



UNITED STATES
NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA ST., N.W.
 ATLANTA, GEORGIA 30323

Report No.: 50-425/88-47

Licensee: Georgia Power Company
 P. O. Box 4545
 Atlanta, GA 30302

Docket No.: 50-425

License No.: CPPR-109

Facility Name: Vogtle 2

Module No. 13 B Coatings

Inspection Conducted: August 8-12 and August 15-19, 1988

Inspector: *T. E. Conlon* for 9-27-88
 J. R. Harris Date Signed

Approved by: *T. E. Conlon* 9-27-88
 T. E. Conlon, Chief Date Signed
 Plant Systems Section
 Engineering Branch
 Division of Reactor Safety

SUMMARY

Scope: This evaluation was performed for one of eleven Readiness Review modules produced as part of a pilot Readiness Review Program being operated by the licensee pursuant to a recommendation contained in NUREG 1055. The NRC agreed to participate in the program by reviewing and commenting on each module.

This evaluation was performed by reviewing the module report, examining supporting documentation and inspecting associated work activities. The licensee's review was verified by interviewing licensee personnel associated with preparing the module, sampling documentation and hardware examined by the licensee's reviewers and by sampling documentation and hardware not selected by the licensee's reviewers and by reviewing records of previous NRC inspections.

Results: In the areas inspected, violations or deviations were not identified.

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *J. A. Bailey, Project Licensing Manager
- J. H. Draggs, GPC Quality Assurance
- *E. D. Groover, QA Site Manager - Construction
- D. A. Lunsford, GPC Quality Assurance
- R. McManus, Manager Readiness Review

Other licensee employees contacted during this inspection included craftsmen, engineers, operators, technicians, and administrative personnel.

Other Organizations

- *R. R. Thomas, Readiness Review Team Leader, Bechtel Corporation
- D. Wiggins, Williams QC Inspector

NRC Resident Inspector

R. Scheppens, Senior Resident Inspector, Construction

*Attended exit interview

2. Module 13B Coatings Unit 2

a. Unit 2 Review

The Unit 2 Readiness Review Program is being conducted at the initiative of Georgia Power Company's (GPC's) management to assure that all design, construction and preoperational testing have been properly implemented at the Vogtle Electric Generating Plant Unit 2. Module 13B presents an assessment of the design and construction activities associated with protective coatings for Unit 2. This evaluation was conducted to determine if the results of the program review for coatings presented in this module are an effective and accurate assessment of design and construction requirements, that these requirements are being properly implemented, and that the resolution of findings identified in the module were correct and that the corrections were made.

b. NRC Review Objective

The objective of this review and inspection was to evaluate the licensee's VEGP Unit 2 Readiness Review of Coatings.

This evaluation was accomplished through a detailed review of all sections of the module by:

- Verifying that the design and construction commitments listed in the module are correct and comply with FSAR commitments and regulatory requirements
- Reviewing module findings and evaluating the correctness of their resolution
- Review of a comprehensive representative sample of the records reviewed by the Readiness Review Staff and an independent sample of documents
- Walkdown observation of construction activities

c. Scope of Review

This review which consisted of an examination of each section of the module was performed by an inspector from the Region II office in Atlanta. Module Sections 1.0, 2.0, 4.0 and 8.0 which contain information concerning the Module Introduction, Company Organization, Program Description, Assessment of Module Adequacy and Assessment Plans and Checklists did not require as detailed a review or evaluation as the remaining sections. The more significant aspects of the module appear in Sections 3.0, 5.0, and 6.0. These sections discuss Licensee Commitments, Audits, Reportable Deficiencies, Special Evaluations, and Methods of Design and Construction Activities related to coatings for Vogtle Electric Generating Plant 2. Review of these sections included a detailed review of the content, examination of items identified as findings, an examination of a sample of records reviewed by the Readiness Review Staff and an examination of an independently selected sample of records.

d. Inspection

The review and evaluation by the Region II inspector was accomplished by reviewing the module in its entirety in the Atlanta Regional Office beginning on August 11, 1988, and by inspection at the Vogtle site on August 15-19, 1988.

