UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

February 9, 2006

George A. Williams, Site Vice President
Grand Gulf Nuclear Station
Entergy Operations, Inc.
P.O. Box 756
Port Gibson, MS 39150

SUBJECT: GRAND GULF NUCLEAR STATION - NRC INTEGRATED INSPECTION REPORT 05000416/2005005

Dear Mr. Williams:

On December 31, 2005, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Grand Gulf Nuclear Station. The enclosed inspection report documents the inspection findings, which were discussed on January 10, 2006, with you and members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, the NRC identified one finding which was evaluated under the risk significance determination process as having very low safety significance (Green). The NRC has also determined there was a violation associated with this finding. However, because the violation was of very low safety significance and the issue was entered into the licensee's corrective action program, the NRC is treating the finding as a noncited violation, consistent with Section VI.A.1 of the NRC Enforcement Policy. The noncited violation is described in the subject inspection report. If you contest the noncited violation or its significance, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Grand Gulf Nuclear Station facility.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

/RA/

Kriss M. Kennedy, Chief
Project Branch C
Division of Reactor Projects

Docket: 50-416
License: NPF-29

Enclosure:
Inspection Report 05000416/2005005
w/Attachment: Supplemental Information

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SUNSI Review Completed: wcw ADAMS: : Yes ☐ No Initials: wcw
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RIV:SRI:DRP/C	RI:DRP/C	C:SPE:DRP/C	C:DRS/EB1	C:DRS/PSB
MASitek acting	AJBarrett	WCWalker	JAClark	MPShannon
E - WCWalker	***E - WCWalker***	***/RA/***	***/RA/***	***LJSmith for***
1/25/06	1/25/06	1/25/06	1/25/06	1/27/06

C:DRS/OB	C:DRS/EB2	C:DRP/C	
ATGody	LJSmith	KMKennedy	
LJSmith for		***/RA/***	
1/27/06	1/27/06	2/9/06	

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket:	50-416
License:	NPF-29
Report:	05000416/2005005
Licensee:	Entergy Operations, Inc.
Facility:	Grand Gulf Nuclear Station
Location:	Waterloo Road Port Gibson, Mississippi 39150
Dates:	October 1 through December 31, 2005
Inspectors:	G. Miller, Senior Resident Inspector M. Sitek, Senior Resident Inspector A. Barrett, Resident Inspector W. McNeill, Reactor Inspector J. Reynoso, Reactor Inspector S. Rutenkroger, Reactor Inspector G. Guerra, Health Physicist
Approved By:	Kriss M. Kennedy, Chief Project Branch C Division of Reactor Projects
Attachment:	Supplemental Information

SUMMARY OF FINDINGS

IR 05000416/2005005; 10/1/05 - 12/31/05; Grand Gulf Nuclear Station; Integrated Resident and Regional Report; Refueling and Other Outage Activities

The report covered a 13-week period of inspection by resident inspectors and announced inspections by three engineering inspectors, and a regional health physics inspector. The inspectors identified one Green finding, which was determined to be a noncited violation. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using the Inspection Manual Chapter 0609 "Significance Determination Process." Findings for which the significance determination process does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC-Identified Findings

Cornerstone: Mitigating Systems

Green. The inspectors identified a Green noncited violation of Technical Specification 5.4.1(a) for the failure of licensee personnel to perform an adequate drywell closeout inspection for foreign material. On October 13, 2005, licensee personnel failed to follow Integrated Operating Instruction 3-1-01-1, "Cold Shutdown to Minimum Generator Load," Attachment II, steps 2, 16, 21, and 34, of the drywell closeout sheet. The inspectors conducted a general inspection of the drywell and discovered approximately 50 foreign material items totaling a volume of approximately 1.5 cubic feet in the drywell floor area. This foreign material included plastic wrappings and tie-wraps, articles of protective clothing, loose paper, metal objects, and other miscellaneous material. This issue was entered into the licensee's corrective action program as CR-GGN-2006-00236.

The finding is more than minor because it is associated with the mitigating systems cornerstone attribute of equipment performance and affects the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have very low safety significance because there was no loss of safety function of the emergency core cooling system suction strainers. The cause of the finding is related to the crosscutting element of human performance in that licensee personnel did not follow the drywell closeout procedure (Section 1R20).

