U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-412/84-10

Docket No. 50-412

License No. CPPR-105 Priority - Category B

Licensee: Duquesne Light Company

435 Sixth Avenue

Pittsburgh, Pennsylvania 15219

Facility Name: Beaver Valley Power Station, Unit 2

Inspection At: Shippingport, Pennsylvania

Inspection Conducted: August 13-17, 1984

Inspectors: R. Paolino, Lead Reactor Engineer — 10-15-84 date

L. Cheung, Reactor Engineer — 10/10/84 date

U. Cheh, Reactor Engineer — 10/11/84 date

Approved By: C. Anderson, Chief, Plant Systems Section, EPB — 10/24/84 date

Inspection Summary: Inspection on August 13-17, 1984 (Report No. 50-412/84-10)
Areas Inspected: A routine unannounced inspection consisting of work observation, work in progress and completed work activities and documentation relative to the installation of instruments and electrical equipment storage, to ascertain whether these activities are being accomplished in accordance with NRC requirements and licensee SAR commitments. The inspection involved 96 inspection-hours on site by three region based inspectors.

Results: One violation was identified (failure to seal electrical equipment in storage against dirt and dust - 10 CFR 50, Appendix B, Criterion XIII).

DETAILS

1.0 Persons Contacted

1.1 Duquesne Light Company

* L. Arch, Senior Project Engineer
* J. Carey, Vice President, Nuclear Group
*# R. Coupland, Director of Quality Control
* C. Davis, Director of Quality Assurance
* H. Good, Senior Quality Control Welding Specialist
H. Hagsett, Material Control Supervisor
* S. Hall, Senior Project Engineer
* E. Horvath, Senior Project Engineer
W. Huysman, Supervisor, Receiving and Storage
G. Kaloz, Quality Control Engineer
* J. Kasunick, Maintenance Supervisor
*# C. Majumdar, Assistant Director of Quality Control
N. Mulig, Receipt Inspector
* D. Rohm, Assistant Director of Quality Control
# H. Seigal, Manager, Engineering
S. Temple, Electrical Inspector
* R. Wallaver, Compliance Engineer

1.2 Stone and Webster Engineering Corporation

E. Andre, Engineer
R. Bernauer, Maintenance Supervisor
*# P. Bienick, Assistant Superintendent of Engineering
* C. Bishop, Construction Manager
D. Cox, Quality Data Supervisor
C. Earle, Equipment Qualification Coordinator
W. Kollman, Site Storage Supervisor
* A. McIntyre, Superintendent of Engineering
M. Pelligrino, Site Engineer
P. Pullin, Construction Engineer
P. Ray-Sircar, Project Engineer
J. Rosen, Principal Instrumentation and Control Engineer
T. Santacrose, Engineer
R. Wittschen, Licensing Engineer
C. Wilbur, Section Manager

1.3 Schneider Power Corporation

R. Deiter, Quality Control Supervisor
R. Heusey, Quality Control Inspector

1.4 Sergent Electric Company

J. Strawbridge, Construction Electrician Foreman

1.5 U. S. Nuclear Regulatory Commission

*# G. Walton, Senior Resident Inspector

* Denotes personnel present at exit meeting.

# Denotes personnel present at cable separation status meeting.

2.0 Facility Tour

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

Specific work activities and completed work observed by the inspectors included installation of instruments, routing of instrument cables and instrument tubing, and installation of cable trays and conduit.

2.2 During the inspection of the Main Steam Cable Vault areas (elevation 740' and 761'), the inspector noted that two coils of multi-looped cables, each being supported by a ¼" wide nylon tie wrap, had damage marks on the cable insulation due to excessive contact pressure. Similar deficiencies were disclosed in unresolved item 412/84-08-02.

3.0 Instrumentation (Components/Systems--Work Observations)

The inspector examined work performance, partially completed work and completed work pertaining to the installation of safety related pressure transmitters and associated tubing to determine whether the requirements of applicable specifications, NRC requirements and licensee commitments were met in the area of receipt inspection, procurement, installation and quality control inspections.

Items examined for this determination include:

-- Safety related pressure transmitter Nos. 2CCP*PT150B&C, located in Auxiliary Building NW corner, elevation 735'.

-- Isometric Drawing No. 10080-RK-303CX-1, Issue No. 2, dated June 26, 1984, and No. 10080-RK-303CY-1, Issue No. 1, dated February 10, 1984.

-- Schneider Construction Revision Notice RK-303CX-1-2, Sheets 1 through 3 and RK-303CY-1-3, Sheets 1 and 2.

No violations were identified.

