

*official*

SEP 22 1988

Docket No. 50-425  
License No. CPPR-109

✓ Georgia Power Company  
ATTN: Mr. W. G. Hairston, III  
Senior Vice President  
Nuclear Operations  
P. O. Box 4545  
Atlanta, GA 30302

Gentlemen:

SUBJECT: NRC EVALUATION OF VOGTLE 2 READINESS REVIEW OF PIPE STRESS AND SUPPORTS MODULE NO. 11

The NRC has performed a review of the Pipe Stress and Supports for Vogtle Unit 2 covered by Readiness Review Module 11 submitted on April 19, 1988. Based upon NRC inspection review of those activities identified in the module, we have determined that the Pipe Supports and Pipe Stress Analysis at Vogtle 2 are acceptable with the exception of the two items in Enclosure 1. This decision is based on information presently available to the inspectors and reviewers. Should information become available which was not considered during this review or which conflicts with earlier information, it will be evaluated to determine what effect it may have on the above conclusion.

Please contact us should you have any questions concerning this letter.

Sincerely,

*JS*

J. Nelson Grace  
Regional Administrator

Enclosures:

- 1. List of Open Items
- 2. Inspection Report No. 50-425/88-19

cc w/encls:

- ✓ R. P. McDonald, Executive Vice President, Nuclear Operations
- ✓ P. D. Rice, Vice President, Project Director

(cc w/encls cont'd - see page 2)

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SEP 22 1988

Georgia Power Company

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- (cc w/encls cont'd)
- ✓ C. W. Hayes, Vogtle Quality Assurance Manager
- ✓ G. Bockhold, Jr., General Manager, Nuclear Operations
- ✓ J. P. Kane, Manager, Nuclear Licensing and Engineering
- ✓ J. A. Bailey, Project Licensing Manager
- ✓ B. W. Churchill, Esq., Shaw, Pittman, Potts and Trowbridge
- ✓ D. Kirkland, III, Counsel, Office of the Consumer's Utility Council
- ✓ D. Feig, Georgians Against Nuclear Energy State of Georgia

- bcc w/encls:
- ✓ E. Reis, OGC
- ✓ J. Hopkins, NRR
- ✓ M. Sinkule, RII DRS, Technical Assistant
- ✓ NRC Resident Inspector Document Control Desk

RII  
SVias  
SVias:ser  
08/16/88

RII  
CPatterson  
08/12/88

RII  
MSinkule  
08/12/88

RII  
VBrownlee  
08/12/88

RII  
Keyes  
09/20/88

RII  
Mernst  
08/18/88

NEC  
Seymour Weiss  
09/08/88

NEC  
for Dave Matthews  
09/15/88

ENCLOSURE 1

List of Open Items

Violation 50-425/88-19-01:

Failure to Follow Procedures,  
Resulting in Errors in Pipe  
Support QC and Design  
Documentation

Inspector Followup Item 50-425/88-19-02:

Potential Problems with  
Spring Can Travel



ENCLOSURE 2  
UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
101 MARIETTA STREET, N.W.  
ATLANTA, GEORGIA 30323

AUG 18 1988

Docket No. 50-425  
License No. CPPR-109

Georgia Power Company  
ATTN: Mr. W. G. Hairston, III  
Senior Vice-President  
Nuclear Operations  
P. O. Box 4545  
Atlanta, GA 30302

Gentlemen:

SUBJECT: NOTICE OF VIOLATION  
(NRC INSPECTION REPORT NO. 50-425/88-19)

This refers to the Nuclear Regulatory Commission (NRC) inspection conducted by S. J. Vias on May 11-12, June 6-10, and July 11-14, 1988. The inspection included a review of activities authorized for your Vogtle facility. At the conclusion of the inspection, the findings were discussed with those members of your staff identified in the enclosed inspection report.

Areas examined during the inspection are identified in the report. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observation of activities in progress.

The inspection findings indicate that certain activities appeared to violate NRC requirements. The violation, references to pertinent requirements, and elements to be included in your response are described in the enclosed Notice of Violation.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and its enclosures will be placed in the NRC Public Document Room.

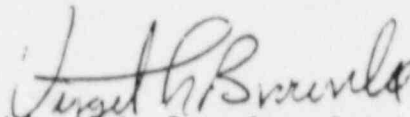
The responses directed by this letter and its enclosures are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

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AUG 18 1988

Should you have any questions concerning this letter, please contact us.

Sincerely,



Virgil L. Brownlee, Chief  
Reactor Projects Branch 3  
Division of Reactor Projects

Enclosures:

1. Notice of Violation
2. NRC Inspection Report

cc w/encls:

- R. P. McDonald, Executive Vice  
President, Nuclear Operations
- P. D. Rice, Vice President, Project  
Director
- C. W. Hayes, Vogtle Quality  
Assurance Manager
- G. Bockhold, Jr., General Manager,  
Nuclear Operations
- J. P. Kane, Manager, Nuclear Licensing  
and Engineering
- J. A. Bailey, Project Licensing  
Manager
- B. W. Churchill, Esq., Shaw,  
Pittman, Potts and Trowbridge
- D. Kirkland, III, Counsel,  
Office of the Consumer's Utility  
Council
- D. Feig, Georgians Against  
Nuclear Energy

ENCLOSURE 1

NOTICE OF VIOLATION

Georgia Power Company  
Vogtle Unit 2

Docket No. 50-425  
License No. CPPR-109

During the Nuclear Regulatory Commission (NRC) inspection conducted on May 11-12, June 6-10, and July 11-14, 1988, violations of NRC requirements were identified. The violation involved pipe support design and construction. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1988), the violation is listed below:

Criterion V of Appendix B to 10 CFR Part 50, as implemented by FSAR Chapter 17, Section 17.1.5 states in part: Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, ... and shall be accomplished in accordance with these instructions, procedures, or drawings.

1. Pullman Power Products Procedure X-24, "As-Building Piping Systems and Related Components", details requirements for as-building and documentation of information necessary for the performance of stress analysis reconciliation. Specifically Section 4.1.1, states that, "Mylars shall be revised to incorporate the as-built information when the actual dimension differs from the design dimension beyond applicable measurement tolerance, but is within allowable construction tolerance."

Contrary to the above, the following discrepancies were found to be properly 'redlined' and documented on a copy of the pipe support drawing in the PPP Process Package, but were not incorporated into the Mylars.