Section 1.0, Introduction, which presents an introduction to the intent and content of the module and Section 2.0 organization and Division of Responsibility, which presents a description for design and application of coatings were reviewed for general content and background data.

Review of Section 3.0, Commitments, was accomplished by examining the Commitment and Implementation matrices and verifying that the applicable commitments were implemented. Verification that the applicable commitments, were referenced and implemented was

accomplished by reviewing the FSAR, SER, Specifications, procedures, regulatory guides, applicable industry standards and responses to NRC generic letters.

Review of Section 4.0, Program Description, was accomplished by examining the two subsections and comparing the described work process used by design and construction with FSAR, specification and procedure requirements. The inspector also compared the described work process with the understanding of program requirements that were examined during inspection of coatings conducted during the review of this module.

Review of Section 5.0, Audits, Nuclear Regulatory Inspections and Special Evaluations, was accomplished by examining the four subsections, and reviewing the audits, NRC inspections and special evaluations and findings identified during the audit review.

Review of Section 6.0, Program Assessment, was accomplished by reviewing Subsection 6.4.1, Commitment Implementation, and Unit 1 followup, Subsection 6.4.2, In process Activities of ongoing design and construction activities, and Subsection 6.4.3, Construction Completion Process. Review of Subsection 6.4.1 included a review of design commitments, construction commitments, and corrective actions taken to prevent recurrence in Unit 2 of the types of problems identified by the Readiness Review during the Unit 1 assessment. Three findings were identified by the Readiness Review Staff which involved concerns with warehouse records not maintained by the contractor, conflicting coating requirements in purchase specification and contract procedure did not meet specification requirements. Review of Subsection 6.4.2 included examination of ongoing design and construction processes.

Three findings were identified by the Readiness Review Staff which involved errors in processing FCRs, contractor procedures which cite different revision of standards than contractor QA Manual and FSAR conflicts in contract procedure for deviation reporting. Review of Subsection 6.4.3 construction completion process included a review of applied coatings, quality documentation, material traceability, inspector qualification and painter certification.

Review of Section 7.0 covered assessment module adequacy and proposed corrective action taken for findings.

Review of Section 8.0 covered assessment plan and checklists proposed for evaluating Unit 2 design and construction activities associated with protective coatings.

3. Evaluations

The evaluation of each section reviewed is provided below. For each section a description of the section that was reviewed and the basis of acceptance is provided.

a. Section 1.0 - Introduction

This section of the module presented an introduction to the intent and content of the module organization. This section was reviewed primarily for content and background information. No additional followup or evaluation of the section was required.

b. Section 2.0 - Organization

This section presents a description of the organization and division of responsibility of GPC, Bechtel Western Power Company, Williams Power Services, Inc. for design and construction activities related to coatings. This section of the module was reviewed for content only. No additional followup or evaluation of this section was required.

c. Section 3.0 - Commitments

- (1) This section contains a listing of commitments and implementing documents which are presented in two matrices. The first matrix is the commitment matrix which contains a listing of the sources and subject of licensee commitments. Commitments listed in this matrix were identified by the Readiness Review Staff through a review of the FSAR and response to NRC questions. The second matrix is the implementation matrix which contains a listing of documents and features discussed in the FSAR and implementing documents. The Readiness Review Staff reviewed these documents to verify compliance with the commitment requirements.
- (2) The Region II inspectors review and evaluation of this section was performed by comparing the licensing commitments and corresponding source documents with the Standard Review Plan, the NRC Regulatory Guides (RGs), the provisions of Industry Standards and the FSAR. The review also included an examination of commitment sources and implementing procedures and specifications to verify that the FSAR commitments were being properly implemented in the Readiness Review Program.
- (3) Review of this section showed that the Vogtle licensing commitments and implementing documents for the protective coating systems comply with the requirements of the FSAR Regulatory Guides and Industry Standards.

d. Section 4.0 - Program Description

- (1) This section of the module, is divided into two subsections which describes the work process utilized by design and construction for coatings at Vogtle Unit 2. Subsection 4.1 provides a description of the work flow, documentation and design control activities for protective coatings for permanent plant systems. The emphasis is on coating materials and approved coating systems for areas and equipment inside the containment building. The architectural group of the Materials and Quality Services Group of Bechtel, selected coating systems to meet the requirements of the service areas, the surface to be coated and the architectural and special service conditions as applicable. This subject addresses Design Basis Accident Tests (DBA), field coating systems, shop coatings, unqualified coatings, specification development, material specifications, field coating specification drawings, shop coating program, quality requirements and the Westinghouse coating program.

