



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

February 13, 2007

Kevin Walsh  
Vice President Operations  
Waterford 3  
Entergy Operations, Inc.  
17265 River Road  
Killona, LA 70066-0751

**SUBJECT: WATERFORD STEAM ELECTRIC STATION, UNIT 3 - NRC INTEGRATED  
INSPECTION REPORT 05000382/2006005**

Dear Mr. Walsh:

On December 31, 2006, the NRC completed an inspection at your Waterford Steam Electric Station, Unit 3. The enclosed report documents the inspection findings, which were discussed on January 16, 2007, with you and other members of your staff.

This 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.

This report documents two self-revealing and one NRC identified findings of very low safety significance (Green). These findings were determined to involve violations of NRC requirements. Additionally, a licensee-identified violation, which was determined to be of very low safety significance is listed in this report. However, because of the very low safety significance and because they were entered into your corrective action program, the NRC is treating these violations as noncited violations (NCVs), consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest any NCV in this report, 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, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Waterford Steam Electric Station, Unit 3, facility.

Entergy Operations, Inc.

-2-

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, 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).

Sincerely,

/RA/

Jeff A. Clark, Chief  
Project Branch E  
Division of Reactor Projects

Docket: 50-382  
License: NPF-38

Enclosure: NRC Inspection Report 050000382/2006005  
w/Attachment: Supplemental Information

cc w/enclosure:  
Executive Vice President and  
Chief Operating Officer  
Entergy Operations, Inc.  
P.O. Box 31995  
Jackson, MS 39286-1995

Vice President, Operations Support  
Entergy Operations, Inc.  
P.O. Box 31995  
Jackson, MS 39286-1995

General Manager, Plant Operations  
Waterford 3 SES  
Entergy Operations, Inc.  
17265 River Road  
Killona, LA 70057-3093

Manager, Licensing  
Entergy Operations, Inc.  
17265 River Road  
Killona, LA 70057-3093

Chairman  
Louisiana Public Service Commission  
P.O. Box 91154  
Baton Rouge, LA 70825-1697

Entergy Operations, Inc.

-3-

Director, Nuclear Safety Assurance  
Entergy Operations, Inc.  
17265 River Road  
Killona, LA 70057-3093

Richard Penrod, Senior Environmental  
Scientist, State Liaison Officer  
Office of Environmental Services  
Northwestern State University  
Russell Hall, Room 201  
Natchitoches, LA 71497

Parish President  
Council  
St. Charles Parish  
P.O. Box 302  
Hahnville, LA 70057

Chairperson  
Denton Field Office  
Chemical and Nuclear Preparedness and Protection Division  
Office of Infrastructure Protection  
Preparedness Directorate  
Dept. of Homeland Security  
800 North Loop 288  
Federal Regional Center  
Denton, TX 76201-3698

Electronic distribution by RIV:  
 Regional Administrator (**BSM1**)  
 DRP Director (**ATH**)  
 DRS Director (**DDC**)  
 DRS Deputy Director (**RJC1**)  
 Senior Resident Inspector (**GFL1**)  
 Branch Chief, DRP/E (**ZKD**)  
 Senior Project Engineer, DRP/E (**VGG**)  
 Team Leader, DRP/TSS (**RLN1**)  
 RITS Coordinator (**MSH3**)  
 Regional State Liaison Officer (**WAM**)  
 NSIR/DPR/EPD (**JTJ1**)  
 NSIR/DPR/EPD (**REK**)  
 DRS STA (**DAP**)  
 D. Cullison, OEDO RIV Coordinator (**DGC**)  
**ROPreports**  
 WAT Site Secretary (**AHY**)

SUNSI Review Completed:   JAC   ADAMS:  Yes  No Initials:   JAC    
 Publicly Available  Non-Publicly Available  Sensitive  Non-Sensitive

R:\ REACTORS\ WAT\2006\WT2006-05RP-GFL.wpd

RI:DRP/E	SRI:DRP/E	C:DRS/EB1	C:DRS/OB	C:DRS/EB2
DHOverland	GFLarkin	WBJones	ATGody	LJSmith
<b>T-JAC</b>	<b>T-JAC</b>	<b>/RA/</b>	<b>/RA/</b>	<b>/RA/</b>
2/5/07	2/5/07	2/5/07	2/8/07	2/8/07
C:PSB	C:DRP/E			
MPShannon	JAClark			
<b>/RA/</b>	<b>/RA/</b>			
2/8/07	2/13/07			

U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket: 50-382

License No.: NPF-38

Report No.: 05000382/2006005

Licensee: Entergy Operations, Inc.