- o V2-1204-014-H004, the actual size of item 'b'.
- o V2-1204-014-H006, the dimension from the centerline W4 to the centerline of the embeded plate.
- o V2-1208-005-H007, the dimension for item #4 was shown on the drawing as 3 5/8", the inspectors measured in the field and the 'redline' drawing, both indicated that the dimension was 5 1/2".
- o V2-1208-145-H017, the pin-to-pin dimension of the spring can, drawing shows 12'-10 5/16", and the 'redline' and the dimension the inspectors measured was 12'-11".

- o V2-1208-145-H016, the Bill of Materials shows item #5 as 8" wide, the inspectors measured the dimension as 8 3/4", this is the same dimension as the 'redline' drawing.
  - o Isometric 2K3-1208-146-01, Detail 2 & 3, indicate a class change from 212/FG0, on Line 1208-145-4" to 414/FG4, on Line 1208-A20-1/2". The Line Designation List (LDL) shows 1208-A20-1/2" as 424/FG4. DCN-R #7, dated 2-3-86, changed the line to 414/FG4.
  - o V2-1208-145-H017, the location of the beam attachment on the drawing shows the 'as-built' dimension as 1'-3 1/2", documentation in the Process package and the Final Inspection Report, both show the dimension to be 1'-2 3/4".
  - o Isometric 2K3-1205-006-01, from DCN #8, the class information was not transferred correctly to the isometric. Also, not all the information from FEDCNR-2262, was transferred to the 'as-built' isometric.
2. Pullman Power Products, Procedure IX-50, "Pipe Support Field Installation and Fabrication Procedure", Section 11.1, states in part that, "Each support shall be visually inspected for compliance with the support drawing and this procedure." Section 12.5.1, states in part that, "The field engineers will as-built all supports in accordance with this procedure."

Contrary to the above, the above sections were not met in that, the following drawings, both P&ID and pipe supports were found to have discrepancies between the actual condition in the field and the drawing; or pertinent information was missing from support drawings.

- o V2-1208-055-H052, shows the angle iron, item 5, in the wrong orientation.
- o V2-1208-055-H014, in the Location Plan, the vertical pipe is shown as going in the (-)Y direction, in the field it is going in the (+)Y direction.
- o V2-1208-255-H002, the drawing shows the dimension from the centerline of item #2 to the centerline of the pipe as 1'-4 1/4" ACT., the inspectors measured 1'-2 1/4".
- o V2-1204-063-H004, the location of the attachment for V2-1204-201-H002, item #a, to the embed plate, shows the dimension from the right side of the embed plate to the attachment as 2 3/8", the inspectors measured 3 1/16".

- o P&ID 2X40B122, shows a line, designated as Line 006-8", (coordinate C-5), and just to the left of TE 0613, should be Line 008-8".
  - o V2-1205-004-H016, in the process package, the "Strut Reconciliation Report" (SRR), of 5-26-87, indicates two struts were installed, SRR of 10-14-86, shows one strut and SRR of 5-18-88, indicates that two struts were installed. The pipe support drawing, (R/3), shows one strut. There is also a discrepancy of the offset angles, in SRR of 10-14-86, it indicates 3 degrees, SRR of 5-26-87, indicates 2 degrees.
  - o V2-1205-006-H014, the Process Package has two different issue tickets for the spring can that was installed, both for the same serial number of B015066, they also indicate two different spring can sizes.
  - o V2-1204-063-H007, was installed on the wrong vertical pipe. The support drawing had the correct location for the support.
3. Pullman Power Products, Procedure IX-50, "Pipe Support Field Installation and Fabrication Procedure", Section 6.6, states in part that, "The locating dimension on the attached support in relation to a connection point on the parent shall be documented on the attached support (baby) drawing."

Contrary to the above, the above section was not met in that, the following pipe support drawings, were found to not have the proper locating dimension of the baby supports.

- o V2-1208-215-H003, -H004, -H005, all three drawings did not have a locating dimension for the attached support (baby) in relation to a connection point on the parent support.

This is a Severity Level V violation (Supplement II.E).

Pursuant to the provisions of 10 CFR 2.201, is hereby required to submit a written statement or explanation to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555, with a copy to the Regional Administrator, Region II, and a copy to the NRC Resident Inspector, within 30 days of the date of the letter transmitting this Notice. This reply should be clearly marked as a "Reply to a Notice of Violation" and should include [for each violation]: (1) admission or denial of the violation, (2) the reason for the violation if admitted, (3) the corrective steps which have been taken and the results achieved, (4) the corrective steps which will be taken to avoid further violations, and (5) the date when full compliance will be achieved. Where good cause is shown, consideration will be given to extending the response time. If an adequate reply is not received within the



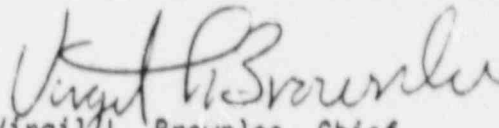
Georgia Power Company  
Vogtle Unit 2

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Docket No. 50-425  
License No. CPPR-109

time specified in this Notice, an order may be issued to show cause why the license should not be modified, suspended, or revoked or why such other action as may be proper should not be taken.

FOR THE NUCLEAR REGULATORY COMMISSION



Virgil L. Brownlee, Chief  
Reactor Projects Branch 3  
Division of Reactor Projects

Dated at Atlanta, Georgia  
this 18 day of August 1988



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

Report No.: 50-425/88-19

Licensee: Georgia Power Company  
 P. O. Box 4345  
 Atlanta, GA 30302

Docket No.: 50-425

License No.: CPPR-109

Facility Name: Vogtle 2

Inspection Conducted: May 11-12, June 6-10, and July 11-14, 1988

Inspector: S. J. Vias 5/11/88  
 S. J. Vias, Project Engineer Date Signed

Accompanying Personnel: P. A. Balmain, Reactor Engineer, (June 6-10, 1988)  
 S. Q. Ninh, Reactor Engineer, (July 11-14, 1988)

Approved by: M. V. Sinkule 8/18/88  
 M. V. Sinkule, Section Chief Date Signed  
 Reactor Branch 3B  
 Division of Reactor Projects

SUMMARY

Scope: This special, announced inspection, on site, involved the areas of safety-related supports (Unit 2), and Readiness Review Module 11, Pipe Stress and Supports (Unit 2).

Results: One violation was identified: Violation, 50-425/88-19-01, Failure to Follow Procedures, Resulting in Errors in Pipe Support QC and Design Documentation. See Paragraph 2.C.6).a.

Inspector Followup Item, 50-425/88-19-02, Potential Problems with Spring Can Travel. See Paragraph 2.C.6).a.(7).

