

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-412/85-10

Docket No. 50-412

License No. CPPR-105 Priority -- Category B

Licensee: Duquesne Light Company

435 Sixth Avenue

Pittsburgh, PA 15219

Facility Name: Beaver Valley Power Station - Unit 2

Inspection At: Shippingport, Pennsylvania

Inspection Conducted: April 29 - May 3, 1985

Inspectors: Peter H. Phelan
P. H. Phelan, Reactor Engineer

6/18/85
date

R. J. Paolino
R. J. Paolino, Lead Reactor Engineer

6/18/85
date

Approved by: C. J. Anderson
C. J. Anderson, Chief, Plant Systems
Section, PSS, DRS

6/20/85
date

Inspection Summary: Inspection on April 29 - May 3, 1985 (Inspection Report No. 50-412/85-10)

Areas Inspected: Routine, unannounced inspection of activities relating to the installation of safety-related electrical/instrumentation components and associated circuits. Review status of previously identified open items. The inspection involved 66 inspection hours on site by two region based inspectors.

Results: No violations were identified.

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Details

1.0 Persons Contacted

1.1 Duquesne Light Company

- *L. E. Arch, Senior Project Engineer
- *F. A. Arnold, Startup Engineer
- A. Bauer, Lead Instrument Test Specialist - SUG
- *R. Coupland, Director - QC
- D. Covington, Senior Inspector - Startup
- *D. W. Denning, Assistant Director - QC
- *G. Horvath, Engineer
- *C. Huemme, Supervisor System/Subsystem Turnover
- *J. R. Kasunick, Maintenance Director - SUG
- *J. F. Konkus, Project Engineer
- G. Lauck, Electrical Maintenance Supervisor
- *F. C. Lin, Engineer
- *C. Majundar, Assistant Director - QC
- *T. P. Noonan, BV-2 Station Superintendent
- *M. Pavlick, Director Milestone Management
- *D. K. Rohm, Assistant Director - QC
- *J. Staff, Compliance Engineer
- *R. J. Swiderski, Startup (SUG) Manager
- C. Trasada, I&C Supervisor - SUG

1.2 Stone and Webster Engineering Corporation

- E. Andre, Support Engineer
- *P. J. Bienick, Assistant Superintendent - Engineering
- D. Cox, Quality Data Supervisor
- *A. A. Dasenbrock, Senior Construction Manager
- J. Devine, Principle Electrical Engineer
- R. Dunne, Principle Engineer
- *H. R. Foley, Site Program Manager
- *D. P. Lessard, Assistant Superintendent Engineering
- *J. J. Novak, Superintendent Construction
- *J. J. Purcell, Assistant Superintendent
- *R. C. Wittschen, Licensing Engineer

1.3 Sargent Electric Company

- R. Charles, Senior Structural Designer
- R. Cronkovich, Design Coordinator
- G. Dean, Structural Engineer
- R. Faust, Principle Structural Engineer
- M. Lyons, Engineer - Mechanical Division
- B. Moon, Area Foreman
- B. Strobe, Project Engineer

1.4 U.S. Nuclear Regulatory Commission

*W. Troskoski, Senior Resident Inspector (BV-1)
L. Prividy, Resident Inspector (BV-2)

*Denotes personnel present at the exit meeting of May 3, 1985.

2.0 Facility Operation

2.1 The inspector observed work activities in progress, completed work and plant status in several areas during a general inspection of Unit 2. The inspector examined work items for obvious defects or noncompliance with NRC requirements or licensee commitments. Particular note was taken regarding the presence of quality control inspection personnel and indications of quality control activities through visual evidence such as inspection records, material identification, nonconformance and acceptance tags.

2.2 The inspector noted that craftsmen in the Safeguards Building, elevation 7'-0 were relocating 4 inch piping for the Emergency Feedwater System. In discussions with craft personnel the apparent reason for relocation of the 4 in. pipe and supports was that the actuator housing for the 4 in. valve (2FWE*HCV100 A, B, C, D, E & F) was oversize and would not fit into the space allocated for the valves. This was because the construction piping drawings and the support hangers were based on vendor standard catalog information on valve actuator size.