Subsection 4.2 construction contains a description of coatings and inspection activities, a flow chart and a list of codes and standards applicable to receipt, storage, application and inspection activities.

- (2) Review of this section indicated that the program described in the subsections is in accordance with the NRC inspector's understanding of the work processes used by design and construction for coatings at the Vogtle Plant.

e. Section 5.0 - Audits and Inspections

- (1) This section contains a discussion of Quality Assurance Audits, Nuclear Regulatory Commission inspections and project reportability evaluations performed in the area of coatings. In addition a description of special evaluations and a discussion of the project evaluation of Unit 1 findings are included. The findings, violations and evaluations applicable to coatings for Unit 2 were reviewed by the Readiness Review Staff and factored into the assessment presented in Section 6 of this module.
- (2) Review of this section by the inspector included a review of the four subsections. Review of the referenced audits and review of the most recent audits conducted by GPC and the Williams Corporation QA verified that the audits were being conducted within the correct time and that proper corrective actions were taken on Audit Findings. Review of the special evaluation concerning the effect of the inorganic zinc lining of the diesel fuel oil storage on the operability of the diesel generators included review of the NRC staff response to this item dated October 15, 1987. This response included the NRC staff review of the licensee's submittals dated July 13, September 30, and October

1987. Based on the review of these submittals, the NRC staff concluded that the zinc coating in the diesel generator fuel oil storage tanks will not affect the operability and reliability of the diesel generators. Review of the special evaluation concerning cracking of concrete floor coatings in the Unit 1 containment indicated that the most probable cause was a high film thickness in local areas coupled with mechanical damage to the coatings. This was based on the fact that samples of the cracked coatings exhibited high filler body coating thickness. Recommendations to prevent cracking of coatings included use of a rubber float, minimal use of needle guns, inspection of coated concrete floors for mechanical damage prior to application, and areas adjacent to damaged areas to be protected or prepared to prevent excessive thickness.

The review also covered a review of the findings identified during the Readiness Review of Coatings in Unit 1. The Readiness Review Staff reviewed these findings to verify that proper corrective actions were taken and to determine if they were applicable to Unit 2. This assessment identified two findings where corrective actions were not entirely effective. These were identified as Findings 2RRF-13B-002, Errors in Processing FCRS and Finding 2RRF-13B-003, Required Warehouse Records Not Maintained by the Contractor. Section 6.0 contains a more detailed discussion of these findings.

f. Section 6.0 Program Assessment

The assessment was performed to provide added assurance that the project continued to comply with licensing commitments. The assessment was organized into the following three parts; Part 1, Commitment Implementation and Unit 1 finding followup; Part 2, Design and Construction program activities; and Part 3, Design and Construction completion.

The objective of Part 1 of the assessment was to assess implementation of licensing commitments with emphasis on those revised or added since Unit 1 Readiness Review by Final Safety Analysis Report amendments or project letters and to assess the adequacy of application to Unit 2 of corrective actions resulting from Unit 1 Readiness Review.

During the review of commitment implementation which covered Design and Construction Requirement and Unit 1 finding followup, several findings were identified. These were: Finding 2RRF-13B-004, Conflicting Coating requirements in Specification X4A J16; Finding 2RR F-13B003, No Contractor Procedure for receipt and issuance of each batch of coating materials; Finding 2RRF-13B-005, Contractors general procedure for control of application procedures allowed exception to the commitment of RG 1.54 which requires that

application procedures conform with the coating manufactures written instructions.