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## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*R. H. Pinson, Vice President - Construction
- \*A. B. Gallant, Project Compliance Coordinator
- \*J. J. Gilmartin, Mechanical Field Operations Staff
- \*E. D. Grocver, Quality Assurance (QA) Site Manager - Construction
- \*C. W. Hayes, Quality Assurance Manager
- R. W. McManus, Readiness Review (RR), Project Manager
- \*W. C. Ramsey, Project Engineering Manager
- \*C. W. Rau, Mechanical Discipline Manager
- \*C. Garrett, Operations Engineering, Oglethorpe Power Corporation

#### Other Organizations

- R. Borgatti, Deputy Engineering Group Supervisor, Bechtel  
Western Power Corporation (BWPC)
- S. K. Gupta, Deputy Engineering Group Supervisor, BWPC
- P. Patel, Engineering Group Leader, BWPC
- \*D. W. Strohman, Project QA Engineer, BWPC
- \*R. C. Summerfeld, RR Team Leader, BWPC
- \*P. R. Thomas, RR Team Leader, BWPC
  
- \*M. W. Barlow, V-SAMU Manager, Westinghouse/V-SAMU
- \*M. J. Beer, Technical Assistant, V-SAMU
- W. E. Faires, Principal Engineer, V-SAMU
- \*M. E. Maryak, Completion Manager, V-SAMU
- N. R. Pasala, Mechanical Engineering Group Leader, V-SAMU
- B. G. Schappell, Manager Mechanical Construction Support, V-SAMU
- \*D. P. Shaw, Westinghouse PQAE
  
- \*B. Edwards, Resident Construction Manager, Pullman Power  
Products (PPP)
- \*J. Miller, Quality Assurance Manager, PPP
- R. Norton, Drafting Lead, PPP
- T. Pacifico, Engineering Manager, PPP
- H. Smith, Quality Control (QC) Manager, PPP
- K. Weis, Chief Engineer, PPP
- J. Morris, QC Inspector, PPP
- A. Turner, QC Inspector, PPP

Other licensee employees contacted included construction craftsmen, engineers, technicians, mechanics, and office personnel.

NRC Resident Inspectors

\*R. J. Schepens, Senior Resident Inspector - Construction

\*Attended exit interview

Acronyms and initialisms used throughout this report are listed in Paragraph 4.

2. Review of Readiness Review Module 11, Pipe Stress and Supports (Unit 2) (50090)

A. Scope of Review

This review consisted of an examination of GPC's Readiness Review Module 11, Pipe Stress and Supports. Sections 1, 2, 3, 4, and 5, which presented data on introduction and module organization, organization and division of responsibilities, commitments, program description, and, audits and inspections. These did not require as extensive a review as Section 6, which covered program assessment.

The evaluation of Section 6 included an examination of content, review of findings and conclusions, review of a small sample of items previously reviewed in the Readiness Review Program, and review of an independently selected sample of documents, both design and construction, and a field construction inspection. The methodology used and an evaluation of each section are presented in the following section.

B. Methodology

The NRC review performed was concerned with all sections of the report, but focused on Section 6. The entire Module was read and reviewed for organization and content after its receipt on April 19, 1988.

The Region II inspectors conducted one on-site preliminary set-up meeting. This was followed up with two on-site inspections at the Vogtle Electric Generating Plant (VEGP) Unit 2.

The first visit to the Vogtle site, made on May 11-12, 1988, was to discuss with licensee and Readiness Review personnel, the scope and inspection plan for the evaluation of this module. The inspector was able to identify the systems, P&ID's, isometrics, and pipe supports, that were to be inspected and reviewed during the upcoming inspection periods. The first inspection also involved the following activities:

- o Reviewing the description of the Readiness Review program and establishing organizational responsibilities for Module 11,
- o Verifying Module 11 review boundaries,

- o Inspecting and reviewing an independent sample of P&IDs and piping isometrics to be used in the assessment of Section 6 of the Module 11 report,

A sample of five P&ID's covered by thirteen piping isometrics, having 56 associated pipe supports was selected to form a basis for the detailed assessment of the Construction Program. The isometrics chosen represent a diversity of pipe systems, sizes, locations, and pipe class.

The second inspection, was made during June 6-10, 1988, involved the following activities:

- o A detailed walkdown of the piping systems, and pipe supports previously identified,
- o A detailed review of the construction documentation for the items inspected in the field,
- o An assessment of the one Level II finding reported in Section 6, of the Module 11 report and a brief review of the 7 Level III findings.

An evaluation of the Construction Program was made by performing a field inspection of all piping installation and pipe supports included in the selected sample of five P&IDs, thirteen piping isometrics and 56 pipe supports. In addition to this field inspection, all of the Pullman Power Products (PPP) Quality Control (QC) documents associated with the thirteen piping isometrics and 56 pipe supports were reviewed for conformance to specifications and procedures, and for compliance with design drawings.

Finally, an assessment was made on the Level II finding (2RRF-011-002), resulting from Readiness Review's Program Assessment Section. This finding involved PPP project procedures not clearly defining authority, responsibilities, and limits of field engineer's performing verification of construction activities versus the authority, responsibilities, and freedom of quality control inspectors to perform inspections and witness construction activities.

The second on-site inspection was conducted during July 11-14, 1988, included the following activities:

- o Performing a Construction Program review of findings from the first inspection with the appropriate PPP personnel,
- o Accomplishing general Module 11 review activities,
- o Performing a Design Program review, for the piping and supports inspected during the first inspection on-site.

General review activities included an assessment of the information presented in Sections 1, 2, 4, and 5 of Module 11.

An evaluation of the Design Program was made by reviewing a sample of the stress calculations for the thirteen selected piping isometrics and their 56 associated pipe supports. These calculations and related design criteria, drawings, and change documentation were reviewed for adequacy of design control, adherence to criteria and procedures, and design integrity.

### C. Evaluation

The evaluation of each Module section is provided below in the section-by-section format used in the Module 11 report. Included are a description of the section, subject matter reviewed, basis for acceptance, and statement of required follow-up or evaluation.

#### 1) Section 1 - Introduction

This section presents the scope of Module 11, outlines the Module organization, and reports the project status. The section was examined by the NRC inspectors for appropriateness of scope and for background information.

