UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

Report Nos. 50-416/79-14 and 50-417/79-14

Licensee: Mississippi Power and Light Company
Jackson, Mississippi

Facility Name: Grand Gulf 1 and 2

Docket Nos. 50-416 and 50-417

License No. CPPR-118 and CPPR-119

Inspection at Grand Gulf near Port Gibson, Mississippi

Inspector: For Albert R. Ruff 7-26-79
D. K. Walters Date Signed

Accompanying Personnel: N. Merriweather

Approved by: T. E. Conlon 7-26-79
T. E. Conlon, Section Chief, RCES Branch Date Signed

SUMMARY

Inspection on July 10-13, 1979

Areas Inspected

This routine, unannounced inspection involved 48 inspector-hours onsite in the areas of in-place storage of safety-related pump and motor operated valve (MOV) motors; calibration of wire termination tools; installation and termination of safety-related 4160 volt and 480 volt cables; quality records for safety-related 4160 volt and 480 volt cables; licensee identified items.

Results

Of the areas inspected, no items of noncompliance or deviations were identified.

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DETAILS

1. Persons Contacted

Licensee Employees

*P. W. Sly, QA Field Supervisor
*H. D. Morgan, Construction Supervisor
*B. C. Lee, QA Representative
*D. F. Mahoney, QA Representative

Other licensee employees contacted included six construction craftsmen, and three office personnel.

Other Organizations

*R. L. Scott, Bechtel Project QA Manager
*J. R. Valdez, Bechtel QA Engineer
*J. W. Yelverton, Bechtel QA Engineer
E. Sherow, Bechtel Assistant Lead Electrical Field Engineer
G. Vining, Bechtel Lead Maintenance Engineer
J. Nelson, Bechtel, Electrical QC Engineer

*Attended exit interview.

2. Exit Interview

The inspection scope and findings were summarized on July 13, 1979 with those persons indicated in Paragraph 1 above.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve noncompliance or deviations. New unresolved items identified during this inspection are discussed in paragraph 5.

5. Licensee Identified Items

(Open) 50.55(e) Item 416/79-14-03: Cracked circuit breaker auxilliary switch assemblies. The licensee had previously reported this item to Region II on July 9, 1979. A cracked auxillary switch was found on breaker 152-1902 during circuit breaker testing of 4160 volt switchgear. The licensee has documented the problem on nonconformance report NCR 3266 and completed an inspection of all 6900 and 4160 volt switchgear breakers and of all 480 volt

load center breakers. The licensee's inspection resulted in the identification of 187 cracked circuit breaker auxillary switch assemblies. The licensee has contacted the manufacturer of the cracked assemblies, but has not completed evaluation of the problem. This item will remain open pending completion of licensee evaluation and implementation of corrective action.

On July 9, 1979, the licensee also reported a fire near the Unit 1 installed reactor vessel which was caused by acetylene gas leakage from a welders hose contacting an electric grinding motor. The fire occurred outside and above the Reactor Pressure Vessel clean room. Flames entered the clean room where they were extinguished using a fire extinguisher that contained a dry chemical retardant. The dry chemical retardant was drawn into the vessel through the recirc suction nozzle by the exhaust fans and accumulated on the RPV internals. The problem was documented on General Electric (GE) Installation and Support Engineering (I&SE) nonconformity report number NCR - 0.33 which proposed resolution of contacting General Electric Nuclear Energy Division (NED) to obtain required corrective action. Results of the analysis of the dry chemical retardant were the following: mono ammonium phosphate - 90%; potassium aluminum silicate and magnesium silicate - 90%. The site GE NED representative has issued Field Deviation Disposition Request number JB1-148 which has a "suggested disposition" requiring that the RPV internals be thoroughly cleaned with a vacuum and that the areas where welding or other work is to be performed be cleaned with acetone or alcohol. The "suggested disposition" additionally states that if further cleaning is determined necessary, instructions will be provided later. The licensee has commenced cleaning per the "suggested disposition". The licensee was informed that this item is unresolved until all required corrective actions have been determined and completed. This was identified to the licensee as unresolved item 416/79-14-03, Fire extinguisher dry chemical accumulation on RPV internals.

