STATES OF COMMING	UNITED STATES IUCLEAF REGULATORY COMMIS REGION II 101 MARIETTA STREET, N.W. ATLANTA, GEORGIA 30323	SION
Report No.: 50-416/86-03		
Licensee: Mississippi Power Jackson, MS 3920	and Light Company 5	
Docket No.: 50-416	License No.: NPF-29	
Facility Name: Grand Gulf		
Inspection Conducted: Febru	ary 10-14, 1986	
Inspectors: 6Alberry	ka for	3/24/96
J. L. Caldwell		Date Signed
6A June	168 fr	3/24/16
L. R. Moore		Date Signed
6 A Ar	115 for	3/24/56
J. H. Moorman, IT	<b>1</b>	Date Signed
Approved by: 61 Av	113	3/24/12
G. A. Belisle, A Division of Reac	cting Section Chief tor Safety	Date Signed

# SUMMARY

Scope: This routine, unannounced inspection entailed 85 inspector-hours on site in the areas of design changes and modifications program and audit implementation.

Results: One violation was identified - Failure to train decontamination workers in accordance with procedures.

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## REPORT DETAILS

#### 1. Persons Contacted

### Licensee Employees

- F. Adcock, Principal Mechanical Engineer, Nuclear Plant Engineering (NPE)
- C. Angle, Manager, Operational Analysis Section (OAS)
- \*J. Bailey. Compliance Coordinator
- J. Buller, Safety Evaluation Engineer, OAS
- D. Chieply, Quality Assurance (QA) Design Review Engineer
- \*T. Cloninger, Vice President, Nuclear Engineering and Support
- \*. Cross, Site Director
- \*L. Daughtery, Compliance Superintendent
- \*W. Edge, Manager, Nuclear Site QA
- \*W. Eiff, Principal Quality Engineer, NPE
- \*S. Fieth, Director, QA J. Hickman, Senior Quality Representative
- \*C. Hutchinson, Site General Manager
- D. Johnson, Mechanical Maintenance Engineer
- A. Khanifar, Electrical Engineering Supervisor
- \*Q. Kingsley, Vice President. Nuclear Operations
- \*B. Lee, QA Audits Supervisor
- L. Loboda, OAS Engineer
- B. McCall, Senior Nuclear Plant Scheduler
- \*R. Moomau, Acting Maintenance Manager
- \*J. Parrish, Chemisty/Health Physics Superintendent
- L. Patterson, Engineer
- R. Patterson, Systems Engineer
- \*S. Tanner, Manager, Programs QA
- \*F. Titus, Director, Nuclear Plant Engineering
- D. Williams, Document Safety Review Coordinator
- J. Wilson, Civil Engineer
- M. Withrow, Instrumentation and Controls (I&C) Supervisor

Other licensee employees contacted included office personnel.

NRC Resident Inspectors

\*R. Butcher, Senior Resident Inspector \*J. Caldwell, Resident Inspector

\*Attended exit interview

#### 2. Exit Interview

The inspection scope and findings were summarized on February 14, 1986, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection findings. No dissenting comments were received from the licensee.

Violation, Failure to take prompt corrective action for known conditions adverse to quality, paragraph 5.

Violation, Failure to train decontamination workers in accordance with procedures, paragraph 6.

Upon management review, the violation for failure to take prompt corrective action for known conditions adverse to quality was determined to be inappropriate. Mr. S. Feith was notified of this position during a telephone conversation conducted on March 4, 1986.

The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector using this inspection.

3. Licensee Action on Previous Enforcement Matters

This subject was not addressed in the inspection.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Design Program (37702)

References: (a) 10 CFR 50.54(a)(1), Conditions of Licenses

- (b) Mississippi Power and Light Operational Quality Assurance Manual (MPL-TOP-1A), Revision 4
- (c) 10 CFR 50 Appendix B, Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants
- (d) Regulatory Guide 1.64, Quality Assurance Requirements for the Design of Nuclear Power Plants
- (e) ANSI N45.2.11 1974, Quality Assurance Requirements for the Design of Nuclear Power Plants

The inspector interviewed engineers from the four disciplines of Nuclear Plant Engineering (NPE). Subjects discussed were educational background, experience, training, familiarity with licensee commitments, and applicability of these commitments to the individual's work related responsibility and function. Those engineers interviewed appeared to be adequately trained and knowledgeable of Final Safety Analysis Report (FSAR) and Technical Specification requirements. The inspector particularly discussed disposition of Material Non-Conformance Reports (MNCRs), 10 CFR 50.59 Safety Evaluations, and plant staff interface. The engineers referenced applicable procedures for disposition of MNCRs, 10 CFR 50.59 Safety Evaluations, and appeared to employ these guidelines. The issue of escalation for resolution of differences at the interface between plant staff and NPE was unclear in the discussions. This area was not proceduralized at the time of the inspection, although the Principal Quality Engineer indicated that an escalation procedure would be drafted as the NPE procedure manual was reviewed and updated.