- a. Boundary Definition. Module 11 included those activities (stress analyses and pipe support design) for ASME, B&PV Code, Section III, Classes 2 and 3 piping within the scope of Bechtel Western Power Corporation (BWPC) and Vogtle Structural Analysis Mobile Unit (V-SAMU). The installation of piping, Section III, Classes 2 and 3, and mechanical equipment were not covered in this module. The design and construction of piping systems in the Nuclear Steam Supply System (NSSS), were not included in this module. Also contained in Module 11 were stress analyses of non-safety related piping that must meet Seismic Category 1 requirements for protection of safety-related components.

The NRC inspectors found the description of Module 11 boundaries to be acceptable.

- b. Project Status. Subsection 1.3 of Module 11 presents the project status for design and construction of small-bore and large-bore pipe supports. Percentages of completion were quoted as of September 1987. These percentages were shown as 77% completion for design of small-bore and 86% completion for design of large-bore pipe supports, and with 7% completion of the analytical stress reconciliation packages. On the construction side, it was shown as 36% completion for installation of small-bore supports, and 86% completion for installation of large-bore supports.

The NRC inspectors determined that the project status indicated significant progress in the pipe support program.

2) Section 2 - Organization and Division of Responsibility

This section describes the organizations involved in design and construction for Module 11. It explains what personnel are responsible for specific design and construction activities, and presents the matrix organization used by the architect/engineering contractor on the project. This section was reviewed by NRC inspectors for content and accuracy. In the process of this review, the responsibilities of the various organizations and personnel within the organizations were clarified. The NRC inspectors had no findings in this section.

3) Section 3 - Commitments

This section contains listings of commitments and implementing documents, which are displayed in two matrices. The first matrix, entitled "Commitment Matrix," identifies all of the Module 11 commitments, their source documents subject and feature. The second matrix, entitled "Implementation Matrix," lists the document or plant feature for each commitment, as discussed in the source document, and the project document in which the commitment is implemented.

During the review of Unit 1 Readiness Review of Module 11, it was noted that two commitments contained in the FSAR were omitted from the RR review of commitments. This matter was followed in Inspector Followup Item 50-424/86-62-01. This inspector reviewed this matter during a later inspection and was documented in NRC Inspection Report 50-424/86-116. This matter was considered closed. The inspection conducted at this time was not directed toward verifying this Readiness Review section.

4) Section 4 - Program Description

This section describes procedures, documentation, control for design and as-built and reconciliation activities; equipment and material; site material control; and fabrication, installation and inspection. The section was examined by the NRC inspectors for content and background information. Some of the background was useful in the review of later sections in the Module, especially Section 6, Program Assessment.

- a. Design. Subsection 4.1 divides the description of the design program into several categories including the pipe stress and pipe support design process; design criteria; design documentation; design control and review; and design change control. This subsection describes the design program from its earliest phase of design criteria development to its final phase of design program verification. The NRC review of this subsection revealed that the information presented therein gave a descriptive

accounting of the design process and defined the division of responsibility between Bechtel Western Power Corporation and Westinghouse in pipe stress analysis activities. It also explained the interfaces between engineering groups involved in the design effort. The information proved useful for developing an understanding of the design program, but did not lend itself to a detailed review. The NRC inspectors identified no findings in the design program described in this subsection. Results from the review of Section 6 of Module 11 were used to determine how effectively the program actually functioned.

- b. Equipment and Material. Subsection 4.2 describes the process for procuring safety-relating piping supports and components or the material used to fabricate these items. GPC serves as the purchasing agent, in compliance with specifications written and controlled by BWPC, for these items and supplies them to the contractors for installation. No findings were identified in the procurement process.
- c. Site Material Control. Subsection 4.3 describes the responsibilities of the pipe support installers relative to receipt, inspection, and control of ASME Boiler and Pressure Vessel Code material within the scope of Module 11. This subsection details the change from Unit 1, in that GPC has subcontracted receipt inspection of ASME B&PV, Section III, components and materials to Pullman Power Products (PPP). GPC is the supplier of ASME B&PV Code items and materials to the NA-installers, PPP, GPC's Nuclear Construction Team, and Nuclear Installation Services Company (NISCO). Materials and equipment are inspected when received at the job site by GPC. After satisfactory completion of this inspection, the material is placed in storage locations maintained by GPC. The NRC did not perform a detailed examination of this subsection since the material contained a brief description and not an assessment. The NRC inspectors had no findings in this subsection.
- d. Fabrication, Installation, and Inspection. Subsection 4.4 describes site fabrication, installation and inspection activities for pipe supports and pipe whip restraints. It also references specification documents that control the inspection of these items, such as codes, specifications, and implementation procedures. As indicated in this subsection, the fabrication and installation of pipe supports was performed in accordance with Bechtel Western Power Corporation's Specification XAAZ01, Division P1, General Requirements, and Division P5, Pipe Support Field Fabrication and Installation. It also describes the



preparation and control of the principal documents used by PPP for site fabrication, installation and inspection of pipe supports. The material in this subsection is generally descriptive and was not assessed in detail by the NRC inspectors. The material presented does indicate that the basic installation program addresses project requirements. Results from the review of Module 11, Section 6 were used to determine how effectively the program actually functioned. The NRC inspectors had no findings relative to the description of this program.

5) Section 5 - Audits and Inspections

This section discusses quality assurance audits and evaluations that have been performed by GPC, and Bechtel Western Power Corporation, addressing pipe stress analysis and pipe supports; and follow up of the Unit 1 findings. It also describes inspections and special evaluations conducted by the NRC. This section discusses findings resulting from these audits relative to the design and construction programs. The section also presents three design and construction problems identified since the completion of Unit 1, Module 11, Assessment. The three concerns were considered significant enough by GPC that the NRC was informed of their potential reportability pursuant to criteria of 10 CFR 50.55 (e).

The findings resulting from design program audits occurred in the design functional areas, such as calculations, drawings, field change requests, design documentation, and design changes. In addition, the NRC inspectors determined that items related to Module 11 and past NRC findings were included in the Readiness Review Team data base for Audits and Inspections.

The NRC inspectors concluded that findings from previous audits and inspections were considered in the Readiness Review Team's assessments for Module 11. The NRC inspectors had no findings in this section.

6) Section 6 - Program Assessment

This section of the Module 11 Report describes activities undertaken to ascertain whether construction and design activities were adequately controlled to ensure implementation of licensing commitments and conformance with project procedures and design requirements related to pipe stress analysis and pipe supports. The section was reviewed in two phases covering Construction Program Verification and Design Program Verification. The inspectors performed detailed evaluations in both areas which are described below.

a. Construction Program Verification

The Construction Program Verification performed by the Readiness Review Team consisted of an assessment of installed safety-related supports that had been As-built, and associated steel. Also, the implementation of design and construction programs with emphasis on significant changes in programs, procedures and organization responsibilities. The program had the objective of determining whether the construction control process functioned effectively and whether it ensured acceptable pipe support installations.

