



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

Report Nos. 50-416/81-12 and 50-417/81-07

Licensee: Mississippi Power and Light Company  
 Jackson, MS

Facility Name: Grand Gulf

Docket Nos. 50-416 and 50-417

License Nos. CPPR-118 and CPPR-119

Inspection at Grand Gulf Site near Port Gibson, Mississippi

Inspectors: R. Wright 5/22/81  
 R. Wright Date Signed

N. Merriweather For R. Wright 5/22/81  
 N. Merriweather Date Signed

Approved by: C. Upright 5/26/81  
 C. Upright, Section Chief Date Signed  
 Engineering Inspection Branch  
 Engineering and Technical Inspection Division

SUMMARY

Inspected on April 28 through May 1, 1981

Areas Inspected

This routine unannounced inspection involved 41 inspector-hours on site in the areas of licensee actions on previous inspection findings, licensee identified items, procurement, receiving inspection and storage, 10 CFR 21 posting and QA inspection of instrumentation.

Results

Of the six areas inspected, no violations or deviations were identified.

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## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*J. W. Yelverton, QA Field Supervisor
- \*H. Morgan, Construction Superintendent
- \*H. S. Pyle, QA Representative (QAR)
- \*D. F. Mahoney, QAR
- \*B. C. Lee, QAR
- \*W. Guider, Environmental Coordinator
- \*W. Garner, QAR

#### Other Organizations

- \*J. R. Veldez, QA Engineer, Bechtel
- \*P. S. Collins, QA Engineer, Bechtel
- \*H. Manolopoulos, Supervisor of Purchasing-Contracts, Bechtel
- \*R. Butler, Materials Supervisor, Bechtel
- D. Mitchell, Field Materials Supervisor, Bechtel
- B. Choate, Field Representative, GE

#### NRC Resident Inspector

- \*A. G. Wagner

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on May 1, 1981, with those persons indicated in paragraph 1 above.

### 3. Licensee Action on Previous Inspection Findings

(Closed) Deficiency 416/80-07-01, 417/80-06-01; failure to conduct environmental survey and to document environmental status. MP&L's letter of response dated April 9, 1980 has been reviewed and determined to be acceptable by Region II. The inspector examined Construction Manual Administrative Procedure, "Environmental Protection Program" Volume 1, Section 3 which superseded Plant Administrative Procedures 01-S-14-1 and confirmed the subject procedure requires the licensee to monitor the sediment basins on a weekly basis. The inspector held discussions with responsible civil and environmental personnel; examined weekly surveillance records from March 80 to present; made a reconnaissance of both basins A & B; and reviewed the latest survey results dated January 28, 1981 which verified that the excavated basins contain adequate silt storage capacity thereby meeting requirements.

## 4. Unresolved Items

Unresolved items were not identified during this inspection.

## 5. Independent Inspection Effort (Unit 2)

The inspector performed a walk-through inspection of general plant areas and observed the in-place storage of safety components LC-26BB1, LC-26BB3, Q2E12C002 MC and Q2T46B003B-B to assure that heat was applied to equipment, motor shafts were covered with oil and whether adequate protective coverings were provided. No violations or deviations were identified.