4. Electrical Equipment Storage and Storage Maintenance

4.1 The inspector examined Warehouse B and Warehouse C, where the electrical equipment is stored, to determine whether the storage and housekeeping are in accordance with licensee's established procedures and NRC requirements.

While in storage level B area on August 15, 1984, the inspector noted that the sealing cap of one Limitorque valve motor (2SWS*MOV-101A) was removed, exposing the internal to the environment. One valve motor (2RSS*MOV-155D) was covered with duct seal. These valve motors required level B storage.

The licensee was informed that this was a violation of 10 CFR 50, Appendix B, Criterion XIII which states in part that "measures shall be established to control the storage ... and preservation of material and equipment in accordance with work and inspection .nstruction to prevent damage or deterioration". FSAR Table 1.8-1 identified that the quality assurance requirements for storage and handling complies with Regulatory Guide 1.38, 1977 which endorses ANSI 45.2.2, 1972. Paragraph 6.2.2, Item 1 of ANSI 45.2.2 states in part "covers removed for internal access at any time for any reason shall be immediately replaced and resealed after completion of the purpose for removal". (412/84-10-01)

4.2 While in storage level B area, the inspector identified 2 pump motors marked "2CHS*P22A, 2CHS*P22B, Boric Acid Transfer Pumps". These two motors were not identified as spares. However, the licensee's Storage and Maintenance Procedure 2BVS-981, Addendum 4, Item 2SMR-1E(3) identified that Boric Acid Transfer Pumps and Motors (Mark No. 2CHS*P22A&B) had been installed and therefore "prior to installation maintenance" does not apply to these motors.

The inspector examined the Equipment Storage History Card for these two motors and found that they were properly maintained using the small spare motor maintenance procedures. However, there were inconsistencies between what was stated in the procedure and what was actually in the storeroom.

This is an unresolved item pending further NRC verification (412/84-10-02).

5.0 Environmental Qualification of Safety Related Instruments

5.1 The inspector reviewed the environmental qualification documents for Rosemount Model 1153, Series D transmitters (for inside containment use) and Series B transmitters (for outside containment use) to determine whether the qualification meets the requirements of applicable specifications and IEEE Standards.

Items examined for this determination include:

-- Stone and Webster Engineering Specification No. 2BVS-648A for Electronic Transmitters, Addendum 4, dated May 30, 1984.

-- Beaver Valley Unit 2 IEEE 323 Status Report dated June 20, 1984.

-- Rosemount Series B Transmitter Qualification Test Procedure and Report No. 108025, Revision A, dated February 4, 1981.

-- Rosemount Installation Drawing No. H36787-7601A, Certified Outline Dimension and Installation Drawing for Model 1153B Series Pressure Transmitter, dated April 18, 1980.

-- Rosemount Report 108220A, Analysis of Model 1153 Series D Transmitters to 420°F for Three Minutes, Revision A, dated October 25, 1982.

5.2 The Rosemount test report indicated that margins for the tested parameters were not included. The licensee claimed that margins were included in their engineering specification. This data was not available for review and verification at this time. This item is unresolved pending NRC review of engineering specifications for margin data. (412/84-10-03)

5.3 Rosemount transmitters were tested for a qualified life of 10 years. The licensee stated that a maintenance and replacement program was developed by Stone and Webster in Boston to replace the transmitters within 10 years. This program was not available for review at this time. This item is unresolved pending NRC review of maintenance/ replacement program. (412/84-10-04)

5.4 Paragraph 6.2.2 of Rosemount report 108025 (for Series B transmitters) requires a qualified conduit sealant be used to prevent moisture entry to the terminal cavity of the transmitters. However, the licensee claimed that conduit sealant was not required because the qualification test was performed without the sealant. Similar issue was reported previously and was identified as unresolved item (412/84-08-04.)

6.0 Cable Separation Status

A meeting was held on August 17, 1984 with the licensee and construction representative (identified by the # sign in paragraph 1.0) on the status of cable separation.

The licensee stated that the engineering walkdown is complete and that cable tray and installations which do not meet established criteria can be reworked and/or provided with barriers. The goal is to resolve all non-conformances in this manner. However, the licensee does not rule out the use of test or analysis to resolve difficult situations that cannot easily be corrected by barriers or reworking.

7.0 Licensee Action on Previous Inspection Findings

(Closed) Construction Deficiency Report No. 82-02 pertaining to NRC concern regarding potential inaccuracy of the existing Reactor Coolant System wide-range pressure measurements after an accident.

The inspector reviewed the following documents:

a. Purchase Order of 2RCS*PT441 (2BV-1-64) TOBAR, Inc., Phoenix, AZ

b. Purchase Order of 2RCS-PT440 (2BV-1-64) ITT Barton, City of Industry, CA

The inspector made a visual observation of the two pressure transmitters, stored in the warehouse, which would be used to replace the defective ones as indicated in the purchase orders and determined that the licensee's corrective action is acceptable.