Unit 1 findings were evaluated for continued application of corrective actions to Unit 2 activities and the Unit 2 assessment results were reviewed for repetition of Unit 1 findings. For 14 of the unit findings the corrective action was found to be effective. The corrective action for one Unit 1 finding to establish a procedural requirement to maintain a warehouse record was found to be not fully effective as described in the discussion of Unit 2 Finding 2RRF-13B-003. Another element of the finding in Unit 1 was found to be repeated in Unit 2. This identified that FCRs were making generic changes to the coating specification, but FCRs were identified as not requiring incorporation in the specification. This was identified as Finding 2RRF-13B-002 which is discussed in Part 2, In Process Activities.

The objective of Part 2 of the assessment was to examine ongoing design and construction processes. The design portion of Part 2 covered the evaluation of 13 Field Change Requests (FCRs). This review identified repetitive failure to properly identify and process changes affecting project Class 02c Coatings (Coatings Inside Containment). Field Change Requests inside containment were improperly identified as project class 62C and were not sent to Quality Assurance (QA) for review. In addition FCRs properly identified as Class 02c were not sent to Quality Assurance for review as required by procedure. This was identified as Finding 2RRF-13B-002, Errors in Processing FCRs.

The construction portion of Part 2 of the assessment examined in process coating application, coating material storage and deviation reports. In process application activities were assessed by observing preparation, inspection and application activities in the field. Attributes assessed included proper environmental testing, surface preparation and inspection, documenting and mixing of materials and application of coatings. Material storage areas were also examined for compliance to procedural requirements. Attributes assessed included temperature control, area cleanliness and material identification. Review of deviation reports covered the contractor's deviation report procedures and a sample of deviation reports. The deviation reports were assessed for compliance to project requirements. The reports were reviewed for adequate description, appropriate disposition, proper justification and required approvals. Review of the deviation report procedure identified a deficiency in procedural requirements for deviation tracking and conflicts. This was identified as Finding 2RRF-13B-008, Conflicts in Contractor Procedure for Deviation Reporting. Review of the two contractor control procedures indicated that they both referenced an incorrect revision of ANSI N45.2.9. This was identified as Finding 2RRF-13B-006, Contractor Procedures Cite Different Revision of Standard than Contractor QA Manual and FSAR.

The objective of Part 3 of the assessment was to evaluate the construction completion process. This covered applied coatings, quality documentation, material traceability, inspector qualification and painter certification.

Review of Section 6.0 by the Region II inspector included a review of the three activities addressed in the assessment plan. This included a review of licensing commitment requirements, and Unit 1 finding followup, design and construction program activities and design and construction completion, and review of findings and corrective actions taken to resolve the findings. This included a review of procedures, FSAR requirements, Field Change Requests (FCRs), Work Requests (WRs), training and certification of inspectors and painters, Deviation Reports (DRs), storage controls, and a walkdown and inspection of ongoing coating work in the Unit 2 containment. Review of the findings identified by the Readiness Review Staff and the corrective actions associated with the findings are as follows:

(1) Finding 2RRF-13B-002, Errors in Processing FCRs

Project Reference Manual Section 17 states in part the following:

- 17.5.2.a - After review and disposition by Engineering if a design change is needed in the affected documents, an x is placed in block 2 and/or 6 of the Field Change Request (FCR) form
- Construction specification change notices (CSCNs) and mechanical specification change notices are incorporated in accordance with part C, Section 2a
- 17.5.3 - Justification concurrence shall be provided on the FCR prior to approval of Block 1b
- 17.6.2.5 - FCRs initiated for specifications that are Q class fire protection or radwaste shall be forwarded to Quality Assurance (QA) for their concurrence prior to submitting the originals to Georgia Power Company.