The assessments made and conclusions reached in Readiness Review's verification program were divided into the following major categories:

- o Implementation of licensing commitments,
- o Followup of corrective actions which resulted from the Unit 1 Readiness Review Program,
- o Project performance in accordance with the quality program, procedures, and design requirements.

During the preparation by the Readiness Review Team for construction walkdowns, the programs and procedures for the installers of pipe supports for safety-related systems were reviewed. All programs and procedures were found to be acceptable.

The inspectors reviewed portions of various procedures during the evaluation of the thirteen isometrics and 56 pipe supports described below. The inspectors found that portions of the construction procedures adequately reflect project requirements with one exception. The inspectors determined that the PPP Procedure X-24, Section 4.1 "As-Building Piping Systems and Related Components", was not being properly adhered to with respect to the incorporation of information 'redlined' on pipe support drawings, by field engineers and QC personnel, onto the mylars for the pipe supports by the drafting group. This is discussed in further detail in Section (1) below.

As discussed earlier in this report, the inspectors selected thirteen piping isometrics with 56 associated pipe supports to form a basis for evaluating the Construction and Design Program Verifications. The piping isometrics and pipe supports examined are listed in Table 1. The inspectors examined the construction aspects of all 56 pipe supports by first performing a field inspection on the pipe isometrics and pipe supports. During this inspection, the following information was recorded:

- o Pipe dimensions, component locations and orientation,
- o Support dimensions and support locations,
- o Support configuration,
- o Weld size and type,
- o Support materials,
- o NF component heat numbers,
- o Clearances between pipe and support,
- o Snubber NPT Code Data Plate information, cold set, traceability markings on connecting hardware,
- o Spring support NPT Code Data Plate information, travel stop installation, traceability markings on connecting hardware.

The information recorded during the field inspections was then reviewed against the Line Designation List (LDL), Valve List, Piping and Instrumentation Diagrams (P&IDs), pipe isometrics and support drawings, all associated documents in the P / QC document packages, and other miscellaneous documents. The documents included in the PPP QC packages were Process Sheets, MFCRBs, Authorizations to Continue Work (ATCWs), DRs, DCN-Rs, Snubber and Strut Checklists, Weld Process Sheets, and Weld Rod Requisition Tickets. Among other miscellaneous construction documents reviewed were Requests for Support Removal, Liquid Penetrant Examination Records, Material Inspection Reports, Maintenance Work Orders, Certificates of Compliance, and Certified Mill Test Reports.

Based on the inspection of pipe supports and associated documentation, the inspectors found that the pipe support installations were generally consistent with the documentation and in accordance with project requirements.

The inspectors did, however, identify several deficiencies in the construction program, which are described as follows:

- (1) During the review of the as-built information gathered in the field, and comparing the information to the PPP Process Packages for the individual pipe supports, it was noted on five occasions that all the information that was "redlined" per PPP Procedure X-24, "As-Building Piping Systems and Related Components",

Section 4.1, was not properly incorporated onto the Mylars. The following discrepancies were found to be properly 'redlined' and documented on a copy of the pipe support drawing in the PPP Process Package, but were outside the tolerance of PPP Procedure X-04, and not incorporated into the Mylars.

- o V2-1204-014-H004, the correct size of item 'b'.
- o V2-1204-014-H006, the dimension from the centerline W4 to the centerline of the embedded plate.
- o V2-1208-005-H007, the dimension for item #4 was shown on the drawing as 3 5/8", the inspectors measured in the field and the 'redline' drawing, both indicated that the dimension was 5 1/2".
- o V2-1208-145-H017, the pin-to-pin dimension of the spring can, drawing shows 12'-10 5/16", and the 'redline' and the dimension the inspectors measured was 12'-11".
- o V2-1208-145-H016, the Bill of Materials shows item #5 as 2" wide, the inspectors measured the dimension as 8 3/4", this is the same dimension as the 'redline' drawing.

This matter of discrepancies between 'redline' information and final pipe support drawings has been previously identified by internal audits performed by the licensee. An audit, documented in an internal Westinghouse memo, from V-SAMU As-Built Completion Group to R. W. Braddy and M.W. Barlow, dated March 15, 1988, identified similar discrepancies during a two stage audit. The conclusion was that all the supports were found to be acceptable, but that three had a slight reduction in margin of safety. In a PPP memo, from B.L. Edwards to C.W. Rau, dated February 10, 1988, PPP listed actions to be taken to minimize future occurrences.

- (2) The following drawings, both pipe support and P&IDs were found to have discrepancies between the actual condition in the field and the drawing; or pertinent information was missing from support drawing.
- o P&ID 2X4DB122, shows a line, designated as Line 006-8", (coordinate C-5), and just to the left of T 0613, should be Line 008-8".
  - o V2-1208-055-H052, shows the angle iron, item 5, in the wrong orientation.

- o V2-1208-055-H014, in the Location Plan, the vertical pipe is shown as going in the (-)Y direction, in the field it is going in the (+)Y direction.
  - o V2-1208-215-H003, -H004, -H005, all three drawings did not have a locating dimension for the attached support (baby) in relation to a connection point on the parent support. This is contrary to PPP Procedure X-24, "As-Built Piping Systems and Related Components", Section 6.6.
- (3) The following pipe supports were found to have dimensions on the drawings that differed from the dimensions measured in the field by the inspectors. The dimensions are outside the tolerance of PPP Procedure IX-50, "Pipe Support Field Installation and Fabrication Procedure", Section 6.2.6.G.
- o V2-1208-255-H002, the drawing shows the dimension from the centerline of item #2 to the centerline of the pipe as 1'-4 1/4" ACT., the inspectors measured 1'-2 1/4".
  - o V2-1204-063-H004, the location of the attachment for V2-1204-201-H002, item #a, to the embed plate, shows the dimension from the right side of the embed plate to the attachment as 2 3/8", the inspectors measured 3 1/16".
- (4) The following drawings had discrepancies between the information obtained in the field and the information on the drawings. During the review of PPP Process packages for the three drawings, it was found that the correct information was noted somewhere in the package, but was not incorporated onto the drawings. (Note: the correct notation of the information was not on the 'redline' drawings.)
- o Isometric 2K3-1208-146-01, Detail 2 & 3, indicate a class change from 212/FG0, on Line 1208-145-4" to 414/FG4, on Line 1208-A20-1/2". The Line Designation List (LDL) shows 1208-A20-1/2" as 424/FG4. DCN-R #7, dated 2-3-86, changed the line to 414/FG4.
  - o V2-1208-145-H017, the location of the beam attachment on the drawing shows the 'as-built' dimension as 1'-3 1/2", documentation in the Process package and the Final Inspection Report, both show the dimension to be 1'-2 3/4".