Facility: Waterford Steam Electric Station, Unit 3

Location: Hwy. 18  
Killona, Louisiana

Dates: October 8 through December 31, 2006

Inspectors: G. Larkin, Senior Resident Inspector  
D. Overland, Resident Inspector  
J. Kirkland, Project Engineer, Project Branch E  
T. McKernon, Senior Operations Engineer, Operations Branch  
L. Carson II, Senior Health Physics Inspector, Plant Support  
Branch  
G. George, Reactor Inspector, Engineering Branch 1  
P. Elkmann, Emergency Preparedness Inspector, Operations  
Branch

Approved By: Jeff A. Clark, Chief, Project Branch E

ATTACHMENTS: Supplemental Information

Enclosure

## SUMMARY OF FINDINGS

IR05000382/2006-005; 10/08/2006-12/31/2006; Waterford Steam Electric Station, Unit 3; Postmaintenance Testing; Refueling and Other Outage Activities; Emergency Plan Biennial Program Inspection

The report covered a 3-month period of inspection by resident inspectors, a project engineer, a senior operations engineer, a senior health physics inspector, a reactor inspector, and an emergency preparedness inspector. The inspectors identified two Green findings, which were noncited violations, and one apparent violation with potential safety significance greater than Green. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using 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 and Self-Revealing Findings

#### Cornerstone: Initiating Events

- Green. A self-revealing violation of very low safety significance of Technical Specification 6.8.1.a was identified for an inadequate procedure for installing a bolted joint that provided structural support for the pressurizer. Specifically, the installation procedure required applying 8750 ft-lbs torque to make up a bolted joint. Following corrective actions, the licensee discovered that the break away torque on several bolts exceeded 13,400 ft-lbs. The improper bolt tensioning resulted in failure of 1 of 16 bolts and the partial cracking of 3 other bolts that potentially could affect the pressurizer's function in a safe shutdown earthquake event. The licensee has since replaced all pressurizer skirt bolting and installed the bolting to an approved torque specification.

This finding is more than minor because if left uncorrected it could have become a more safety significant concern. The finding was associated with the equipment performance attribute of the Initiating Events cornerstone, and it affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. This finding was determined to have very low safety significance because a seismic event would not have resulted in a loss-of-coolant accident that exceeded the Technical Specification limit for reactor coolant system leakage. Therefore, this issue screened out in Phase 1 of the Manual Chapter 0609 "Significance Determination Process," because there was no actual loss of safety function (Section 1R20).

Enclosure

#### Cornerstone: Mitigating Systems

- Green. A self-revealing violation of very low safety significance of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure to implement effective corrective actions to prevent recurrence of a significant condition adverse to quality. Specifically, on multiple occasions Valve SI-405B failed to stroke open while attempting to place shutdown cooling Train B in service. This violation of Appendix B, Criterion XVI, is being treated as a noncited violation and was entered into the licensee's corrective action program.

This finding is greater than minor because it affects the Mitigating Systems cornerstone attribute of equipment operability, availability, and reliability of systems that respond to initiating events. This finding was evaluated using the significance determination process and was determined to be a finding of very low safety significance because, in each condition identified, it did not represent an actual loss of a safety function. The inspectors also determined that the cause of the condition had crosscutting aspects associated with the corrective action program component in the problem identification and resolution area. This assessment was based on the fact that the licensee failed to thoroughly evaluate the problem such that the resolutions addressed the causes and therefore, corrective actions were inadequate to prevent repetition (Section 1R19).