Contrary to the above, of a sample of 13 FCRs reviewed for Readiness Review Module 13B coatings, the following discrepancies were noted which were written against Specification X1AJ07

- C-FCRB-22524 - Generic Change identified as NA/NA missing QA review
- C-FCRB-21176 - Missing QA review, incorrect project class
- C-FCRB-21175 - Missing QA review, incorrect project class

- C-FCRB-19820 - Generic change identified as NA/NA missing QA review and justification
- C-FCRB-20176 - Missing QA review, incorrect incorporation
- C-FCRB-19891 - Missing QA review

The root cause of this finding was that personnel processing FCRs had an inadequate understanding of the coating project class designation and the QA review requirement associated with the coating 02c class.

Remedial action included correction to the FCRs and Specification X1AJ07 was revised May 12, 1988. This revision corrected the revision block to indicate that the FCR was modified. Action to prevent recurrence included training of appropriate architectural personnel regarding the coating project classification (02c versus 062c); the need for QA review of FCRs with the project class 02c, and identification of generic changes requiring incorporation into the specification.

In following upon this finding the inspector reviewed the FCR identified as having error and verified that proper corrective actions were taken and also reviewed 13 additional FCRs to verify that similar problems did not exist in other FCRs. The inspector also verified that proper revisions were made to specification X1AJ07 and that the proper training had been given to appropriate architectural personnel.

(2) Finding 2RRF-13B-003 - Required Warehouse Record Not Maintained by Contractor

Specification X1AJ07, paragraph 12.1.1A, 12.7.1 and 12.7.2 require that the documentation requirements of ANSI N 101.4 be met and allow alternate forms providing the same degree of documentation to be used. Example 3 of the Quality Document Forms Attachment to Specification X1AJ07 is a warehousing record documenting the receipt and withdrawal of coating materials for each batch of coating material received.

Contrary to the above no procedure was found prescribing preparation and turnover of the warehousing record.

Remedial action included revision of Procedure WC-015-253, Warehouse Coating Records to address the upkeep and turnover of the warehousing records. In addition the existing warehousing records have been reviewed by the Williams Quality Control Department. The review found that records were missing for the period of September 9, 1986 to December 10, 1986. The missing records were addressed in Deviation Report WC-88-003 dated May 26, 1988. The approved disposition was hardware not

affected. The Williams Quality Assurance/Quality Control (QA/QC) Site Manager concluded after completing the review, that the existing warehouse records are acceptable as quality documents.

The new QC procedure has been approved by GPC Quality Control and is controlled by the Williams QC Department through Document Control Procedures WC-003 and WC-019. Williams Quality Control will monitor the warehousing records closely to assure compliance. In following up on this item the HRC inspector reviewed the referenced procedures and current warehouse records and verified that ANSI N101.4 and specification X1AJ07 requirements were being met.

- (3) Finding ARRF-13B-004, Conflicting Coating Requirements in Purchase Specifications.

Design Criteria DC-1000A, Section 10, requires that coatings inside the containment meet the requirements of ANSI N101.2.

Specification X4AJ16 (Containment Cooling Units), Revision 10, dated December 10, 1986, Paragraph 6.3.1 requires that coatings be certified to ANSI N101.2. Paragraph 6.3.A requires an inorganic Zinc primer followed by an epoxy topcoat and also lists acceptable suppliers and products.

The Ameron and Carboline inorganic Zinc primers listed are not their N101.2 qualified products. The products listed are all inorganic Zinc primers. No epoxy topcoat is listed. This finding identifies conflicting requirements within Specification X4AJ16. Paragraph 6.3.2a of the specification requires documentation in accordance with ANSI N101.4 and Regulatory Guide 1.54. In the same specification Paragraph 6.3.A.4 requires specific name brand coatings which will not meet these documentation requirements and makes no allowance for acceptable alternatives.