## 6. Licensee Identified Items (50.55(e))

- a. (Closed) 416/81-12-01, Unauthorized replacement of motor connection box. This item was reported on March 20, 1981 as a potentially reportable deficiency under 10CFR 50.55(e). The inspector reviewed the licensee's final report dated April 17, 1981 and NCR 5416. The licensee performed an investigation and determined that this deficiency was an isolated case in Unit 1 and did not apply to Unit 2. The licensee replaced the unqualified connection box with a vendor supplied box and issued employee "job bulletin" number 373 emphasizing the proper procedures for substitution of components. The inspector examined the as-built installation of the motor connection box on filter assembly Q1T48D001A-A.
- b. (Open) 416/81-12-02 and 417/81-07-01, Non-qualified diesel generator pump motors. This item was reported on March 23, 1981 as a potentially reportable deficiency and has been determined to be reportable under 10CFR 50.55(e). The licensee has issued a final report dated April 29, 1981. The deficiency concerns the non-qualified auxiliary motors used on the standby diesel generator's auxiliary lube oil pump and auxiliary jacket water pump. This item remains open pending completion of the corrective action and further review by Region II.
- c. (Closed) 416/81-12-03 and 417/81-07-02, Incorrect plug welds. The licensee performed an evaluation and made a determination that this item is not reportable under the requirements of 10CFR 50.55(e) or Part 21. The licensee issued NCR 5374 and QAR F-299 documenting the deficiency. The final disposition by Project Engineering is that the structural integrity of switchgear (metal clad) mounting is not affected by the plug being ground flush with the panel floor.
- d. (Closed) 416/81-05-06 and 417/81-02-06, Emergency diesel generator instrument tubing flattened. The deficiency concerns blemishes (flat spots) on instrument tubing on the standby diesel generator. The licensee performed an investigation and determined that this item is not reportable under 10CFR 50.55(e) or Part 21. The problem was identified with 3/8" stainless steel tubing manufactured by Sandvik, Inc. with

heat number 464282. The licensee's analysis showed the outside diameter (O.D.) in the area of the flat spot is in the range of 0.374 to 0.371 inches which is within the requirements of ASTM A213 which allows a tolerance of 0.365 to 0.385 inches O.D. The licensee performed a reinspection of approximately 25 percent of this type of tubing and concluded the initial deficiency identified was an isolated occurrence. The inspector reviewed the following documents:

- (1) NCR 4994, Tubing
- (2) Specification Number 9645-3-709
- (3) ASME Boiler and Pressure Vessel Code, Section II, Materials, Winter 1974 addenda section 6.1.1, "Stainless Steel Tubing"
- (4) ASME SA213, Summer 1974
- (5) ASTM A450-73, 1974

The inspector reviewed the as-built tubing installations for tube sections M1 and M2 in panel 1H22P400. This item is closed.

- e. (Closed) 416/81-12-04 and 417/81-07-03, Suppression pool cleanup system. The inspector reviewed the following documents.

- (1) Piping and Instrumentation Drawing Number M-1099, Revision 6, "Suppression Pool Cleanup System"
- (2) Memorandum PMI-81/740, MQBC-81/208 and BCQM 81/119.

The licensee performed an evaluation and determined that the postulated condition could not exist and therefore is not reportable under 10 CFR 50.55(e).

- f. (Closed) 416/80-20-05 and 417/80-13-05, Parker Hannifan tee-fitting failed during hydro

The inspector reviewed nonconformance report 4679 and several licensee memoranda. The licensee has performed an evaluation and determined that this item was an isolated event and is not reportable under 10 CFR 50.55(e).

## 7. Procurement

### a. Documents Examined

- (1) FSAR Section 1.4, Identification of Agents and Contractors
- (2) PSAR Section 17.0, Quality Assurance

- (3) Quality Control Procedure 3.0, Field Procurement
- (4) Work Plan Procedures WP/P-9, Field Materials Requisition
- (5) Field Procurement Individual Jobsite Instruction FP-IJI-3, Purchasing/Subcontracting
- (6) Bechtel Quality Assurance Manual Section 4000, Control of Purchased Items, Materials and Operations
- (7) Bechtel Corporation Audit Number 18, dated February 11-15, 1980; MP&L/Bechtel Audit of Bechtel Power Corporation Implementation at Grand Gulf Nuclear Station Covering, Field Material Requisition, Purchasing, Warehouse Receiving, Handling and Storage, and Receiving Inspection Activities
- (8) MP&L Audit Report Number GESIS-81/11, dated February 17-20, 1981; concerning GE Spare Parts (San Jose, CA) Covering Procurement Documents and Control of Purchased Materials
- (9) Bechtel Purchase Order No. and Design Specification No. 9645-E-035.0, For Containment Structure Electrical Penetration Assemblies
- (10) Bechtel Purchase Order No. and Design Specification No. 9645-M-018.0, For Standby Diesel Generators
- (11) GE Purchase Order No. AE 373 (MPL-C41-A001), For Standby Liquid Control Tanks