#### Cornerstone: Emergency Preparedness

- Green. The inspector identified a noncited violation of 10 CFR 50.54(q) for failure to conduct during 2005 an offsite drill involving a simulated contaminated individual with provision for participation by local medical support services as required by the licensee's emergency plan. The licensee's failure to conduct the drill is a performance deficiency because the licensee identified the drill's postponement in October 2005, but did not appropriately reschedule the drill. In addition, the licensee did not request NRC approval to deviate from this emergency plan requirement.

This finding is greater than minor because a degraded proficiency in providing appropriate medical treatment for a contaminated individual has a potential impact on the safety of licensee employees and the public. The finding is of very low safety significance because the licensee failed to conduct only one required drill during the inspection period January 2005 through December 2006, and the drill was not appropriately rescheduled with NRC approval. This finding is a noncited violation of 10 CFR 50.54(q) and 10 CFR Part 50, Appendix E, IV, F.1. The licensee has entered this issue into their corrective action system as Condition Report 2006-4429 (Section 1EP5).

B. Licensee-Identified Violations

Violations of very low safety significance, which were identified by the licensee have been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. These violations and corrective actions are listed in Section 4OA7 of this report.



## REPORT DETAILS

Summary of Plant Status: The plant was operated at approximately 100 percent power from October 8 to November 22, 2006, when reactor power was reduced to 85 percent power to comply with a Technical Specification requirement to reduce power to compensate for a main steam safety valve lift point setting found outside of its allowed tolerance. Reactor power was increased to 100 percent power on November 23, 2006. On November 25, 2006, operators commenced a plant shutdown for Refueling Outage 14. Operators restarted the reactor plant on December 26, 2006 and reached 100 percent power on December 30, 2006, and remained at 100 percent power through the end of the report period.

### 1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

#### 1R01 Adverse Weather Protection (71111.01)

##### .1 Readiness For Seasonal Susceptibilities

###### a. Inspection Scope

The inspectors completed a review of the licensee's readiness of seasonal susceptibilities involving low seasonal temperatures and high winds. The inspectors: (1) reviewed plant procedures, the Updated Final Safety Analysis Report, and Technical Specifications to ensure that operator actions defined in adverse weather procedures maintained the readiness of essential systems; (2) walked down portions of the three systems listed below to ensure that adverse weather protection features (heat tracing, space heaters and weatherized enclosures) were sufficient to support operability, including the ability to perform safe shutdown functions; (3) evaluated operator staffing levels to ensure the licensee could maintain the readiness of essential systems required by plant procedures; and (4) reviewed the corrective action program to determine if the licensee identified and corrected problems related to adverse weather conditions.

- December 13, 2006: Main Steam System, Firewater System, and Emergency Feedwater System

Documents reviewed by the inspectors included Operations Procedure OP-901-521, "Severe Weather and Flooding," Revision 4-3, Operations Procedure OP-002-007, "Freeze Protection and Temperature Maintenance," Revision 11, and Design Basis Document W3-DBD-003, "Emergency Feedwater System."

The inspectors completed one sample.

###### b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

.1 Partial Walkdown

a. Inspection Scope

The inspectors: (1) walked down portions of the two below 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 walk down to the licensee's Updated Final Safety Analysis Report and corrective action program to ensure problems were being identified and corrected.

- October 10, 2006: Chemical and Volume Control System Train A
- December 11, 2006: Shutdown Cooling System Train A

Documents reviewed by the inspectors are listed in the attachment. The inspectors completed two samples.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

.1 Quarterly Inspection

a. Inspection Scope

The inspectors walked down the six below 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 Updated Final Safety Analysis Report to determine if the licensee identified and corrected fire protection problems.