To determine the extent of this problem with conflicting requirements, a sample of 8 out of approximately 40 specifications requiring the ANSI N101.4 and N101.2 documentation was reviewed. These Specifications were X2AG03, X2AG05, X2AG06, X2AG07, X2AG08, X2AH01, X2AH02 and X2AP01-C9.1. No conflicts or discrepancies between the approved coating lists and documentation requirements were identified. The purchase order document PAV2-86 was reviewed to determine the quality of paint actually supplied for items in Specification X4AJ16. The Supplier Quality Verification Document List - Detailed documents that the paint meets the requirements of Paragraph 6.3.1.2.a of X4AJ16. Also the product identity and Quality Assurance certification record certifies that the paint meets the manufacturing requirements of ANSI N101.2, ANSI N101.4 and ANSI N5.12 when properly mixed. Documentation that the paint was properly mixed and

applied was also provided. These documents provide objective evidence that the paint meets the more stringent requirements of Paragraph 6.3.1.2a of X4AJ16 and that the conflict in the specification did not degrade the paint quality. The root cause of the finding was attributed to human error. The specification writer did not realize that the paint specification contained conflicting requirements and that the review process failed to uncover the mistake. Specification X4AJ16 was revised June 8, 1988, to delete Paragraph 6.3.A.4. This will eliminate the conflict between documentation requirements and avoid the procurement of unqualified coatings. This will assure that future materials procured under X4AJ16 will meet the requirements of Paragraph 6.3.1.2.a. During this inspection, the NRC inspector reviewed the revision to Specification X4AJ16 and nine other specifications to verify that similar errors were not in the specifications.

- (4) Finding 2RRF-13B-00-5, Contractor Procedure Does Not Meet Specification and FSAR Requirements

Final Safety Analysis Report (FSAR) Section 6.1.2.1, Specification X1AJ07 Section 12.5.1 and Williams QA Manual Section 5.4.4 and job specific addendum Section 5.4.1 require written approval of the manufacturers application procedures.

This finding identified that Williams Procedure WC-300, Sections 300.4.1.4 and 300.7 allow exceptions to these requirements.

In following up on this finding Williams QC reviewed all application procedures and found options or exceptions stated or implied in Sections 300.2.2, 300.2.3, 300.4.1.4 and 300.7 of Procedure WC-300.

The cause of this error was due to an effort by Williams Management to provide changes based on oral concurrence prior to receiving written approval from the coating manufacturer. To prevent recurrence of this item the Williams QA/QC manager will ensure that the written approval from the coating manufacturers is obtained prior to implementation.

Investigation of this item by the NRC inspector showed that in no instance had procedures been issued without the oral approval of the manufacturer. All procedures have been submitted to the manufacturer and have been approved in writing. No coatings have been unacceptably applied as a consequence of this discrepancy.

- (5) Finding 2RRF-13B-006, Contractor Procedures Cite Different Revision of Standard Than the Contractor QA Manual and FSAR.

FSAR Section 17.1.2 and Williams QA Manual job specific addendum, Section 5.10 require conformance to ANSI N45.2.9-1973, eleventh draft. Williams procedure WC-003, "Document Security" and Procedure WC-019, Controlled Document Revision and Distribution reference ANSI N45.2.9-1974.

The cause of the finding was that no reference in the QA procedures manual would lead the user to the job specific addendum of the QA manual as the source of the correct edition of referenced standards. Williams QA/QC site manager checked the QA procedures to verify that other standards referenced are the edition stated in the job specific addendum of the QA manual. All were found to be the edition stated in the job specific addendum. Williams revised Procedure WC-003 and WC-019 to reference ANSI N45.2.9-1973, eleventh draft. These revisions were completed April 19, 1988. To prevent recurrence of this error Williams QA/QC site manager will ensure that all future procedure have the correct standards referenced.

The NRC inspector reviewed the corrective actions taken on this finding. Review of the 1973 eleventh draft and 1974 revision of ANSI N45.2.9 showed that there were no changes that would have adversely affected the quality of Williams documentation. The inspector also checked the Williams QA manual for correct revisions of referenced standards to further evaluate the broadness of this finding. No further discrepancies were found.

(6) Finding 2RRF-13B-008, Conflict In Contractor Procedure for Deviation Reporting

Vogtle Electric Generating Plant QA manual Section 15.2 states:

- The identification, documentation segregation, review, disposition and notification of affected organization of nonconformance of materials, parts, components or services is controlled.
- Nonconformances concerning departures from design specification and drawing requirements which are dispositioned "use as is" or "repair" are dispositioned by the responsible engineering organization.