B. Licensee-Identified Findings

None

REPORT DETAILS

Summary of Plant Status

Grand Gulf Nuclear Station was in a refueling outage at the beginning of the inspection period. The plant returned to full power on October 21, 2005. For the remainder of the inspection period, the plant remained at or near full rated thermal power except for a planned control rod pattern adjustment and power suppression testing to identify a fuel failure on December 29, 2005.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R04 Equipment Alignments (71111.04)

a. Inspection Scope

Partial System Walkdowns. The inspectors: (1) walked down portions of the three listed risk important systems and reviewed plant procedures and documents to verify that critical portions of the selected systems were correctly aligned; and (2) compared deficiencies identified during the walkdown to the licensee's Updated Final Safety Analysis Report (UFSAR) and Corrective Action Program to ensure problems were being identified and corrected.

- On October 12, 2005, an inspector walked down Train B of the standby service water system while Train A was out of service for planned maintenance activities.
- On December 1, 2005, an inspector walked down the Division I emergency diesel generator while the Division II diesel generator was out of service for unplanned maintenance.
- On December 12, 2005, an inspector walked down the reactor core isolation cooling system while the Division III diesel generator was out of service for planned maintenance.

The inspectors completed three samples.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

a. Inspection Scope

Quarterly Inspection. The inspectors walked down the six listed plant areas to assess the material condition of active and passive fire protection features and their operational lineup and readiness. The inspectors: (1) verified that transient combustibles and hot work activities were controlled in accordance with plant procedures; (2) observed the condition of fire detection devices to verify they remained functional; (3) observed fire suppression systems to verify they remained functional and that access to manual actuators was unobstructed; (4) verified that fire extinguishers and hose stations were provided at their designated locations and that they were in a satisfactory condition; (5) verified that passive fire protection features (electrical raceway barriers, fire doors, fire dampers, steel fire proofing, penetration seals, and oil collection systems) were in a satisfactory material condition; (6) verified that adequate compensatory measures were established for degraded or inoperable fire protection features and that the compensatory measures were commensurate with the significance of the deficiency; and (7) reviewed the UFSAR to determine if the licensee identified and corrected fire protection problems.

- Auxiliary building passage area (Room 1A401)
- Auxiliary building north passage area (Room 1A417)
- Division II switchgear room (Room 1A207)
- Train B residual heat removal system heat exchanger room (Room 1A206)
- Division II switchgear room (Room OC215)
- Lower inverter room (Room OC407)

Documents reviewed by the inspectors included:

- Procedure 10-S-03-4, "Fire Protection: Control of Combustible Material," Revision 13

- Grand Gulf Nuclear Station Fire Pre-plans, Revision 15

The inspectors completed six samples.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07A)

a. Inspection Scope

The inspectors reviewed licensee programs, verified performance against industry standards, and reviewed critical operating parameters and maintenance records for the Train B heat exchanger of the residual heat removal system. The inspectors verified that: (1) performance tests were satisfactorily conducted for heat exchangers/heat sinks

and reviewed for problems or errors; (2) the licensee utilized the periodic maintenance method outlined in EPRI NP-7552, "Heat Exchanger Performance Monitoring Guidelines;" (3) the licensee properly utilized biofouling controls; (4) the licensee's heat exchanger inspections adequately assessed the state of cleanliness of their tubes; and (5) the heat exchanger was correctly categorized under the Maintenance Rule. The inspectors also verified that the testing and documentation that was conducted on November 2, 2005, was performed in accordance with Special Test Instruction GG-2005-002, "Residual Heat Removal B Heat Exchanger Thermal Performance Test," Revision 0. Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program

Quarterly Inspection (71111.11Q)

a. Inspection Scope

On November 22, 2005, the inspectors observed testing and training of senior reactor operators and reactor operators to identify deficiencies and discrepancies in the training, to assess operator performance, and to assess the evaluator's critique. The training scenario involved an unisolable loss of coolant accident combined with a loss of offsite power. Documents reviewed by the inspectors included:

- GSMS-LOR-00154, "Reactor Level Transmitter Failure / Recirculation Pump Downshift / LOP / LOCA," Revision 9

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed performance-based problems involving two selected in-scope structures, systems or components (SSCs) to assess the effectiveness of the licensee's Maintenance Rule Program. Reviews focused on: (1) proper Maintenance Rule scoping in accordance with 10 CFR 50.65; (2) characterization of failed SSCs; (3) safety significance classifications; (4) 10 CFR 50.65 (a)(1) and (a)(2) classifications; and (5) the appropriateness of performance criteria for SSCs classified as (a)(2) and goals

and corrective actions for SSCs classified as (a)(1). Also, the inspectors reviewed the system functional failures for the last 2 years. The following systems were reviewed:

- Standby liquid control system (C41)
- Instrument air system (P53)

The inspectors completed two samples.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

a. Inspection Scope

Throughout the inspection period, the inspectors reviewed weekly and daily work schedules to determine when risk-significant activities were scheduled. The inspectors discussed four selected activities with operations and work control personnel regarding risk evaluations and overall plant configuration control. The inspectors discussed emergent work issues with work control center personnel and reviewed the prioritization of scheduled activities. The inspectors verified the performance of plant risk assessments related to planned and emergent maintenance activities as required by 10 CFR 50.65(a)(4) and plant Procedure 01-S-18-6, "Risk Assessment of Maintenance Activities," Revision 3. Specific maintenance work orders (WO) reviewed during this period included:

- WO 55743, Reactor recirculation system Valve B33F067A replacement
- WO 75341, Service water system Valve P47F002B repair
- WO 77639, Division II emergency diesel generator troubleshooting
- WO 38968, Division III emergency diesel generator maintenance outage

The inspectors completed four samples.

b. Findings

No findings of significance were identified.

1R14 Operator Performance During Nonroutine Evolutions and Events (71111.14)

a. Inspection Scope

The inspectors reviewed operator response to one nonroutine event during the inspection period. In addition to direct observation of operator performance, the inspectors reviewed procedural requirements, operator logs, and plant computer data to determine whether the response was in accordance with plant procedures and training. The following event was reviewed:

- On November 6, 2005, the inspectors observed control room personnel as they responded to an apparent addition of negative reactivity from an unknown source. The inspectors reviewed operator procedural compliance and response throughout the event. At the conclusion of this inspection period, the licensee determined that a resin intrusion was the most likely cause of the event. The licensee is performing inspections of resin retention elements in the eight condensate demineralizers as a corrective action. As of the end of this inspection period, one condensate filter demineralizer had been inspected by the licensee, with no identified issues.

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors selected two operability evaluations performed by the licensee during the report period involving risk-significant SSCs. The inspectors evaluated the technical adequacy of the operability determinations, determined whether appropriate compensatory measures were implemented, and determined whether the licensee considered all other pre-existing conditions, as applicable. Additionally, the inspectors evaluated the adequacy of the licensee's problem identification and resolution program as it applied to operability evaluations as specified in Procedure 01-S-06-44, "Operability Assessment," Revision 106. Specific operability evaluations reviewed are listed below.

- CR-GGN-2005-4495, Reactor core isolation cooling system flow controller
- CR-GGN-2005-5084, Division II emergency diesel generator lube oil pressure

The inspectors completed two samples.

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds (71111.16)

a. Inspection Scope

The inspectors reviewed the cumulative effects of all open operator workarounds and evaluated in detail an operator workaround associated with a control air leak on the Division I diesel generator as identified in CR-GGN-2005-0673. The inspectors evaluated the manual operations for effects related to the following attributes: (1) the reliability, availability, and potential to misoperate the system; (2) the ability of operators to respond in a correct and timely manner to operate the equipment, and (3) the

potential for affecting supporting SSCs. The inspectors also assessed whether operator workarounds were being identified and entered into the corrective action program at an appropriate threshold.

The inspectors completed two samples.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17)

.1 Resident Inspector Baseline Annual Inspection

a. Inspection Scope

The inspectors reviewed a modification that replaced the condensate storage tank level transmitters and changed the scales and setpoints of the associated low level trip units. The inspectors ensured that the design bases, licensing bases, and performance capability of risk significant SSCs were not degraded by the modification. The inspection included a review of the work package and a walkdown of the field work after installation of the modification. The inspectors also reviewed the results of the postmaintenance testing.

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

.2 Biennial Permanent Plant Modifications Inspection

a. Inspection Scope

The inspection procedure requires a minimum sample size of five plant modifications. The inspectors reviewed 13 permanent plant modification packages and their associated documentation, such as 10 CFR 50.59 safety evaluations, applicability determinations, and screenings, to verify that the modifications were performed in accordance with regulatory requirements and plant procedures. The inspectors reviewed procedures governing plant modifications to evaluate the effectiveness of the programs for implementing modifications to risk-significant SSC's, such that these changes did not adversely affect the design and licensing basis of the facility. The inspectors have listed in the attachment to this report the procedures and permanent plant modifications reviewed. The inspectors interviewed the cognizant design and system engineers for the identified modifications to gain their understanding of the modification packages. In addition to the plant modification packages referred to as engineering requests, the inspectors reviewed three procurement engineering evaluations for the same objectives.