The licensee periodically receives documents from such organization as Institute of Nuclear Power Operations (INPO), General Electric (GE), and NRC concerning problems experienced by other operating plants. These documents include GE Service Information Letters (SIL), NRC Inspection and Enforcement (IE) Bulletins, IE Notices, INPO Significant Operating Experience Reports, and INPO Significant Event Reports (SER). These documents are evaluated by NPE as to their applicability and importance to the operation of Grand Gulf Nuclear Station. Other documents evaluated by NPE include Incident Reports, Operation and Maintenance Reports, and Potentially Reportable Deficiencies. Guidance for this activity is provided by NPE AP 01-701, "Onsite and Offsite Document Review", Revision 5. Within NPE, document evaluations are the responsibility of OAS. OAS performs the function of the Independent Safety Engineering Group (ISEG) referred to in the licensee's Technical Specifications.

The inspector reviewed evaluations of IE Bulletins, SERs, and SILs received by the licensee from 1984 to the present. These documents are received into NPE by OAS. They are logged in a manual tracking system and then assigned a priority for review by the Document Safety Review Coordinator. A "Red" priority indicates that a document has a significant impact on plant safety or operation and requires immediate attention. A "Yellow" priority indicates that the document has a potential impact on plant safety or operation. A "Green" priority indicates a possible minor impact on plant safety or operation. Also, an estimated completion date for the evaluation is assigned. After priority assignment, the documents are either evaluated internally by OAS, or distributed to other sections within NPE as may be required for an appropriate evaluation. When documents are assigned to be reviewed by disciplines other than the OAS, the discipline Principal Engineer will assign a Responsible Engineer to do the evaluation according to current workload within the discipline. After the evaluation is complete, recommendations are documented and appropriate action is taken to implement the recommendations. Periodically, document evaluations distributed to disciplines other than OAS will not be completed by the assigned due date. In these cases, the Document Safety Review Coordinator sends a memo to the Principal Engineer responsible for action on the documents listing the late documents by title and the due date. Currently, the issuance of these memos is not required by an NPE procedure, nor are the Principal Engineers required to respond to these memos. Additionally, when a conflict concerning evaluation timeliness or priority arises between OAS and another discipline performing a document evaluation, there is no prescribed path for escalation of the conflict in the management chain to assure its timely resolution.

For example, GE SIL 211, Supplement 1 was issued on January 14, 1985, and logged in the OAS tracking system on March 10, 1985. A "Yellow" priority was assigned to this SIL. This SIL concerned possible drive mechanism malfunctions for the Traversing Incore Probe (TIP) which causes the detector to be withdrawn beyond the shielded position into the drive housing. If this occurs, general area radiation levels become excessively high around the drive housing. Supplement 1 to SIL 211 was sent to the Mechanical Section for evaluation. The Mechanical Section sent a memo to OAS stating that corrective action had already been taken by issuing DCP 82/4154 on November 11, 1982, which provided corrective action for SIL 211. The memo also stated that actions suggested by SIL 211 and SIL 211, Supplement 1, were similar and that no further corrective action was required. The licensee had access to information that indicated that corrective action for SIL 211 might not be adequate to completely correct the problem and that action suggested by SIL 211, Supplement 1 would.

SIL 211 and its supplement were discussed with the Principal Mechanical Engineer and the Mechanical I&C Engineering Supervisor and they stated that they were still in the process of determining the Supplement's applicability to Grand Gulf. The evaluation for SIL 211, Supplement 1, was still outstanding at the time of this inspection.

The inspectors' offsite document review also identified a failure of the tracking system which caused the evaluation for SER 2-84 not being completed in a prompt manner.