b. Quality Assurance Program

In Section 17.1-1 of the PSAR, Mississippi Power and Light (MP&L) commits to implement AEC Regulatory Guide 1.28 "Quality Assurance Program Requirements for Design and Construction" which in turn endorses ANSI N45.2-1971, as supplemented or modified by paragraph C "Regulatory Position". Therefore, ANSI N45.2 is essentially MP&L's QA program for controlling procurement of equipment, materials and services.

Middle South Energy, Inc. (MSEI) and MP&L are co-applicants in the licensing proceedings. MSEI provides financing for construction and maintains title ownership of the facility. MP&L assumes responsibility for design, construction, and operation of the Grand Gulf facility. Since MP&L does not have the inhouse engineering and construction capability, Bechtel Corporation was retained by them to provide engineering, procurement, quality assurance, and construction management services. General Electric Company (GE) was awarded the contracts to design, fabricate and deliver the boiling water nuclear steam supply system.

Site construction procurement is performed by Bechtel. Vendor qualification and vendor inspection for construction procured (Q-) items is performed by Bechtel (Procurement Supplier Quality Department) who audits, surveys and qualifies various vendors and develops the Bechtel Evaluation Suppliers List (ESL).

c. Implementation

The inspector reviewed the documents listed above and discussed procurement functions and audits conducted of procurement activities with responsible MP&L personnel at the site.

The inspector selected two Bechtel procurement specifications (electrical penetrations, standby diesel generators) and a GE purchase order (standby liquid control tank) to determine the following:

- . that specified design parameters were in accordance with SAR or other AE/licensee specifications
- . applicable codes and standards were specified
- . 10 CFR 21 requirements were imposed as applicable
- . applicable QA requirements were imposed
- . requirements for Certificates of Conformance were acceptable
- . if source inspections were required.

The inspector conducted discussions with selected Bechtel personnel concerning procurement procedures to verify that they were knowledgeable of their responsibilities and duties.

No items of violation or deviations were identified in the procurement area.

8. Receiving Inspection and Storage

a. Documentation Examined

- (1) Technical Specification 9645-M-184.0, Storage of Material and Equipment
- (2) Quality Control Instruction #0201T, Review of Field Material Requisitions, Review and Approval of Material Receiving Instructions and Performance of Receipt Inspections for Hardware and Documentation
- (3) Quality Control Procedure 2.0 - Receiving Inspection
- (4) Work Plan Procedure WP/P-14, Material Control



- (5) Work Plan Procedure WP/P-15, Maintenance of Materials and Equipment While in Storage
- (6) Quality Control Procedure 4.0, Material Handling and Storage
- (7) Field Procurement Individual Jobsite Instruction FP-IJI-4, Warehouse Receiving, Handling/Storage, Issue, and Shipping Requirements

b. Quality Assurance Program

The PSAR Section 17.1-1 states that the subject program will meet Regulatory Guide 1.28 which in turn endorses ANSI N45.2-1971 with certain regulatory modifications. The licensee through his agent "Bechtel", receives, stores and handles equipment and materials at the site for items procured by Bechtel, GE or their subcontractors.

c. Implementation

The inspector examined the licensee's system established as detailed in the above listed procedure for conducting receiving inspection, handling and storage of materials and equipment. The facilities utilized were examined; hoisting, rigging and tools and equipment employed observed; typical documentation for several receiving packages to include Materials Receiving Instructions, Materials Receiving Reports and suppliers certifications were checked for acceptability, legibility and completeness. The inspectors conducted discussions with responsible Bechtel field materials supervisors, and QC receiving engineers pertaining to their procedural responsibilities and found them competent, knowledgeable and experienced in their respective duties performed.