The inspectors evaluated the effectiveness of the licensee's corrective action process to identify and correct problems concerning the performance of permanent plant modifications. In this effort, the inspectors reviewed a sample of 10 corrective action reports identified in the attachment to this report of the 65 written since the last inspection in this area. The review included the subsequent corrective actions pertaining to licensee-identified problems and errors in the performance of permanent plant modifications to assure proper resolution of the issues.

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed postmaintenance test procedures and associated testing activities for four selected risk-significant mitigating systems. In each case, the associated work orders and test procedures were reviewed against the attributes in Inspection Procedure 71111.19 to determine the scope of the maintenance activity and to determine if the testing was adequate to verify equipment operability. The reviewed activities were:

- WO 74082, Division II standby diesel generator relay replacement
- WO 59496, Primary containment isolation Valve B21F067C
- WO 51008060, Train B standby gas treatment system
- WO 54902, Train B drywell purge compressor

The inspectors completed four samples.

b. Findings

No findings of significance were identified.

1R20 Refueling and Other Outage Activities (71111.20)

a. Inspection Scope

The inspectors evaluated the licensee's outage activities associated with Refueling Outage 14 to ensure that: risk was considered in developing the outage schedule; administrative risk reduction methodologies were implemented to control plant configuration; mitigation strategies were developed for losses of key safety functions; and the operating license and Technical Specification (TS) requirements were satisfied to ensure defense-in-depth. Specific activities observed included:

- Spent fuel pool cooling operations during low water level conditions

- Reactor water inventory controls during containment upper pool draindown

- Drywell closeout inspections and containment integrity
- Reactor plant heatup and Mode 3 operations
- Reactor startup and Mode 2 operations
- Reactor power ascension and Mode 1 operations
- Turbine synchronization to the grid
- Reviews of the outage safety assessment, Revision 1, and shutdown operations protection plan, Revision 6

b. Findings

Introduction: The inspectors identified a Green noncited violation (NCV) of TS 5.4.1(a) for the failure of licensee personnel to perform an adequate drywell closeout inspection for foreign material.

Description: On October 13, 2005, near the end of Refueling Outage 14, the inspectors were informed by the drywell coordinators that the drywell closeout for foreign material was complete. The inspectors subsequently conducted a general inspection of the drywell and discovered approximately 50 foreign material items totaling a volume of approximately 1.5 cubic feet in the drywell floor area. This foreign material included plastic wrappings and tie-wraps, articles of protective clothing, loose paper, metal objects, and other miscellaneous material. The inspectors reviewed the completed drywell closeout sheet, which is an attachment to Integrated Operating Instruction 03-1-01-1, "Cold Shutdown to Generator Carrying Minimum Load," Revision 131. Steps 2, 16, 21, and 34 of the drywell closeout sheet were initialed as performed, indicating that the licensee's inspection of foreign material in the drywell was complete. The inspectors determined that these steps were performed prior to the inspectors' general inspection of the drywell. The inspectors also reviewed the design calculations for the emergency core cooling system suction strainers and determined that the total amount of foreign material found would not have rendered the strainer inoperable.

The inspectors also found foreign material during the first drywell entry in Refueling Outage 14. A loose, approximately 2' x 2' sized section of clear plexiglass was found on top of the reactor recirculation pump motor. Clear plastic in the containment or drywell is contrary to the requirements in the best practices section of Procedure 01-S-07-44, "Foreign Material Exclusion," Revision 7. The procedure states that all clear material is prohibited from entering the containment unless it is part of permanent equipment, is conspicuously marked, or is restrained with a lanyard. The licensee documented this performance deficiency in CR-GGN-2005-03520 and subsequently removed the plexiglass from the drywell.

The inspectors also reviewed the licensee's corrective action program and determined that a total of 25 condition reports were written during the refueling outage documenting

general foreign material control issues. Of the 25 condition reports, 8 documented concerns on foreign material exclusion practices, 17 identified actual foreign material in exclusion areas, and 4 had minor impacts on plant equipment. The licensee documented the negative trend in foreign material controls in CR-GGN-2005-04306.

Analysis: The performance deficiency associated with this finding involved licensee personnel not following procedures. The finding is more than minor because it is associated with the mitigating systems cornerstone attribute of equipment performance and affects the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Foreign material in the drywell has the potential to adversely impact safety-related equipment. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have very low safety significance because there was no loss of safety function of the emergency core cooling system suction strainers. The cause of the finding is related to the crosscutting element of human performance in that licensee personnel did not follow the drywell closeout procedure.