INPO SER 2-84 described a reaction of the zinc primer and/or phenolic liner of diesel fuel oil storage tanks and naphenate base fuel oil with potential application to licensee safety-related equipment. The reaction resulted in the formation of a gel which could plate out on the ejector nozzles and possibly cause the clogging of in-line strainers. This condition could eventually result in compromising the ability of the diesels to perform at design capacity. It is noted on the SER that this is a long term degeneration effect on the diesel as opposed to a sudden catastrophic failure. The SER was received January 6, 1984. A memo from the OAS Principal Engineer to the NPE Mechanical Principal Engineer, dated October 31, 1984, requested verification of the applicability of the zinc primer-fuel oil reaction at Grand Gulf. On February 22, 1985, a memo from the OAS Principal Engineer informed the Plant Manager of the zinc primer applicability and recommended verification of onsite fuel oil as naphthenate based. The response priority given on this memo was "Green". The fuel oil was determined compatible with the zinc reaction and the Plant Manager requested NPE to evaluate continued operation of the diesel generators until the fall outage in 1985. A memo dated July 31, 1985, from NPE to the Plant Manager listed potential courses of action for evaluation and endorsed normal use and operation of diesel generators at least until the fall outage. The memo also stated that NPE would evaluate potential courses of action and advise plant staff at this time. Documentation was not available to verify that corrective actions or further evaluations were performed. Two years after initial receipt of the SER relating to safety related equipment, the licensee had not completed evaluation and corrective action to close out the issue.

NUREG-0737, Clarification of TMI Action Plan Requirements, Section I.C.5, Procedures for Feedback of Operating Experience to Plant Staff. requires that procedures be prepared to assure that operating information pertinent to plant safety originating both within and outside the utility organization is continually supplied to operators and other personnel. Procedure NPE AP 01-701 provides administrative guidance for reviewing operational feedback to plant personnel. The two examples previously discussed relating to GE SIL 211, Supplement 1, and INPO SER 2-84 are indicative that additional management attention is needed in this area to ssure that evaluations are performed and recommendations resulting from these evaluations are implemented in a timely manner.

The inspector reviewed onsite generated documents, MNCRs, and Design Change Packages (DCPs) evaluated by NPE. DCPs were reviewed for a period from 1982 until the present. Significant improvement was noted by the inspector in the quality of 10 CFR 50.59 safety reviews and safety review applicability checklists performed over the last year. This improvement can be credited, in part, to the addition of a procedure providing guidance for reviews which was implemented in August 1985. The remaining credit would be on the increased emphasis on personnel to provide a more thorough basis for statements on safety reviews and safety review applicability checklists.

Material Nonconformance Reports (MNCRs) may be generated at any plant organization level. After generation, the MNCR is directed to the QA Senior Quality Representative where the report is logged and tracking begins. The MNCR is then directed to the operations plant staff for initial evaluation. Following this evaluation, the MNCR is either returned to QA for implementation, tracking, and closure or to NPE for further evaluation. After NPE evaluation, the MNCR returns to QA for distribution and tracking. MNCRs concerning safety-related or important to safety issues received an additional Design Quality Review by the QA Review Group. This group utilized QA Procedure 3.10, "Review of Design Documents Generated or Approved by NPE", Revision 6, to provide guidance for this review. The majority of errors identified by this design quality review were administrative in nature, i.e., drawing revision discrepancies, signatures missing from 50.59 reviews, or incomplete MNCR forms. QA was responsible for verification and final closeout of the MNCR.

During the MNCR review, the inspector noted a discrepancy with MNCR 0142-85. This MNCR dealt with marginally acceptable results of a Technical Specification required surveillance of heaters in the Standby Gas Treatment System (SGTS). Electrical surveillance 06-EL-1148-R-0001, Standby Gas Treatment Heater Test, was being performed as a retest for DCP 84/3109. This DCP removed the 50 Kilowatt (kw) heaters originally installed in the SGTS and replaced them with 48 kw heaters which met 10 CFR 50.49 requirements. Technical Specifications require these heaters to dissipate 50±5 kw for operability requirements. The electrical surveillance performed on

Train A of the SGTS on March 7, 1985, was performed twice before acceptable results were recorded. The first test was performed using a TIF digital clamp-on ammeter (2% accuracy) with the measured capacity at 44.02 kw. An Amprobe RS3A clamp-on ammeter (3% accuracy), listed as a required test equipment in the surveillance procedure, resulted in a capacity of 45.6 kw. Based on these marginally acceptable results, MNCR 0142-85 was generated. An attachment to the MNCR stated that acceptable readings were obtained only after the heaters were energized for one hour. Electrical maintenance personnel stated it was not unusual to employ additional test equipment in such situations and, due to satisfactory readings obtained with surveillance procedure suggested equipment, a violation of Technical Specifications did not occur. Electrical maintenance personnel also stated that energizing heaters for one hour would have a tendency to reduce, rather than increase, heater output. NPE dispositioned this MNCR by stating that a nonconformance did not exist and justified this statement with calculations generated by an NPE engineer, demonstrating that the heaters could perform their intended function with only 21.5 kw generated. The disposition further stated that 50±5 kw value was based on the size of the originally installed heaters, not supported by calculations, and that NPE would process a TS change based on their calculations. The current TS did not reflect this proposed change. Investigation of the change processing revealed a March 14, 1985, memo transmitting the change from NPE to the Director of Licensing and Safety. The inspector verified the memo was transmitted but could not locate any evidence to verify the change had been made or was still being processed. Since a violation of TS has not occurred, this issue was not deemed a violation; however, the inspector was concerned with the interface weakness which permitted this proposed TS change to remain unprocessed. After investigation, the deficiency appeared to be the result of a low priority assignment and/or a failure of the tracking mechanism to verify corrective action completion on an MNCR.