This item is closed.

(Closed) Unresolved Item 412/83-10-02 pertaining to NRC concern regarding specific IEEE Standards that have been referenced in the PSAR and omitted from the electrical Installation Procedures No. 2BVS-931. The inspector reviewed the licensee's document DY8310240002 dated October 24, 1983, and verified that the required IEEE standards had been included. The inspector also reviewed the final revision of Procedure 2BVS-931 (Addendum 2) for further verification of the inclusion of these standards.

This item is closed.

(Closed) Unreolved Item 83-17-02 pertaining to inadequate drainage of piping systems and valves following hydraulic tests.

The NRC inspector reviewed the following documents:

a. SW Flow Diagram Feedwater Piping, DWG No. 12241-RM-45A-16 (Service Building).

b. SW Main Condensate (CNM), DWG No. 12241-RM-468 (Turbine Building).

c. SW Flow Diagram Component Cooling Piping-SH.1, DWG No. 12241-RM-77A-120 (Auxiliary Building).

d. Test Report No. 6244A, Unit 2.

The inspector made visual observations of the following six piping systems listed below and 30 others.

a. FWS V183 EL 784'6", DWG No. 12241-RM-45A-16

b. FWS V185 El 784'6", DWG No. 12241-RM-45A-16

c. FWS V187 El 784'6", DWG No. 12241-RM-45A-16

d. CNM V272 El 789'9", DWG No. 12241-RM-468

e. CNM V267 El 739'9", DWG No. 12241-RM-468

f. CCP*V651(S) El 743'7 5/8", DWG No. 12241-RM-77A-120

The inspector verified that low drainage point systems are being installed as indicated in the drawings and licensee's corrective action is acceptable.

This item is closed.

(Open) Unresolved Item 83-12-03 pertaining to unsupported cable length.

The inspector reviewed data furnished by the licensee and determined the response does not address the issue. The corrective action taken was to increase the unsupported length from 3 ft. to 4½ ft. 2BVS-931 was changed to incorporate the 4½ ft. However, engineering response to problem was that unsupported cable larger than 3 ft. is acceptable if justified by analysis of raceway and cable. 2BVS-931 does not include the requirement for engineering justification where the unsupported length is greater than 3 ft.

This item remains open.

(Open) Construction Deficiency Report No. 82-04 pertaining to the NRC concern regarding a potential problem in the Solid State Protection System (SSPS).

The NRC inspector reviewed the licensee's correspondence and determined that the licensee does not have sufficient data to resolve this issue.

This item remains open.

(Open) Construction Deficiency Report No. 84-05 pertaining to misapplications of solenoid-operated valves.

The NRC inspector reviewed the licensee's correspondence and determined that the licensee does not have sufficient data to resolve this issue.

This item remains open.

(Closed) Construction Deficiency Report No. 84-03 pertaining to GE HEA Type Relays that have a tendency to malfunction under certain conditions.

The inspector reviewed the following documents:

a. Nonconformance and Disposition Report, DLC-SQC BVPS Unit 2 No. 4617, dated July 5, 1984.

b. Date Codes dated June 29, 1984.

c. The licensee Inspection Report by D. Mahendra for PNL*REL-250/Item #1E, Drawing RE-25CZ.

d. Procedure for Testing G.E. Relays dated July 2, 1984.

e. SW Engineering Field Action Report by Arap. Mitra dated June 29, 1984.

f. Receipt Inspection Plan, No. RIP-731-R9, dated June 29, 1984.

The inspector made visual observations of six GE HEA type lockout relays listed as follows:

a. SW Mark No. 4-KVS*2AE5, 34LN, El 730' Service Building.

b. SW Mark No. 4-KVS*2AE3, 34LN, El 730' Service Building.

c. SW Mark No. 4-KVS*2DF16, 31DP El 730' Service Building

d. 4-KVS*2DF, 31DP El 730' Service Building.

e. PNL*REL-2410, 34LT El 730' Service Building.

f. 480V Unit Substation, 31KV El 730' Service Building.

The inspector verified that the licensee's corrective action is acceptable.

This item is closed.

8.0 Unresolved Items

Unresolved items are matters about which more information is needed to determine whether it is acceptable or a violation. Unresolved items are discussed in detail in Paragraphs 4, 5 and 7.

9.0 Exit Meeting

The inspector met with licensee and construction representatives (denoted in Details, Paragraph 1.0) at the conclusion of the inspection on August 17, 1984 at the construction site. The inspector summarized the scope and inspection findings. At no time during this inspection was written material provided to the licensee.