- o Isometric 2K3-1205-006-01, from DCN #8, the class information was not transferred correctly to the isometric. Also, not all the information from FEDCNR-2262, was transferred to the 'as-built' isometric.
- (5) The following PPP Process Packages, had documentation in the package that did not correctly reflect what was in the field or was confusing.
- o V2-1205-004-H016, in the process package, the 'Strut Reconciliation Report" (SRR), of 5-26-87, indicates two struts were installed, SRR of 10-14-86, shows one strut and SRR of 5-18-88, indicates that two struts were installed. The pipe support drawing, (R/3), shows one strut. There is also a discrepancy of the offset angles, in SRR of 10-14-86, it indicates 3 degrees, SRR of 5-26-87, indicates 2 degrees.
  - o V2-1205-006-H014, the Process Package has two different issue tickets for the spring can that was installed, both for the same serial number of BC15066, they also indicate two different spring can sizes.
- (6) The NRC inspectors while performing the inspection in the field noted a discrepancy with respect to pipe support V2-1204-063-H007. The support was designed and the drawing located the support on a 4" riser, at elevation 208'-8", and 3'-2" West of Column A3. The pipe support was actually installed at the correct elevation, but on a different riser, approximately 1'-11", West of Column A3. The pipe support, at various times was inspected no less than three times. PPP has issued DR PP-18138, for disposition of this problem.

The discrepancies, in the above six items between support installation, design information, construction documentation and QC documentation is a violation of 10 CFR 50, Appendix B, Criterion V, and is identified as Violation 425/88-19-01 - Failure to Follow Procedures, Resulting in Errors in Pipe Support QC and Design Documentation.

- (7) During the inspection of V2-1204-063-H005, and during subsequent discussions with both PPP and BWPC personnel, it was determined that the spring can installed for this support was very close to becoming topped out. Therefore, it was agreed upon, that the spring can would be monitored during hot functional

testing, and during the process of setting the spring to its proper 'hot setting.' This item will then be followed as Inspector Followup Item 50-425/88-19-02, "Potential Problems with Spring Can Travel."

b. Design Program Verification

The Design Program Verification performed by the Readiness Review Team focused on evaluation of the pipe stress analysis activities and design of pipe supports. Their assessment in part was intended to evaluate the compliance of design change activities with engineering procedure controls. The RR review emphasized the evaluation of conformance of as-built data and conformance of installation and data collection activities with quality program requirements.

The RR group intended for the assessment samples to be selected from the same systems evaluated for Module 4, however, since the sequencing of analytical and reconciliation work was controlled by the turnover schedule, the assessment sample was altered and limited. The NRC inspectors found that the RR sample covered all the areas needed to evaluate the module topic, however, it was difficult to do a complete vertical slice through their assessment, in order to draw conclusions on the overall program. Therefore, the NRC inspectors were not able to efficiently use the RR review groups sample in their review, and chose a completely independent sample for review.

Documents included in the Readiness Review Team's review and results of the review were divided into the following major categories:

- o Pipe Stress Analysis Packages,
- o Pipe Support Calculations,
- o Pipe Support Drawings,
- o Design Change and Nonconformance Documents,

The NRC inspectors examined all of the foregoing topics in their review. The approach used by the inspectors in their examination was directed toward evaluating the same equipment, piping, and supports, from the beginning of design to the completion of construction. This was accomplished by first selecting a set of thirteen piping isometrics to form a basis for an assessment of both the Design and Construction Program Verifications. The piping isometrics were chosen to obtain a diversity of pipe sizes,

pipe classes, locations, and systems. None of the thirteen piping isometrics selected were included in Readiness Review's program. The thirteen isometrics chosen had a total of 56 associated pipe supports. Included in this support sample were miscellaneous steel supports, pipe straps, snubbers, struts, and spring supports. Of these 56 supports, only two pipe support drawings were within Readiness Review's program. The piping isometrics and pipe supports selected for evaluation are listed Table 1. All of the isometrics and pipe supports were evaluated in NRC Region II's review of the Construction Program Verification, and a portion of the design documents associated with these isometrics were examined in the review of the Design Program Verification. The design documents examined by NRC inspectors are indicated in Table 1. The NRC assessment of design documentation is reported as follows:

(1) Pipe Stress Analysis Packages

The following calculation packages were examined for completeness, inter-discipline coordination, conformance to design criteria and project requirements, consistency with drawings and installation, and technical adequacy:

- o BJ-01-706, R/2
- o BG-01-717, R/1
- o BC-00-718, R/1
- o BC-00-725, R/0

Observations made relative to the stress analysis review include:

- o The piping configuration, location of components in the line and locations of supports, used in the analysis was consistent with the isometric, the installation and project tolerances, except that pipe support V2-1204-063-H007, was installed on the wrong pipe. See discussion in Section 2.C.6).a.(6), of this report.
- o Stress limits used were in accordance with ASME Section III Class 2 criteria for the Class 2 piping.
- o Damping values used were in accordance with Regulatory Guide 1.61.
- o Load combinations used were in accordance with Design Criteria DC-1017 and NUREG-0484.



- o Stresses for the faulted condition were within allowances specified in ASME Code Case 1606-1.
- o The valve weights and orientations used in the analysis were consistent with the drawings and installation.
- o The design temperature and pressure, operating temperature and pressure, and pipe material were consistent with parameters given in the Line Designation List.
- o The seismic response spectra used in the analysis corresponded to the proper building and elevation.
- o The calculations for thermal anchor movements were correct and the movements were incorporated in the analysis. The inspectors found for Isometric drawing 2K3-1204-014-01, calculation BJ-01-706, a portion of Page 7 was missing in the calculation, indicating the thermal anchor movements used in the calculation.
- o The calculated stresses were within ASME Section III Class 2 allowances and deflections at support locations were less than the allowable for both small and large bore piping.