Investigation of the TS change issue demonstrated an inconsistency between the Licensing Group for TS changes and the procedure employed by NPE. Nuclear Licensing and Safety procedure 3.5, "Control of Technical Specifications", Revision O, described the detailed method by which TS changes are submitted to the Licensing Section and how these submittals were to be acknowledged and processed. The NPE procedure, O1-319, "Changes to GGNS Technical Specifications", Revision 2, did not provide a method for receiving an acknowledgement from licensing and provided only general guidelines for processing and submittal. This inconsistency provides a basis for discrepancies in the processing of TS changes by NPE. This issue was discussed with the Principal Quality Engineer and will be reviewed in conjunction with the NPE procedures enhancement program recently instigated by the Quality Engineering Group.

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The Quality Engineering Section of NPE currently performs Quality Evaluations (internal audits) of NPE functions. The following evaluations were reviewed by the inspector:

QE	86/001	Specifications
QE	85/005	Certification of Information
QE	85/004	Document Control
QE	85/002	Design Change Control
QE	85/001	Performance of Design and Preparation of DCPs

The Principal Quality Engineer (PQE) establishes a schedule for conducting the evaluation and performs them accordingly. Evaluations are issued to the Cognizant Principal Engineer (CPE) containing audit findings and recommended corrective actions after the evaluation and corrective actions, if any, have been discussed between the PQE and CPE. Corrective action, if any, is then taken by the CPE. Implementation of corrective action is then verified by QE.

Procedure NPEAP 01-203, "Evaluation of NPE Activities", was first issued on August 21, 1985, to assist NPE managers in finding problems and assessing root causes. All of the evaluations listed above, except 85/005, identified discrepancies. Discrepancies were generally for failure to include the proper drawing and procedure revisions in DCPs, failure to include Equipment Qualification Control File change review questionnaires in Change Notice packages, failure to provide complete control of design drawings, and failure to re-file items properly. It appears that the evaluations will provide NPE with a method of finding problems and assessing root causes in addition to that already provided by the plant Quality Assurance Department audits.

Due to previous SALP ratings in the design control area, the inspector reviewed changes in the NPE program and organization with potential for improvement of licensee performance. Personnel changes provide one potential for improvement. The Principal Quality Engineer position was filled by an apparently quality conscious individual actively attempting to locate and correct problem areas. The organization has reduced the number of contractor personnel, replacing these with company personnel better motivated to quality work and company goals. All professional staff members are participating in formal Engineering Analysis Training. In addition, the Quality Engineering Group has initiated proceduralized internal evaluations to identify problems within NPE and provide corrective action. Due to the short time these changes have been in effect, a determination cannot be made as to the effectiveness of these measures.

Within this area, no violations or deviations were identified.

Audit Implementation (40704)

References: (a) 10 CFR 50.54(a)(1), Conditions of License

- (b) Mississippi Power and Light Operational Quality Assurance Manual (MPL-10P-1A), Revision 4
- (c) 10 CFR 50 Appendix B, Quality Assurance Criteria for Nuclear Power Plants and Fuel Processing Plants
- (d) Regulatory Guide 1.144, Auditing of Quality Assurance Programs for Nuclear Power Plants
- (e) ANSI N45.2.12-1977, Requirements for Auditing of Quality Assurance Programs for Nuclear Power Plants
- (f) Technical Specifications, Section 6

Several aspects of the QA audit program were inspected, especially in the area of training audits. There were 15 training related audits and several other audits which included training activities performed by QA audit personnel in 1985. The inspector reviewed the below listed eight training related audits, three miscellaneous audits, and a Corrective Action Request (CAR) which resulted from a finding that was identified in one of the audits. These audits for the most part were record and program reviews to verify that training and other activities were being conducted in accordance with Mississippi Power and Light (MP&L) procedures and other applicable requirements. A few audits included classroom participation but very few included interviews with personnel to determine their understanding of the material and views on the adequacy of the training.