- October 10, 2006: Fire Zones RAB 16, 23, 36, 39, and Fuel Handling Building
- October 16, 2006: Fire Zones RAB 2, 16, 18 and 19

- October 18, 2006: Fire Zones RAB 2, 8A, 36, 37, and ultimate heat sink Train A
- November 21, 2006: Fire Zones RAB 1E, 6, 7, 11, 12, 13
- November 30, 2006: Fire Zones RAB 2, 8B, 23, 31, 39
- December 5, 2006: Fire Zones RAB 15, 19, 20, 21, 22, Containment Building, Cooling Tower A

Documents reviewed by the inspectors are listed in the attachment. The inspectors completed six samples.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

.2 Semi-annual Internal Flooding

a. Inspection Scope

The inspectors: (1) reviewed the Updated Final Safety Analysis Report, the flooding analysis, and plant procedures to assess seasonal susceptibilities involving external flooding; (2) reviewed the Updated Final Safety Analysis Report and corrective action program to determine if the licensee identified and corrected flooding problems; (3) inspected underground bunkers/manholes to verify the adequacy of (a) sump pumps, (b) level alarm circuits, (c) cable splices subject to submergence, and (d) drainage for bunkers/manholes; (4) verified that operator actions for coping with flooding can reasonably achieve the desired outcomes; and (5) walked down the one below listed areas to verify the adequacy of: (a) equipment seals located below the floodline, (b) floor and wall penetration seals, (c) watertight door seals, (d) common drain lines and sumps, (e) sump pumps, level alarms, and control circuits, and (f) temporary or removable flood barriers.

- December 5, 2006: Reactor Containment Building

The inspectors reviewed calculation MN(Q)-6-4, "Water Level Inside Containment," dated November 2, 1978.

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11)

.1 Biennial Inspection

a. Inspection Scope

The inspector reviewed the annual operating examination test results for 2006. Since this was the first half of the biennial requalification cycle, the licensee was not required to administer a written examination. These results were assessed to determine if they were consistent with NUREG 1021, "Operator Licensing Examination Standards for Power Reactors," guidance and Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process," requirements. This review included examination of test results for a total of 42 licensed operators, a total of 9 crews, which included: shift-standing senior operators, staff senior operators, shift-standing reactor operators, and staff reactor operators. All crews and individuals passed the requalification examinations.

The inspector completed one sample.

b. Findings

No findings of significance were identified.

.2 Quarterly Inspection

a. Inspection Scope

On November 6-7, 2006, the inspectors observed 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 a simulated plant shutdown exercise in preparation for the plant shutdown on November 26, 2006 for a plant refueling outage.

Documents reviewed by the inspectors included:

- Operations Procedure OP-010-005, "Plant Shutdown," Revision 5
- Emergency Planning Procedure EP-001-001, "Recognition and Classification of Emergency Conditions," Revision 21

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed the two below listed Maintenance Rule scoped systems that have displayed performance problems to: (1) verify the appropriate handling of structure, system, and component performance or condition problems; (2) verify the appropriate handling of degraded structure, system, and component functional performance; (3) evaluate the role of work practices and common cause problems; and (4) evaluate the handling of structure, system, and component issues reviewed under the requirements of the Maintenance Rule, 10 CFR Part 50 Appendix B, and the Technical Specifications.

- Essential Chill Water System
- Startup Transformers (Offsite Power)

Documents reviewed by the inspectors are listed in the attachment. The inspectors completed two samples.

b. Findings

No findings of significance were identified.

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

.1 Risk Assessment and Management of Risk

a. Inspection Scope

The inspectors reviewed the four below listed assessment activities to verify: (1) performance of risk assessments when required by 10 CFR 50.65 (a)(4) and licensee procedures prior to changes in plant configuration for maintenance activities and plant operations; (2) the accuracy, adequacy, and completeness of the information considered in the risk assessment; (3) that the licensee recognizes, and/or enters as applicable, the appropriate licensee-established risk category according to the risk assessment results and licensee procedures; and (4) the licensee identified and corrected problems related to maintenance risk assessments.

- October 31, 2006: Planned maintenance activities on start up transformer Train B
- November 29, 2006: Planned maintenance and operational activities during reactor coolant system midloop conditions
- December 7, 2006: Planned maintenance activities to restore emergency diesel generator Train B following the integrated diesel test
- December 18, 2006: Planned maintenance and operational activities during reactor coolant system midloop conditions

Documents reviewed by the inspectors are listed in the attachment. The inspectors completed four samples.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors: (1) reviewed plant status documents such as operator shift logs, emergent work documentation, deferred modifications, and standing orders to determine if an operability evaluation was warranted for degraded components; (2) referred to the Updated Final Safety Analysis Report and design-basis documents to review the technical adequacy of licensee operability evaluations; (3) evaluated compensatory measures associated with operability evaluations; (4) determined degraded component impact on any Technical Specifications; (5) used the Significance Determination Process to evaluate the risk significance of degraded or inoperable equipment; and (6) verified that the licensee has identified and implemented appropriate corrective actions associated with degraded components.