(2) Pipe Support Calculations

The pipe support calculation packages listed in Table 1, were examined for completeness, inter-discipline coordination, conformance to design criteria and project requirements, consistency with drawings and installation, and technical adequacy. All of these pipe supports are contained in the piping isometrics reviewed in the Construction Verification Review, discussed in Section 2.C.6).a.

Observations made relative to these pipe support calculations include:

- o Design loads and displacements were correctly transferred from the pipe stress calculations to the pipe support calculations.
- o A friction load was included whenever the thermal movement at a support exceeded 1/16 inch.
- o The structural members used in the analyses corresponded in size and material with the drawings and installation.

- o That design assumptions were properly noted in the calculation package. The inspector found that for pipe support V2-1204-014-H006, that the calculation for the embeded plate, that it should have been noted that the assumptions the engineer used, when the reduced faulted loads, used in the calculation, were indeed compared to the upset loads.
- o The calculated stresses in miscellaneous steel were within allowances of the American Institute of Steel Construction, and stresses in ASME Section III Subsection NF components were within NF allowances.

(3) Pipe Support Drawings

The examination of pipe support drawings was performed in conjunction with the review of pipe support calculations and the evaluation of the Construction Program Verification. Therefore, all of the pipe supports listed in Table 1 were included in the pipe support drawing review. The drawings were reviewed for completeness, appropriate approvals, drafting clarity, and consistency with project requirements.

The only deficiency identified in the drawing review were those noted in the Construction Verification Review Section 2.C.6).a of this report.

(4) Design Change and Nonconformance Documents

Based on the information presented in this report, Mechanical Field Change Requests (MFCRs), DCN-Rs, and Deviation Reports (DRs), were included in the many of the 56 pipe support packages for the thirteen piping isometrics evaluated by the NRC Region II inspectors. These design change documents were examined by the NRC Region II inspectors for the following attributes:

- o Proper disposition and approval,
- o Appropriate technical justification,
- o Correct incorporation into drawings.

The NRC inspectors identified no findings during the examination of the sample design change documentation.

c. Findings

Subsection 6.5 of the Module 11 Report presents 8 findings disclosed by the Readiness Review Team in the Design Program Verification. Among these findings there were no Level I, one Level II, and seven Level III findings. The NRC Region II inspectors performed an evaluation on the one Level II finding (2RRF-001-002).

- o Finding 2RRF-001-002, Level II, was in reference to two PPP procedures IX-50, and IX-65. The concern was the lack of clarity with respect to the appropriate responsibilities and authority of PPP field engineers, QC inspectors, and QA engineers. The procedures have been revised and appropriate training has been conducted.

The NRC inspectors identified no findings during the examination of the Readiness Review Findings in the Construction and Design Program Verification.

3. Exit Interview

The inspection scope and findings were summarized on July 14, 1988, with those persons indicated in Paragraph 1. The inspector described the areas inspected and discussed in detail the inspection findings. No dissenting comments were received from the licensee.

Violation 425/88-19-01, Failure to Follow Procedures, Resulting in Errors in Pipe Support QC and Design Documentation. See Paragraph 2.C.6).a.

Inspector Followup Item, 50-425/88-19-02, Potential Problems with Spring Can Travel. See Paragraph 2.C.6).a.(7).

The licensee did identify as proprietary materials various documents for review by the inspector during this inspection, but no proprietary information is contained in this report.

4. Acronyms and Initialisms

AISC	American Institute of Steel Construction
ANSI	American National Standards Institute
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ATCW	Authorization to Continue Work
AWS	American Welding Society
BWPC	Bechtel Western Power Company
CD	Civil Deviation Report
CMTR	Certified Materials Test Report
COC	Certificate of Compliance
DBE	Design Basis Earthquake
DC	Design Criteria (Bechtel)
DCN-R	Drawing Change Notice-Resident

DR	Deviation Report
FSAR	Final Safety Analysis Report
GDC	General Design Criteria
GPC	Georgia Power Company
IDR	Independent Design Review
IE	Office of Inspection and Enforcement
IEB	Inspection and Enforcement Bulletin
INPO	Institute of Nuclear Power Operations
LDL	Line Designation List
MFCR	Mechanical Field Change Request
MWO	Maintenance Work Order
NDE	Non-Destructive Examination
NRC	Nuclear Regulatory Commission
NRR	Office of Nuclear Reactor Regulation
NSSS	Nuclear Steam Supply System
OBE	Operational Basis Earthquake
P&ID	Piping and Instrumentation Diagram
PPP	Pullman Power Products
PQR	Procedure Qualification Record
PWR	Pipe Whip Restraint
QA	Quality Assurance
QC	Quality Control
RRF	Readiness Review Finding
RRT	Readiness Review Team
SER	Safety Evaluation Report
SRP	Safety Review Plan
SSER	Supplement Safety Evaluation Report
VEGP	Vogtle Electric Generating Plant
V-SAMU	Vogtle Structural Analysis Mobile Unit
VWAC	Visual Weld Acceptance Criteria
WPS	Welding Procedure Specification