Enforcement: TS 5.4.1.a requires that written procedures be established, implemented, and maintained covering the activities specified in Appendix A, "Typical Procedures for Pressurized Water reactors and Boiling Water Reactors," of Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operation)," Revision 2, dated February 1978. Regulatory Guide 1.33, Appendix A, Section 2, recommends general plant operating procedures for startup from cold shutdown. Integrated Operating Instruction 03-1-01-1 required that general areas in the drywell be free of loose material. Contrary to this, on October 13, 2005, the drywell coordinators failed to ensure that general areas in the drywell were free of loose material. Because the finding is of very low safety significance and has been entered into the licensee's corrective action program as CR-GGN-2006-00236, this violation is being treated as an NCV consistent with Section VI.A of the Enforcement Policy: NCV 05000416/2005005-01, "Foreign Material in the Drywell."

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed performance of surveillance test procedures and reviewed test data for four selected risk-significant SSCs to assess whether the SSCs satisfied the TSs, UFSAR, Technical Requirements Manual, and licensee procedural requirements and to determine if the testing appropriately demonstrated that the SSCs were operationally ready and capable of performing their intended safety functions. The following tests were inspected:

- 06-OP-1P75-R-0003, "Division I Standby Diesel Generator Functional Test," Revision 110
- 06-OP-1E12-Q-0006, "Residual Heat Removal System B Valve Test," Revision 107

- 06-OP-1E12-Q-0024, "Residual Heat Removal System B Quarterly Functional Test," Revision 109

- 06-OP-1P11-Q-0001, "Quarterly Valve Stroke Time Testing," Revision 110

The inspectors completed four samples.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed the temporary alteration listed below to assess the following attributes: (1) the adequacy of the safety evaluation; (2) the consistency of the installation with the modification documentation; (3) the updating of drawings and procedures, as applicable; and (4) the adequacy of postinstallation testing.

- Temporary Alteration 2005-0039, Installation of a jumper to permit closing the bypass drain valve on Feedwater Heater 6A.

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Observation (71114.06)

a. Inspection Scope

The inspectors observed one simulator based drill conducted on November 28, 2005. The inspectors reviewed the drill scenario to determine if it reflected realistic plant configurations. The inspectors focused on the ability of the emergency response organization to properly classify the simulated emergencies using the emergency action levels, their ability to activate the station emergency plan and procedures, and their ability to make proper and timely notifications as appropriate.

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS2 ALARA Planning and Controls (71121.02)

a. Inspection Scope

The inspector assessed licensee performance with respect to maintaining individual and collective radiation exposures as low as is reasonably achievable (ALARA). The inspector used the requirements in 10 CFR Part 20 and the licensee's procedures required by TSs as criteria for determining compliance. The inspector interviewed licensee personnel and reviewed:

- Current 3-year rolling average collective exposure
- Six outage or on-line maintenance work activities scheduled during the inspection period and associated work activity exposure estimates which were likely to result in the highest personnel collective exposures
- Site-specific ALARA procedures
- ALARA work activity evaluations, exposure estimates, and exposure mitigation requirements
- Intended versus actual work activity doses and the reasons for any inconsistencies
- Person-hour estimates provided by maintenance planning and other groups to the radiation protection group with the actual work activity time requirements
- Dose rate reduction activities in work planning
- Postjob (work activity) reviews
- Assumptions and basis for the current annual collective exposure estimate, the methodology for estimating work activity exposures, the intended dose outcome, and the accuracy of dose rate and man-hour estimates
- Method for adjusting exposure estimates, or replanning work, when unexpected changes in scope or emergent work were encountered
- Records detailing the historical trends and current status of tracked plant source terms and contingency plans for expected changes in the source term due to changes in plant fuel performance issues or changes in plant primary chemistry
- Self-assessments, audits, and special reports related to the ALARA program since the last inspection

- Resolution through the corrective action process of problems identified through postjob reviews and postoutage ALARA report critiques

- Corrective action documents related to the ALARA program and follow-up activities such as initial problem identification, characterization, and tracking

- Effectiveness of self-assessment activities with respect to identifying and addressing repetitive deficiencies or significant individual deficiencies

The inspector completed 10 of the required 15 samples and 5 of the optional samples.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems (71152)

.1 Routine Review of Identification and Resolution of Problems

The inspectors performed a daily screening of items entered into the licensee's corrective action program. This assessment was accomplished by reviewing condition reports, work orders, and work requests and attending corrective action review and work control meetings. The inspectors: (1) verified that equipment, human performance, and program issues were being identified by the licensee at an appropriate threshold and that the issues were entered into the corrective action program; (2) verified that corrective actions were commensurate with the significance of the issue; and (3) identified conditions that might warrant additional follow-up through other baseline inspection procedures.