- October 19, 2006: Operability evaluation addressing pressurizer heater capacity following a surveillance test as described in Condition Report 2006-3125
- November 11, 2006: Operability evaluation addressing containment fan cooler Train B flow control valve failing to control at intermediate flow rates as described in Condition Report 2006-3357
- December 22, 2006: Operability evaluation addressing steam Generator 32 tube sheet plugging as described in Condition Report 2006-4510

Documents reviewed by the inspectors are listed in the attachment. The inspectors completed three samples.

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

The inspectors selected the six below listed postmaintenance test activities of risk significant systems or components. For each item, the inspectors: (1) reviewed the applicable licensing basis and/or design-basis documents to determine the safety functions; (2) evaluated the safety functions that may have been affected by the maintenance activity; and (3) reviewed the test procedure to ensure it adequately tested the safety function that may have been affected. The inspectors either witnessed or

reviewed test data to verify that acceptance criteria were met, plant impacts were evaluated, test equipment was calibrated, procedures were followed, jumpers were properly controlled, the test data results were complete and accurate, the test equipment was removed, the system was properly realigned, and deficiencies during testing were documented. The inspectors also reviewed the Updated Final Safety Analysis Report to determine if the licensee identified and corrected problems related to postmaintenance testing.

- October 11, 2006: Planned maintenance on chemical volume control charging Pump B
- October 12, 2006: Planned maintenance for reactor trip circuit breaker Number 7
- November 1, 2006: Planned maintenance for start-up transformer Train B 6.9 kV circuit breaker
- November 26, 2006: Emergent maintenance on reactor coolant Loop 1 shutdown cooling suction inside containment isolation Valve SI-405B
- November 29, 2006: Planned maintenance on excore start-up Channel 2
- December 12, 2006: Planned maintenance on reactor coolant Loop 1 shutdown cooling suction outside containment isolation Valve SI-407B

Documents reviewed by the inspectors are listed in the attachment. The inspectors completed six samples.

b. Findings

Introduction. A self-revealing violation of very low safety significance of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure to implement effective corrective actions to prevent recurrence of a significant condition adverse to quality. Specifically, on multiple occasions Valve SI-405B failed to stroke open while attempting to place shutdown cooling Train B in service. The root cause analysis determined that "the design of SI-405A(B) fluid reservoir was intolerant to operation with low pressure/level." This condition caused inadequate hydraulic pump discharge pressure that resulted in the failure of Valve SI-405B to stroke open. This violation of Appendix B, Criterion XVI, is being treated as a noncited violation and was entered into the licensee's corrective action program.

Description. On November 26, 2006, while in Mode 4, station operators performed Operating Procedure OP-903-033, "Cold Shutdown IST Valve Test" to stroke open Valve SI-405B in an effort to place shutdown cooling Train B in service. Valve SI-405B is a hydraulic pneumatic operated gate valve in the shutdown cooling return line from the reactor coolant system to the low-pressure safety injection Pump B suction. Valve SI-405B has a safety function to open to allow flow through shutdown cooling Train B. During the test, Valve SI-405B did not stroke fully open within its design time of 15 minutes +/- 225 seconds, and automatically closed per its design. On its second

attempt, Valve SI-405B fully opened, but not within the maximum inservice testing limit of 370 seconds. Valve SI-405B was declared inoperable and Technical Specification 3.6.3, "Containment Isolation Valves," was entered. The licensee closed valve SI-407B to comply with Technical Specification 3.6.3. This caused shutdown cooling Train B to become unavailable. Later in Mode 5, Technical Specification 3.6.3 no longer applied and the licensee was allowed to open Valve SI-407B and shutdown cooling Train B was restored to service. The licensee wrote Condition Report CR-WF3-2006-3610 to document the open stroke failure of Valve SI-405B. The root cause analysis determined that "the design of SI-405A(B) fluid reservoir is intolerant to operation with low pressure/level." This condition caused inadequate hydraulic pump discharge pressure that resulted in the failure of Valve SI-405B to stroke open.