TABLE

P&ID DRAWING NUMBER SYSTEM and BUILDING	PIPING ISOMETRICS	PIPING ISOMETRICS INSPECTED BY		STRESS ANALYSIS PROBLEM NUMBER	STRESS ANALYSIS REVIEWED BY		LINE NUMBER AND SAFETY/ PIPING CLASS	PIPE SUPPORTS	SUPPORTS CALCULATION REVIEWED		SUPPORTS INSPECTED BY		PPP SUPPORT QC DOCUMENTATION REVIEWED BY NRC	
		NRC	RRT		NRC	RRT			NRC	RRT	NRC	RRT		
2X4DB121, R/22 Safety Injection Auxiliary Building	2K3-1204-025-01, R/4	YES	NO	BJ-01-706, R/2	YES	NO	2-1204-014-4" Q212/GGO	V2-1204-014-H007 R/2	YES	NO	YES	NO	YES	
								V2-1204-014-H008 R/3	YES	YES	YES	NO	YES	
	2K3-1204-014-01, R/3	YES	NO	BJ-01-706, R/2	YES	NO	2-1204-014-4" Q212/GGO	V2-1204-014-H004 R/2	YES	NO	YES	NO	YES	
								V2-1204-014-H005 R/2	YES	NO	YES	NO	YES	
								V2-1204-014-H006 R/2	YES	NO	YES	NO	YES	
2X4DB114, R/19 Chemical and Volume Control Auxiliary Building	2K4-1208-055-02, R/6	YES	NO	BG-02-905	NO	NO	2-1208-055-3" Q212/HGO	V2-1208-055-H044 R/2	NO	NO	YES	NO	YES	
								V2-1208-055-H045 R/2	NO	NO	YES	NO	YES	
								V2-1208-055-H046 R/2	NO	NO	YES	NO	YES	
								V2-1208-055-H048 R/4	NO	NO	YES	NO	YES	
								V2-1208-055-H049 R/2	NO	NO	YES	NO	YES	
								V2-1208-055-H050 R/2	NO	NO	YES	NO	YES	
								V2-1208-055-H051 R/2	NO	NO	YES	NO	YES	
								V2-1208-055-H052 R/2	NO	NO	YES	NO	YES	
		2K4-1208-215-01, R/5	YES	NO	BG-02-905	NO	NO	2-1208-215-3" Q212/HGO	V2-1208-215-H001 R/3	NO	NO	YES	NO	YES
	V2-1208-215-H002 R/3								NO	NO	YES	NO	YES	
	V2-1208-215-H003 R/2								NO	NO	YES	NO	YES	
	V2-1208-215-H004 R/2								NO	NO	YES	NO	YES	
								V2-1208-215-H005 R/5	NO	NO	YES	NO	YES	
	2K4-1208-005-02, R/6	YES	NO	BG-02-905	NO	NO	2-1208-255-3" Q212/FGO	V2-1208-255-H001 R/3	NO	NO	YES	NO	YES	
V2-1208-255-H002 R/2								NO	NO	YES	NO	YES		
V2-1208-055-H005 R/2								NO	NO	YES	NO	YES		
V2-1208-005-H006 R/3								NO	NO	YES	NO	YES		
							V2-1208-005-H007 R/2	NO	NO	YES	NO	YES		
	2K4-1208-005-01, R/6	YES	NO	BG-02-905	NO	NO	2-1208-005-3" Q212/FGO	V2-1208-005-H002 R/2	NO	NO	YES	NO	YES	
V2-1208-005-H001 R/2								NO	NO	YES	NO	YES		
2X4DB-119, R/15 Safety Injection Auxiliary Building	2K3-1204-063-02, R/5	YES	NO	BG-01-903	NO	NO	2-1204-057-4" 2-1204-063-4" 2-1204-063-3" Q212/FGO	V2-1204-063-H003 R/2	NO	NO	YES	NO	YES	
								V2-1204-063-H004 R/2	NO	NO	YES	NO	YES	
								V2-1204-063-H005 R/4	NO	NO	YES	NO	YES	
								V2-1204-063-H006 R/2	NO	NO	YES	NO	YES	
								V2-1204-063-H007 R/3	NO	NO	YES	NO	YES	
								V2-1204-063-H009 R/2	NO	NO	YES	NO	YES	
								V2-1204-063-H010 R/2	NO	NO	YES	NO	YES	
								V2-1204-063-H012 R/2	NO	NO	YES	NO	YES	
								V2-1204-063-H013 R/2	NO	NO	YES	NO	YES	
								V2-1204-063-H001 R/2	NO	NO	YES	NO	YES	
								V2-1204-057-H039 R/2	NO	NO	YES	NO	YES	

P&ID DRAWING NUMBER SYSTEM and BUILDING	PIPING ISOMETRICS	PIPING ISOMETRICS INSPECTED BY		STRESS ANALYSIS PROBLEM NUMBER	STRESS ANALYSIS REVIEWED BY		LINE NUMBER AND SAFETY/ PIPING CLASS	PIPE SUPPORTS	SUPPORTS CALCULATION REVIEWED		SUPPORTS INSPECTED BY		PPP SUPPORT QC DOCUMENTATION REVIEWED BY NRC		
		NRC	RRT		NRC	RRT			NRC	RRT	NRC	RRT			
2X4DB116-2, R/16 Chemical and Volume Control, Auxiliary Building	2K3-1208-139-01, R/12	YES	NO	BG-01-717, R/1	YES	NO	2-1208-139-6" Q212/FGO	V2-1208-139-H016 R/3	YES	NO	YES	NO	YES		
								V2-1208-139-H014 R/3	YES	NO	YES	NO	YES		
								V2-1208-139-H003 R/4	YES	NO	YES	NO	YES		
								V2-1208-139-H007 R/5	YES	NO	YES	NO	YES		
								V2-1208-139-H008 R/5	YES	NO	YES	NO	YES		
	2K3-1208-146-01, R/15	YES	NO	BG-01-903, R/1	NO	NO	2-1208-145-4" 2-1208-146-3" 2-1208-A20-1/2" Q212/FGO	V2-1208-145-H005 R/5	NO	NO	YES	NO	YES	NO	YES
								V2-1208-145-H006 R/7	NO	NO	YES	NO	YES		
								V2-1208-145-H013 R/4	NO	NO	YES	NO	YES		
								V2-1208-145-H014 R/1	NO	NO	YES	NO	YES		
								V2-1208-145-H015 R/1	NO	NO	YES	NO	YES		
2X4DB122, R/20 Residual Heat Removal Auxiliary Building	2K3-1205-004-02, R/7	YES	NO	BC-00-718, R/1	YES	NO	2-1205-004-14" Q212/HGO	V2-1205-004-H015 R/4	YES	NO	YES	NO	YES	NO	YES
								V2-1205-004-H010 R/3	YES	NO	YES	NO	YES		
	2K3-1205-004-01, R/13	YES	NO	BC-00-718, R/1	YES	NO	2-1205-004-14" Q212/HGO	V2-1205-004-H016 R/3	YES	NO	YES	NO	YES	NO	YES
								V2-1205-004-H019 R/4	YES	NO	YES	NO	YES		
								V2-1205-004-H001 R/2	YES	NO	YES	NO	YES		
	2K3-1205-006-01, R/12	YES	NO	BC-00-725, R/0	YES	NO	2-1205-006-8" Q212/HGO	V2-1205-006-H009 R/4	YES	NO	YES	NO	YES	NO	YES
								V2-1205-006-H001 R/5	YES	NO	YES	NO	YES		
	2K3-1205-006-02, R/12	YES	NO	BC-00-725, R/0	YES	NO	2-1205-006-2" Q212/HGO	V2-1205-006-H014 R/6	YES	YES	YES	NO	YES	NO	YES

## AREA PERFORMANCE

### CATEGORY 3

Licensee management attention to and involvement in the performance of nuclear safety or safeguards activities are not sufficient. The licensee's performance does not significantly exceed that needed to meet minimal regulatory requirements. Licensee resources appear to be strained or not effectively used. NRC attention should be increased above normal levels.