This finding identified two discrepancies:

- Williams Procedure WC-008 contains no provision of tracking reworkable deficiencies defined in Section 008.5.1.2. Requirements for identifying non-reworkable deficiencies are conflicting (Sections 008.5.1.3 and 008.5.2.1).
- Provisions of Williams Procedure WC-008 for approval of "use as is" or "repair" dispositions are conflicting and

do not identify project engineering as the responsible engineering organization (Sections 008.5.2.4, 008.5.7.2, 008.6.3.2.1, 008.6.3.23 and 008.6.3.26).

Investigative action of the first discrepancy confirmed that the original intent of procedure WC-008 Section 008.5.1.3 was to address the tracking of rejected items which were reworkable. A typographical error was made and Section 008.5.1.3 inadvertently stated "rejected items which are not reworkable." Section 008.5.1.3 also addresses an open item log. Williams QC stopped using the log in May of 1986. At that time the responsibility for keeping the log was moved from the QC clerk to the QC inspectors. The investigation found that the Williams QC inspectors failed to use the log and that Williams QC management failed to ensure that the inspectors used the log. The purpose for the open item log was to track reworkable items. Prior to May 1986, the log documented and verified that reworkable items were handled in a timely manner. Williams QC replaced the open item log with a designated hold file. Williams QC management failed to make the appropriate change in procedure WC-008 to reflect the new method of tracking.

Williams QA/QC management reviewed all reworkable rejected items reported between May 1986 and April 6, 1988. There were 568 reworkable, rejected items reported during this period. A random sampling of 72 of the 568 items were reviewed and it was determined that 50 were reworked within four days, two within seven days and 20, all of which were on one inspection report, were not reworked for four months. Although the open item log had not been used since May 1986, these 20 rejects were recorded in May 1987 but were never placed on a Deviation Report. The inspection report was placed in the designated hold file until it was reworked. The Williams QC site manager did not write a Deviation Report because the delay was caused by construction restraints which did not allow the workers back into the area for rework. Williams management concluded from this review that items were reworked in a timely manner except as constrained by other construction activity. As of April 6, 1988, there were no outstanding reworkable rejected items in the designated hold file. The root cause of this finding was attributed to inappropriate attention level of Williams QC management.

Investigation of the second part of this finding established that Section 008.6.3.23 had three editorial errors. The words "recommended dispositions" are used twice in this section. The correct words should be "approved dispositions." The third error had the "owner or designee" approving what should have been the approved disposition. The design engineering group should approve the approved disposition. The root cause of the

error was inadequate review of the final printed text prior to final approval.

The following corrective actions were taken to correct these findings. Williams revised Procedure WC-008, Section 008.5.1.3 to direct any inspection reports which identify reworkable deviations to be placed in a designated hold file until the areas have been reworked. This file will be reviewed monthly by the QA/QC site manager. Any item over 60 days old shall be reported as a deviation report. The inspection report shall remain in the hold file until it has been closed by the approved disposition on the deviation report. Deviation Report WC-88-002 has been written to resolve the procedure violation cited and it has been dispositioned "hardware not affected." The typographical error in Section 008.5.1.3 has been corrected. Williams has also revised procedure Section WC-008, Section 008.6.3.23 to state "approved dispositions" instead of "recommended dispositions" and "design engineering group" instead of "owner designee."

To prevent recurrence of this finding, Williams QA/QC reviewed their Quality Control procedures and determined that the QC Manager reviews deviation report trends and rejected open items on a monthly basis. No other monthly review requirements were found. The trend review (Form WC-0080) is in place and a checklist for the monthly review of rejected open items (Form WC-008E) has been added to the nonconformance control procedure.

During this inspection, the NRC inspector reviewed the changes made to the procedures and reviewed current deviation reports. This review indicated that appropriate corrective actions have been taken on this finding.