Considering that the approved valve actuators are larger than the standard catalog item used in the design the inspector questioned the impact of the larger/heavier component on the seismic analysis of the system and the adequacy of installed support hangers. This item is unresolved pending licensee evaluation regarding validity of seismic data and hanger design. (412/85-10-01)

3.0 Licensee Action on Previously Identified Items

3.1 (Closed) Unresolved Item No. 84-08-04 pertaining to an effective seal against the external environment for wire terminations routed through flex conduit and terminated in the transmitter housing.

The inspector reviewed the licensee's plan for sealing openings in class IE equipment E&DCR2P-4629A issued on February 11, 1985. It lists all instruments and devices requiring sealing of conduit openings. The E&DCR amends Electrical Installation specification no. 2BVS-931 to include the necessary sealing methods and equipment involved. E&DCR 2P-4664 was issued on March 6, 1985 providing construction with a listing by mark number of equipment included under E&DCR 2P-4629A. Sealing of necessary instruments and devices is scheduled for completion prior to fuel load.

This item is closed.

- 3.2 (Closed) Unresolved Item No. 84-10-03 pertaining to consideration of IEEE 323-1974 margin requirements for Rosemount transmitters test parameters.

The inspector reviewed licensee document nos. 2NCD-04752 and 2DLS-24218 verifying margin requirements for tested parameters, as stated in Section 6.3.1.5 of IEEE-323-1974. For the subject transmitters, the completed System Component Evaluation Worksheets, as described in 2BVM-128 contains calculations that include an allowance for margins as specified in IEEE-323-1974. This item is closed.

- 3.3 (Closed) Unresolved Item No. 84-17-03 pertaining to the conditioned release for installation of equipment for which qualification test data has not been reviewed or approved. The inspector reviewed Project Procedure No. 2BVM-135 on "Environmental Qualification Conditioned Release program for class 1E Electrical Equipment" and Field Construction Procedure No. FCP-417 and "Site Identification and Control of Component/-Equipment Requiring Environmental Qualification." These procedures describe the systematic program for releasing class 1E Electrical Equipment. However, there is no differentiation between an "initial" SDDF form issued for vendor document status or one issued for approval of final EQ package. The licensee has revised the use of the SDDF form as well as the 2BVM-135 procedure describing the functions of the SDDF forms. In addition, 2BVM-135 and FCP-417 have been revised to clearly delineate the use of EASF and EARF in providing conditional release for shipment and installation. All electrical equipment requiring conditional release have been identified and tagged in accordance with the revised FCP-417. This item is closed.

- 3.4 (Open) Unresolved Item No. 84-08-02 pertaining to adequacy of support for temporary storage of coiled cable. The inspector reviewed licensee documents nos. 2DLS-24403, DLC-SQCL-#0998C, 2DLS-24422 and 2NCD-04691 all of which address the issue and the corrective action taken to resolve this issue. The review included a closing document dated April 25, 1985 from the electrical subcontractor's Project Manager stating that all work associated with the installations of temporary supports is complete. Contrary to the above, the inspector identified three examples involving temporary storage of coiled cable in the main steam and cable vault, elevation 760'-0 which violate the minimum bend radius. One contributing factor to violations of minimum bend radius is in the use of preformed plastic cable supports. There appear to be at least three sizes in use (8, 10, 12 inch diameter) for cable support. One of the cables identified by the inspector is coiled on an 8 inch cable support. The cable no. NKA-068 requires a minimum bend radius of 9 inches. This cable has settled around the support conforming to the 8 inch diameter. It is not evident that the licensee considered the effect of the cable support diameter on minimum bend radius of cable.

This item remains open.

4.0 Instrumentation (Components/System) --- Work Observation

4.1 The inspector observed work performance, completed work and partially completed work of activities relating to the installation of the Feedwater System Level transmitter to ascertain whether the installation was performed in accordance with applicable procedures, FSAR and licensee commitments.

-- Instruments No. 2FWS*LT487 located in the Containment Building, Elevation 787'-0.

-- Specification 2BVS-977 for Installation of Instrumentation

-- Drawing Nos. RK-313BA1 and RK-313V-1

4.2 This was a partial installation consisting of the level transmitter, the manifold assembly and supporting structure.

No violations were identified.