.2 Semiannual Trend Review

a. Inspection Scope

The inspectors completed a semiannual trend review of repetitive or closely related issues that were documented in condition reports, maintenance WOs, system health reports, and corrective action trend reports to identify trends that might indicate the existence of more safety significant issues. The inspectors' review consisted of the 6-month period from June 1 through December 31, 2005. When warranted, some of the samples expanded beyond those dates to fully assess the issue. The inspectors also reviewed corrective action program items associated with the plant service water radial wells, gas cylinder management, and the standby service water systems. The inspectors compared and contrasted their results with the results contained in the licensee's quarterly trend reports for the second and third quarter of 2005. Corrective actions associated with a sample of the issues identified in the licensee's trend report were reviewed for adequacy. The review also included issues documented outside the

corrective action process, including repetitive and/or rework maintenance lists, departmental problem lists, system health reports, quality assurance audits/surveillances, self-assessment reports, and maintenance rule assessments. Documents reviewed by the inspectors are listed in the attachment.

b. Findings and Observations

No findings of significance were identified. However, during the review the inspectors noted the following trends.

- The inspectors identified a negative trend in the efficiencies and material condition of heat exchangers cooled by the standby service water systems. Specifically, this included the residual heat removal, the control room air conditioning, and the Division III emergency diesel generator heat exchangers.

- The inspectors noted at the end of the inspection period that the licensee continues to have work management issues involving the refurbishment of the plant service water radial wells.

- The inspectors identified several issues involving the management of gas cylinders, including spacing and labeling errors. This trend was not identified by the licensee.

.3 ALARA Review

Section 2OS2 evaluated the effectiveness of the licensee's problem identification and resolution processes regarding exposure tracking, higher than planned exposure levels, and radiation worker practices. The inspector reviewed the corrective action documents listed in the attachment against the licensee's problem identification and resolution program requirements. No findings of significance were identified.

4OA6 Meetings, including Exit

On November 10, 2005, the engineering inspectors presented the results of the biennial permanent plant modifications inspection by telephone to Mr. D. Wiles, Director, Engineering, and other members of his staff, who acknowledged the findings. The inspectors confirmed that proprietary information was not provided or examined during the inspections by the resident inspectors.

On December 8, 2005, the inspector presented the ALARA inspection results to Mr. G. Williams, Vice President, Operations, and other members of your staff who acknowledged the findings. The inspector confirmed that proprietary information was not provided or examined during the inspection.

On January 10, 2006, the resident inspectors presented the inspection results to Mr. G. Williams, Vice President, Operations, and members of his staff, who acknowledged the findings. The inspectors confirmed that proprietary information was not provided or examined during the inspections by the resident inspectors.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

C. Abbott, Supervisor, Quality Assurance
D. Barfield, Manager, Outage
J. Booth, Manager, Outage
C. Bottemiller, Manager, Plant Licensing
R. Bryan, General Manager, Plant Operations
M. Causey, Senior Lead Technical Specialist
R. Collins, Manager, Operations
D. Coulter, Licensing Specialist, Plant Licensing
M. Crawford, Licensing, Specialist
T. Curtis, ALARA Specialist
L. Eaton, Senior Lead Engineer
N. Edney, Supervisor, Radiation Protection
C. Ellsaesser, Manager, Planning and Scheduling
M. Guynn, Manager, Emergency Preparedness
E. Harris, Manager, Corrective Action and Audits
M. Krupa, Director, Nuclear Safety Assurance
M. Larson, Senior Licensing Engineer
N. Mascarella, Engineer
C. Mason, Quality Assurance Auditor
J. Miller, Manager, Training
J. Robertson, Manager, Quality Assurance
M. Rohrer, Manager, System Engineering
F. Rosser, Supervisor, Radiation Protection
R. Sumrall, Emergency Planner
G. Williams, Vice President, Operations
D. Wiles, Director, Engineering
D. Wilson, Supervisor, Design Engineering
R. Wilson, Superintendent, Radiation Protection
P. Worthington, Supervisor, Engineering
E. Wright, Senior Health Physics/Chemistry Specialist
H. Yeldell, Manager, Maintenance