4. Findings

No NRC findings were identified during the review of Module 13B Unit 2. Review of this Module showed that the Readiness Review Staff did a comprehensive review of design and construction activities for safety-related coatings and that significant findings were identified by the Readiness Review Staff. This resulted in significant corrections in the program that clarified inspection requirements, documentation requirements and inspection activities.

5. Conclusions

Based upon the review within the scope of Module 13B, Coatings the NRC has reached the following conclusions for coatings for Vogtle Unit 2.

a. Summary of Specific Conclusions

The module has been determined to be acceptable. A summary of the report comments for each module section is as follows:

- (1) Section 1 - Introduction. The module organization and project status were correct as of the date of the module publication.
- (2) Section 2 - Organization and Division of Responsibilities. The organization and responsibilities presented in Section 2 of the Module were reviewed and verified as being correct.
- (3) Section 3 - Commitments. Review of the commitments as listed in Section 3 of the module indicated that licensing commitments and implementing documents comply with the FSAR, Regulatory Guides and Industry Standards.
- (4) Section 4 - Program Description. The inspector reviewed the description of the program as given in Section 4 of the module. This included a review of the referenced design and construction controls for coatings. Review of this section indicated that the description of controls of coatings presented in Section 4 are correct and is in agreement with the FSAR and project requirements.
- (5) Section 5 - Audits and Inspections. Review of this section included a review of audits, NRC inspections, special evaluations and followup on Unit 1 findings. This review indicated that proper corrective actions were taken on the findings and special evaluations covered in this section.
- (6) Section 6 - Program Assessment. This section covered the program developed and actions performed to ascertain whether the design and construction activities related to coatings for Unit 2 have been adequately controlled to implement licensing commitments, to ascertain whether the corrective actions resulting from the Unit 1 Readiness Review were applied to Unit 2, and to verify that the results of design and construction activities conform to project procedures and design requirements.

The above assessments resulted in six findings. Five were classified as Level II and one as a Level III. Each of the findings identified were evaluated to determine the extent of the deficiency, the root cause of the finding and the impact on hardware or documentation. Four of the six findings reported involved contractor procedure deficiencies. In each of the four cases, investigations showed that the intent of the requirements addressed in the procedure had been met. The investigation also showed the deficiencies to be limited to the item or procedure in the finding. One of the remaining two findings was an isolated case of conflict in a purchase specification and the other finding was due to repetitive errors in processing Field

Change Requests. The investigation of the FCR deficiencies showed them to be limited to the coating specification.

None of the findings reported deficiencies in applied coatings or inspection documentation. None of the remedial actions involved applied coatings.

Review of the findings by the inspector indicated that the findings were isolated cases of failure to comply with engineering or licensing requirements or with procedures. Inspection of coatings by the inspector indicated that these findings had no effect on applied coatings.

b. General Conclusions

This module presents an adequate assessment of the Georgia Power Company (GPC) process for design and construction of coatings.

During this review, it was apparent to the NRC inspector that GPC management supported the program by their active participation in the development of the program. Review and evaluation of Module 13B Unit 2 by the NRC inspector indicates that the review performed by GPC Readiness Review staff was sufficiently comprehensive in scope and depth to identify problem areas and that the dispositions of Readiness Review findings were proper and satisfactory. The procedures for design construction, and quality control were consistent with commitments and, are therefore acceptable. Based on the review of this module and the results of previous NRC inspections, the inspector concluded that coating activities were performed in accordance with the appropriate procedures and that records reflect quality of the coatings. The inspector concluded that the Vogtle program for the design and construction of Category 1 coatings complies with the Final Safety Analysis Report and that compliance is verifiable with existing documentation.

The NRC inspector furthermore believes that Module 13B accurately assess the status of design and construction activities for Category 1 coatings. This conclusion is based on information currently available to the NRC inspector. Should information subsequently become available which was not considered during this review and which conflicts with earlier information it will be evaluated to determine what effect it may have on the above conclusion.

6. Exit Interview

The inspection scope and results were summarized on August 19, 1988, with those persons indicated in Paragraph 1. The inspector described the areas inspected and discussed in detail the inspection results. Dissenting comments were not received from the licensee. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector during this inspection.