Audit	Report	No.	85/0009	Maintenance Training and Qualification Program
Audit	Report	No.	85/0037	Shift Technical Advisor Training
Audit	Report	No.	85/0045	Operator License Instructor Qualification
Audit	Report	No.	85/0073	Radiation Worker Training Program
Audit	Report	No.	85/0127	Contractor Process Control
Audit	Report	No.	85/0153	Qualification of Contract Personnel
Audit	Report	No.	85/0032	Fire Protection Implementation Procedures
Audit	Report	No.	85/0018	Fire Brigade Training
Audit	Report	No.	85/0144	Environmental Qualification of Electrical Equipment

Audit Report No. 85/0166

Transamerican Delaval Incorporated (TDI) Diesel Generator DR/OR Reports and Summary of TDI Owners Group Recommendations and MP&L Actions

Audit Report No. 85/0064

Feedback of Operational Information

Several observations were discussed with QA management dealing with training and miscellaneous other audits. One particular observation dealt with Audit No. 85-0166. This audit reviewed 96 of 200 line item commitments to the NRC to perform recommended activities on TDI diesel generators to ensure operability. Of these 96 items, 2 were found to be deficient in that one had not been incorporated into the surveillance activities and therefore was not being performed, and the other involved the actual surveillance periodicity being greater than that committed to in the letter to the NRC. The discrepancies were corrected and verified by the auditor during the course of the audit. The inspector questioned QA supervision on why the remaining 104 line items were not audited following the discovery of the two discrepancies and was told that a much greater percentage of deficiencies must be found to warrant a 100% audit even considering the significance of the TDI diesel generator operability question.

Another observation involved Audit 85-0037. During the course of this audit, the QA auditor identified a new requirement to have STA's fill out qualification cards. But since the requirement for the qualification cards was not in effect during the period being audited, the cards were not reviewed. The qualification card requirement became effective December 1, 1985. The audit was conducted February 1985, but audited a period in late 1984. The inspector asked QA supervision if this new requirements for STA qualification cards had now been audited in light of past training qualification card problems, the inspector was told that the next STA training audit was not scheduled until March 1986.

The final observation deals with Audit 85/0144 which looked at the Environmental Qualification (EQ) of electrical equipment. The audit provided some very good recommendations to the EQ program. These recommendations consisted of NPE reviewing and revising ES-19, "Engineering Standard for Environmental Equipment Qualification Maintenance," due to its lack of adequate detail and minor inconsistencies. More important, the audit recommended that NPE perform plant walkdowns to support the development of this new revision. Finally, the audit recommended that personnel associated with environmentally qualified equipment should receive training in order to understand the significance of the EQ program.

Within this area, one violation was identified. The training audits reviewed did not identify any major deficiencies with the exception of one that was identified in Audit 85/0073. This deficiency involved the training of decontamination workers. The QA auditor identified that decontamination training had not been received by any MP&L permanent or contract employees. Through discussions with plant maintenance supervision, the QA auditor was informed that decontamination work was being performed even though the decontamination training had not been completed. QA initiated CAR 2157, documenting the findings and requesting resolution. The plant and training department responded by providing decontamination training to the Labor/Decon Section. During the CAR review and discussions with the training department, the Labor/Decon Section supervisor, and the painters supervisor, the inspector was informed that decontamination work such as hydrolazing and use of strippable coatings was being performed by Bechtel contract employees and MP&L painters, respectively. These workers did not fall under the Labor/Decon Section that had received decontamination training and therefore, were performing specific decontamination activities without the required training. The inspector discussed this apparent discrepancy with the Chemical/Radiation Superintendent, Manager of Plant Maintenance, and the painters' supervisor and was assured the decontamination activities, even though performed by workers without the benefit of decontamination training, were performed under the monitoring of Health Physics (HP) personnel. The inspector was informed that these workers had also received radiation training such as Rad Worker I and Rad Worker II prior to the performance of decontamination work. The reason given as to why decontamination training had not been provided to the Bechtel hydro-lazers or the MP&L painters was because they were not in the Labor/Decon Section and plant personnel failed to recognize that the work performed by these personnel required them, by procedure, to have completed the decontamination training. QA also closed out CAR 2157 with the completion of training of the Labor/Decon Section, failing to followup to ensure that all personnel who performed specific decontamination activities had received the required training.

Technical Specification 6.8.1 requires that written procedures be established, implemented, and maintained covering activities in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Section 7.e(6) requires, radiation protection procedures. Administrative Procedure 01-S-04-25, "Decontamination Training Program", requires that all personnel performing decontamination work receive decontamination training. The failure to ensure that personnel performing hydro-lazing and strippable coating decontamination activities had received required training is identified as Violation 50-416/86-03-01.