Several certificates of conformance were chosen at random for examination and were found to properly identify the purchased items, identified specific requirements the items met or did not meet, and were signed by an appropriate member of the suppliers QA group where applicable.

The inspector examined the storage facilities of the main site warehouse (Levels B and C) and the West upper field lay down (Level D) storage area. Random items and materials selected in these areas were found stored in their proper environment as described in Technical Specification 9645-M-184.0. The subject storage facilities were examined for proper controlled access, storage conditions, cleanliness, proper stacking and cribbing of items, proper control of items in storage to include identification and marking, proper use of desiccant humidity indicator and purging systems for required equipment and that records were being maintained of storage conditions and were current.

The inspector examined the QC Monitoring Storage Reports for the period January 1980 to present and the associated Condition Reports (CR) that were generated as a result of these inspections and concluded that these discrepancies received proper, timely, corrective action.

No items of violation or deviations were identified in the receiving inspection or storage area.

9. The site facilities were inspected to determine if the posting requirements specified in 10 CFR 21.6 had been implemented. The licensee had posted notices prepared per 10 CFR 21.6 in conspicuous locations in the main administrative building and both the Bechtel construction and MP&L QA office buildings.

No items of violation or deviations were identified.

10. QA Inspection and Performance

This inspection was performed to determine whether site work is being accomplished in accordance with NRC requirements and SAR commitments, and that prompt and effective action is being taken to achieve permanent corrective action on significant discrepancies.

The following areas were examined to verify the inspection objectives:

a. Field Drawings and Inspection

Drawings reviewed:

1. FSK-I-1077B - 033A, Rev. 4
2. FSK-I-1077B - 047A, Rev. 2
3. FSK-I-1077B - 032A, Rev. 3
4. FSK-I-1077B - 031A, Rev. 3
5. FSK-I-1077B - 013A, Rev. 4
6. FSK-I-1051A - 016A, Rev. 8
7. FSK-I-1051A - 015A, Rev. 7
8. FSK-I-1051A - 010A, Rev. 6
9. FSK-I-1085A - 010B, Rev. 11 (Red-lined drawing)

The inspector selected instrument numbers 1N11PT-N038B, 1E12-PI-R002B and 1B21-PT-N for examination. The inspector made a detailed inspection of the as-built instrument installation to determine whether equipment or systems were installed as described by field drawings and construction specifications. The inspector reviewed the above identified field design drawings to ascertain whether the most recent revisions of drawings are used to perform work; and whether the most recent revisions of field drawings, construction specifications and work procedures are in agreement with the SAR.



b. Quality Control

The inspector reviewed several nonconformance reports and talked to QC inspectors responsible for inspection of safety related instrumentation to determine if reports adequately described the deficiency; whether deficiencies submitted by QC inspectors received proper corrective action; and, if work and work controls were adequate. The inspector reviewed QC Instruction 0721T, "Instrumentation Inspection Activities", to determine whether frequency and timing of inspections are adequate to properly control the work; that inspection procedures and reference documents are adequately detailed to instruct the QC inspector on exactly what he should be looking for when making inspections or observing tests.

c. Audits

- (1) The inspector selected management audit reports MAR 81-04, MAR 81-07, MAR 81-08, MAR 81-15, MAR 81-22, MAR 81-36 and MAR 81-37. These reports were reviewed to assure that the licensee has conducted audits to verify the effectiveness of the QA/QC program in the instrumentation area and whether licensee audits indicate that: (a) drawings are in agreement with the SAR, (b) installation is according to drawings and specifications, (c) craftsmen are qualified and competent to perform the work they are doing, (d) QC procedures and inspectors meet requirements, (e) nonconformance reports are accurate, and (f) materials and equipment meet specifications.
- (2) The inspector reviewed audit reports J-21-01I and J-20-01I to determine if the audits performed were meaningful, effective and reflect quality performance. The inspector reviewed the corrective action taken on audit findings to see if it was complete and timely.

Within the areas examined no violations or deviations were identified.