NRC Personnel

W. Walker, Senior Project Engineer, Reactor Project Branch C
R. Azua, Project Engineer, Reactor Project Branch C

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000416/2005005-01	NCV	Foreign Material in the Drywell

LIST OF DOCUMENTS REVIEWED

Procedures

01-S-06-02, "Conduct of Operations," Revision 120

01-S-06-05, "Reportable Events or Conditions," Revision 106

01-S-06-44, "Operability Assessment," Revision 106

01-S-07-44, "Foreign Material Exclusion," Revision 7

01-S-18-06, "Risk Assessment of Maintenance Activities," Revision 3

02-S-01-17, "Control of Limiting Conditions for Operability," Revision 111

04-1-01-P41-1, "Standby Service Water System," Revision 123

04-1-01-E12-1, "Residual Heat Removal System," Revision 126

04-1-01-E51-1, "Reactor Core Isolation Cooling System," Revision 123

04-1-01-P75-1, "Standby Diesel Generator System," Revision 69

05-1-02-V-11, "Loss of Plant Service Water," Revision 26

06-OP-1P75-R-0003, "Division I Standby Diesel Generator Functional Test," Revision 110

06-OP-1E12-Q-0006, "Residual Heat Removal System B Valve Test," Revision 107

06-OP-1E12-Q-0024, "Residual Heat Removal System B Quarterly Functional Test," Revision 109

06-OP-1P11-Q-0001, "Quarterly Valve Stroke Time Testing," Revision 110

08-S-02-75, "Coverage and Control of Refueling Operations," Revision 9

10-S-03-4, "Control of Combustible Materials," Revision 13

17-S-02-301, "NNM Movement and Inventory Control," Revision 2

17-S-05-1, "Local Leakrate Testing Program," Revision 107

CE-P-05.11 "EOOS Model Development and Control," Revision 1

EN-DC-105, "Configuration Management," Revision 2

EN-DC-114, "Project Management," Revision 1

EN-DC-115, "Engineering Response Development,"Revision 7

EN-LI-102, "Corrective Action Process," Revision 1

EN-WM-101, "On-Line Work Management Process," Revision 0

ENS-DC-121, "Maintenance Rule," Revision 2

ENS-LI-101, "10 CFR 50.59 Review Program," Revision 8

ENN-DC-136, "Temporary Alterations," Revision 8

IOI 03-1-01-1, "Cold Shutdown to Generator Carrying Minimum Load," Revision 131

RP-110, ALARA Program, Revision 2

RP-105, Radiation Work Permits, Revision 7

STI GG-2005-002 "Residual Heat Removal B Heat Exchanger Thermal Performance Test," Revision 0

Work Orders/Maintenance Action Items

WO 55743	WO 75341	WO 77639	WO 38968	WO 67016

Condition Reports

CR-GGN-2003-03063	CR-GGN-2005-04154	CR-GGN-2005-05001
CR-GGN-2003-03084	CR-GGN-2005-04196	CR-GGN-2005-05043
CR-GGN-2003-04599	CR-GGN-2005-04306	CR-GGN-2005-05084
CR-GGN-2004-01889	CR-GGN-2005-04350	CR-GGN-2005-05108
CR-GGN-2004-02463	CR-GGN-2005-04399	CR-GGN-2005-05121
CR-GGN-2004-02581	CR-GGN-2005-04495	CR-GGN-2005-05196
CR-GGN-2004-02593	CR-GGN-2005-04497	CR-GGN-2005-05208
CR-GGN-2004-02835	CR-GGN-2005-04499	CR-GGN-2005-05211
CR-GGN-2004-02996	CR-GGN-2005-04528	CR-GGN-2005-05222
CR-GGN-2005-00673	CR-GGN-2005-04547	CR-GGN-2005-05235
CR-GGN-2005-00952	CR-GGN-2005-04552	CR-GGN-2005-05254
CR-GGN-2005-01098	CR-GGN-2005-04592	CR-GGN-2005-05269
CR-GGN-2005-01130	CR-GGN-2005-04640	CR-GGN-2005-05272
CR-GGN-2005-01216	CR-GGN-2005-04665	CR-GGN-2005-05275
CR-GGN-2005-02813	CR-GGN-2005-04704	CR-GGN-2005-05307
CR-GGN-2005-02871	CR-GGN-2005-04773	CR-GGN-2005-05349
CR-GGN-2005-03242	CR-GGN-2005-04818	CR-GGN-2005-05365
CR-GGN-2005-03718	CR-GGN-2005-04827	CR-GGN-2005-05394
CR-GGN-2005-03903	CR-GGN-2005-04885	CR-GGN-2005-05443
CR-GGN-2005-03943	CR-GGN-2005-04942	CR-GGN-2005-05459
CR-GGN-2005-04036	CR-GGN-2005-04975	CR-GLO-2005-00087
CR-GGN-2005-04069		