5.0 125VDC Distribution System -- Work Observation/Document Review

5.1 The inspector examined various portions of the DC Distribution System to ascertain whether the installed system is in accordance with applicable procedures, specification and licensee commitments in the areas of Receipt Inspection, Material Qualification, Maintenance, Quality Control Inspections and Tests.

5.2 Items examined for this determination include:

-- Specification No. 2BVS-358 Revision 1, dated August 3, 1982 for 125VDC Battery Breaker Switchgear.

-- Specification No. 2BVS-841, Addendum No. 2 dated May 13, 1983 for "Control Storage Battery"

-- Test Procedure No. 2T-LTG-38B-2.02 Revision 0, dated May 23, 1980 for "Battery 2-4 Initial Charge."

-- Specification No. 2BVS-363 Addendum No. 3 dated April 3, 1985 for "AC and DC Emergency Vital Bus and Pressurizer Heater Distribution Panel."

-- Preventative Maintenance Procedure No. 2-39 BYS-BKR-1-2-5-6-61E Revision 0, dated January 25, 1984 for "Battery Air Circuit Breaker Inspection."

-- Procedure No. 2MSP-39.04-E Revision 0 dated May 16, 1984 for "Battery 2-4 Test and Inspections"

- Procedure No. 2MSP-39.08-E Revision 0 dated June 6, 1984 for "Battery 2-4 Inspection and Resistance Test."
- Procedure No. ETP-516 Revision 0 Attachment 11 dated August 17, 1983 for "ITE Low Voltage Circuit Breaker Test Report"
- Purchase Order No. 2BV-841 dated September 15, 1983 for "Control Storage Battery Maintenance History Card."
- Purchase Order No. 2BV-841 Material Receiving Report dated June 11, 1983 for "Batteries and Accessories".
- Receipt Inspection Report Nos. E-2-3545-S and E-2-3065.
- Inspection Report Nos. SPE-29, SPE-33 and SPE-50

5.3 The inspector verified implementation of the procedures and specification. The documents were current, legible, easily retrievable and signed by authorized cognizant personnel.

No violations were identified.

6.0 Support Hangers -- QA Document Review

6.1 The inspector selected several mechanical supports which deviate from the standard practice of providing side bracing for cantilevered supports exceeding the 4 ft minimum length to determine whether the licensee performed the required analysis to justify deviating from standard practice.

The inspector reviewed engineering justification and analysis for two electrical conduit supports and two pipe supports.

The calculations and analysis submitted for NRC review were thorough, current, legible, reviewed and approved by authorized cognizant personnel.

No violations were identified.

7.0 Startup/Turnover Program

7.1 The inspector reviewed portions of the turnover package for SSP-15A-1B and SSP-15A-1A. The inspector noted that the program identifies and tracks the status of open items, listing equipment description, date installed, date removed and date replaced. The inspector selected two components from SSP-15A-1B verifying program traceability. The information was current and easily retrievable.

No violations were identified.

8.0 Licensee Action on Unsupported Cable Lengths

The licensee has begun its inspection of unsupported cable lengths to determine the extent of the problem at the BV2 facility. With 10 percent of the inspections complete, preliminary results indicate that 78 percent of the unsupported cables inspected do not meet the criteria specified in E&DCR No. 2P-4491B.

With regard to the cable denting problem, only two examples were identified representing less than .3 percent of cables inspected. This item is being tracked by NRC Open Item No. 83-12-03.

9.0 Unresolved Items

9.1 Unresolved items are matter about which more information is needed to determine whether it is acceptable or a violation. Unresolved items are discussed in paragraph 2.0.

10.0 Exit Meeting

10.1 The inspector met with the licensee and construction representatives (denoted in Detail, paragraph 1.0) at the conclusion of the inspection on May 3, 1985, at the construction site. The inspector summarized the findings of the inspection and the licensee acknowledged the inspectors comments.

The licensee was informed that the paragraph on proprietary information would no longer appear in the cover letter and that the manual chapter places responsibility upon the licensee to inform the inspectors that material provided during this inspection is proprietary and is to be omitted from the report. There was none.

At no time during the inspection was written material provided to the licensee by the inspector.