6. Independent Inspection Effort (Units 1 and 2)

The in-place storage of four safety-related pump motors (identified as NIC11C001A, NIC11C001B, E21C001M and E12C002A) and four motor operated valve (MOV) motors (identified as Q1E30F594A, Q1P41F014A, Q1P41F064 and Q1P44F054B) was observed. Bechtel construction work plan/procedure (WP/P) number WP/P-15, "Maintenance of Materials and Equipment While in Storage", provides the periodic maintenance and documentation requirements for equipment in storage. Maintenance records for the selected pump and MOV motors were completed in accordance with procedure WP/P-15. Pump motors were observed to have heaters energized, a visible oil level and adequate protection. MOV motors were observed to have heat applied to windings and adequate protection.

During discussions with the licensee concerning wire termination tools, recent problems with wire insulation strippers were identified. NCR 3809 documented that strippers for numbers 10 through 20 AWG wire occasionally puncture a small hole in the wire insulation. NCR 3796 documented that strippers for number 18, 16, and 12 AWG wire were nicking or scraping the wire strands of the conductor. The stripping of a sample of number 12 AWG

wire by one of the insulation wire strippers did not result in any nicking or scraping of the conductor, but did result in the puncturing of the conductor insulation. The wire insulation stripper problems are currently being evaluated by the licensee. This was identified to the licensee as inspector follow-up item 416/79-14-02 and 417/79-14-01; wire stripping tool insulation punctures and wire strand nicks.

Within the areas inspected, no items of noncompliance or deviations were identified.

7. Electrical (Cables and Terminations I) - Observation of Work and Work Activities (Unit 1)

The inspector selected four safety-related 4160 volt cables (identified as 1AA503-1, 1AA504-1, 1BA615-1, 1BA616-1) and eight safety related 480 volt power cables (identified as 1AB5503-1, 1AB5503-2, 1AB5506-1, 1AB55108-1, 1BB6503-1, 1BB6503-2, 1BB6505-1, 1BB65109-1) for inspection. Cables are installed in accordance with Bechtel procedure WP/P-E-21, "Installation of Electrical Cables", and terminated in accordance with Bechtel procedure WP/P-E-22, "Installation of Electrical Cable Terminations". Cables were inspected in the areas of identification and control, size and type, routing, separation and terminations. Cable size and type, identification and routing were verified using cable pull cards. Cable terminations were verified using cable termination cards which were compared with the requirements of the scheme drawings referenced by the cards. Cable reels stored in site cable storage areas were observed to be identified by tagging and stored above grade with cable ends sealed. The installation of cable raceway support numbers 1B-516A-3-2563, 1B-512-3-2542, 1B-516A-2-2541 and 1B-512-2-2540 were inspected for compliance with Bechtel drawing numbers E-0688R19, C-0695CR3, C-0674R15, C-0676R8 and C-0663R16. The installation of cable tray support numbers 2S-S05-3-1034, 2S-S06-1-1032, 2S-S08A-1-1031, 2S-S02-3-1029, 2S-S02-3-1027, 2S-S02-3-1028 and 2S-S02-3-1029 were inspected for compliance with Bechtel drawing numbers C-1735AR4, C-1735BR8, C-1735CR2 and E-1716R10.

Within the areas inspected, no items of noncompliance or deviations were identified.

8. Electrical (Cables and Terminations I) - Review of Quality Records (Unit 1)

Quality records were reviewed for the cables identified in paragraph 7. The following cable installation and termination inspections records were checked:

a. Cable installation inspections had been documented on cable pull cards in accordance with Bechtel Quality Control Instruction (QCI) number 9.1-24 for cables 1AA504-1, 1AB5503-1, 1AB5503-2, 1BA615-1, 1BB6503-1 and 1BB6503-2.

b. Cable termination inspections had been documented on cable termination cards in accordance with Bechtel QCI 9.1-27 for cables 1AA504-1,

1AB5503-1, 1AB5503-2, 1AB55108-1 ("From" end only), 1BA615-1, 1BB6503-1, 1BB6503-2 and 1BB65109-1 ("From" end only). QC installation and termination inspections had not been completed for all cables identified in paragraph 7. "Hi-pot" test records for cables 1AA504-1 and 1BA615-1 were also reviewed.

Receiving inspections for cable reels identified as AY2-004, AY2-007, BY2-001, BY1-003, BY6-003, AB2-004, AB2-003, BB2-001, BB1-003, and BB6-001 had been performed in accordance with Bechtel WP/P-14, "Receipt, Storage and Handling of Materials for Nuclear Facilities".

Results of receiving inspections had been documented per Bechtel QCI 3.1-1, "Receiving Inspection". Vendor certification documentation for these reels was also reviewed.

Within the areas inspected, no items of noncompliance or deviations were identified.