260. The AR designation indicates the audit was performed by licensee quality assurance organization, AFR designates L. K. Comstock audit finding report. No AR-260 was issued by the licensee in this area.

The NRC inspector reviewed AFR-260 during this inspection. The audit finding report was issued to document inspection of repairs on switchgear 1/2R225006/7. During receipt inspection, weld cracks had been identified in the frames of the switchgear and nonconformance report NR-142 initiated to document the cracks and to effect

corrective action. QC review of AR-260 documentation determined that two crack repairs in Unit 2 switchgear were not signed off. AFR-260 Revision 1 was initiated to document the repair and inspection of the two cracks. During the document package review, the reviewer observed that LKC form 118 should have been used to document the inspection instead of the AFR. The repairs were reinspected on Inspection Report 4876, LKC form 118, in 1983, and the deficiencies corrected. Based on the above, the inspector documentation of the inspections and repairs on this switchgear was adequate and that disposition of the nonconformance report was proper.

Conclusion

The alleged's statement that NRC inspectors did not address AFR-260 in Inspection Report 440/83008 is correct. However, the NRC inspector's review of AFR-260 and it's supporting documentation revealed that deficiencies in the AFR had been adequately identified and corrected in accordance with the quality assurance program. Based on the above this allegation is not substantiated as having a negative impact on the quality assurance program or nuclear safety-related issues.

d. Allegation

NRC did not address AR-276. Allegor comment on Inspection Report 440/83008.

NRC Review

Audit Report No. 276 performed by the licensee's construction quality section, identified nonconforming electrical cable tray support welds. The licensee issued nonconformance report CQA-048 to track the corrective action of deficiencies identified in AR-276. Action Request AR-001 was issued instructing L. K. Comstock to reinspect and repair the nonconforming welds, to document the inspection of the welds on inspection reports, document nonconforming welds on nonconformance reports and to hold and document training sessions for Comstock QC welding inspectors on weld acceptance criteria. Inspection procedures were clarified and revised to include weld acceptance criteria. Checklists were developed specifically for electrical hanger turnover inspection prior to turnover of hangers beginning in August 1984. The NRC inspector verified that the above actions had been accomplished and that the audit report had been properly closed by the audit team leader and the CQS unit supervisor.

Conclusion

Based on the inspector's review of documentation providing evidence that hanger weld inspection deficiencies had been properly corrected, this allegation was not substantiated.

6. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, violations or deviations. An unresolved item is discussed in Paragraph 3.a.

7. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection and summarized the scope and findings of the inspection. The licensee acknowledged the inspector's comments. The inspector also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspector during the inspection. The licensee did not identify any such documents/processes as proprietary.