Miscellaneous Documents

Rolling 18 Month Unavailability - C41 (SLC)
Rolling 18 Month Unavailability - Unit 1 Compressor (IA)
Rolling 18 Month Unavailability - Unit 2 Compressor (IA)
ERT-GG-2003-0261-001-01-00/ 02-00
Draft Outage Critique
RF14 Personnel Contamination Events Action Plan

ALARA Committee Minutes

March 16, 2005
April 13, 2005
June 21, 2005
July 7, 2005
August 4, 2005
September 8, 2005
October 7, 2005

Audits and Self-Assessments

QA-14-2005-GGNS-1, “Audit Report: Radiation Protection,” February 8 through March 22, 2005
GLO-2005-0084, “ALARA Planning and Controls Self-Assessment,” August 8-18, 2005

Calculations

EC-Q1E22-00-001, "Voltage Drop Study for Valve Q1E22F004," Revision 0
EC-M3.9.8, "Standby Gas Treatment System Drawdown Time Calculation," Revision 0

Plant Modifications

ER 2004-0028-000, "Airlock Door Seal Supply Pressure Setpoint Change," Revision 0

ER 2003-0261-001, "Deletion of Automatic Auxiliary Building. Isolation Signals for Selected Service Water, Chilled Water, Fire Water, and Instrument Air Valves," Revision 0

ER 2003-0189-000, "Modification of Precoat Filter Bypass Valve to Alleviate Thermal Binding Issue," Revision 0

ER-2003-0167-000, "Add Redundant Pressure Switches in Turbine Lube Oil System to Prevent Single Failure," Revision 0

ER 2002-0419-000, "Determine Method to Extend Life of Standby Liquid Control Surveillance Pressure Indicator," Revision 0

ER 2002-0339-000, "Loose Parts Found in Jet Pump," Revision 0

ER 2002-0339-001, "Evaluation of Recirculation Pump Discharge Gate Valve Repair," Revision 0

ER-2002-0339-004, "Additional ECCS Options During Repair of B33F067A Valve Without Offloading the Core," Revision 0

ER 2002-0037-001, "New Upshift Position Setting for Reactor Recirculation Flow Control Valve Minimum Position Interlock Setpoint," Revision 0

ER 2002-0037-002, "Change Cavitation Interlock Setpoint for Recirculation Flow Control Valve," Revision 0

ER 2002-0037-003, "Revise Upshift Position Setting for Reactor Recirculation Flow Control Valve Minimum Position Interlock Setpoint," Revision 0

ER 2000-0916-000, "Kaowool Fire Wrap," Revision 0

ER 1999-0217-000, "Replace and Respan Transmitters 1E22N054C&G and 1E51N035A&E," Revision 0

ER 1997-0285-001, "Addresses Operation Margin Enhancement for High Pressure Core Spray Injection Shutoff Valve Actuator Torque Capacity," Revision 0

PE 12829, "Alternate Offgas Rosemont Transmitter," Revision 0

PE 11899, "Dedication of Main Steam Coupling," Revision 0

PE 11879, "Evaluated Replacement Feedwater Solenoid Coil," Revision 0

Radiation Work Permits

2005-1002 Revision 1	2005-1004 Revision 1	2005-1009 Revision 0
2005-1054 Revision 0	2005-1400 Revision 1	2005-1402 Revision 0
2005-1403 Revision 1	2005-1505 Revision 0	2005-1506 Revision 0
2005-1508 Revision 2	2005-1512 Revision 2	2005-1513 Revision 2
2005-1516 Revision 0	2005-1518 Revision 1	2005-1519 Revision 1
2005-1533 Revision 0	2005-1706 Revision 3	

LIST OF ACRONYMS

ALARA	as low as is reasonably achievable
CFR	*Code of Federal Regulations*
NCV	noncited violation
NRC	Nuclear Regulatory Commission
SSC	structures, systems, and components
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
WO	work order