The inspectors noted a similar event on April 17, 2005, that Valve SI-405B failed to fully open while operations was aligning shutdown cooling system Train B for service in Mode 4. Operators were performing Operating Procedure OP-903-033 testing to stroke open Valve SI-405B. During testing, Valve SI-405B failed to reach the full open position within the maximum allowable time. A root cause evaluation concluded that the valve was intolerant to minor degradation of various subcomponents in the system, which caused a diversion of sufficient hydraulic fluid flow to stroke open the valve. The licensee stated that there was very limited data to support historical failure analysis to determine the true cause(s) of the failures to operate. Condition Report CR-WF3-2005-1362 implemented corrective actions to preclude recurrence, including replacing the hydraulic actuators with a motor-operated actuator in May 2008.

Condition Report CR-WF3-2006-3610 noted that Valve SI-405B had also failed to stroke open satisfactorily due to various hydraulic system malfunction in October 2003, April 2002, and October 2000.

Analysis. The deficiency associated with this finding was the failure to establish corrective measures to prevent recurrence of a significant condition adverse to quality. Specifically, corrective actions established to address the function of Valve SI-405B to cycle open were not effectively implemented and failed to prevent recurrence resulting in Valve SI-405B being declared inoperable. The inspectors determined that the issue was more than minor in significance since it affected the Mitigating Systems cornerstone attribute of equipment operability, availability, and reliability of systems that respond to initiating events. The inspectors evaluated the finding using Inspection Manual Chapter 0609, Significance Determination Process (SDP), Appendix A, SDP Phase 1 Screening Worksheet for Initiating Events, Mitigating Systems, and Barrier cornerstones to assess the safety significance. The finding was determined to be of very low risk significance because, in each condition identified, it did not represent an actual loss of a safety function. This finding had crosscutting aspects associated with the corrective action program component in the problem identification and resolution area. This assessment was based on the fact that the licensee failed to thoroughly evaluate the problem such that the resolutions addressed the causes and, therefore, corrective actions were inadequate to prevent repetition.

Enforcement. 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requires in part, that measures be established to assure that conditions adverse to quality are promptly identified and corrected. In the case of significant conditions adverse to



quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition. The failure to establish corrective measures to prevent recurrence of Valve SI-405B failure to stroke open during actual and test demands conditions impacted the ability of a risk significant system to perform as designed and is a violation of 10 CFR Part 50, Appendix B, Criterion XVI. Corrective actions for Valve SI-405B per Condition Report CR-WF3-2005-1362 failed to preclude an additional failure as documented in Condition Report CR-WF3-2006-3610. Because this violation was of very low safety significance and was entered in the corrective action program as Condition Report CR-WF3-2006-3610, this violation is being treated as a noncited violation, consistent with Section VI.A of the NRC Enforcement Policy (NCV 05000382/2006005-01, Recurring Failure of Valve SI-405B to Open).

1R20 Refueling and Other Outage Activities (71111.20)

The inspectors reviewed the following risk significant refueling items or outage activities to verify defense in depth commensurate with the outage risk control plan, compliance with the Technical Specifications, and adherence to commitments in response to Generic Letter 88-17, "Loss of Decay Heat Removal:" (1) the risk control plan; (2) tagging/clearance activities; (3) reactor coolant system instrumentation; (4) electrical power; (5) decay heat removal; (6) spent fuel pool cooling; (7) inventory control; (8) reactivity control; (9) containment closure; (10) reduced inventory or midloop conditions; (11) refueling activities; (12) heatup and cooldown activities; (13) restart activities; and (14) licensee identification and implementation of appropriate corrective actions associated with refueling and outage activities. The inspectors' containment inspections included observations of the containment sump for damage and debris; and supports, braces, and snubbers for evidence of excessive stress, water hammer, or aging. Documents reviewed by the inspectors included the Refueling Outage 14 Risk Assessment Plan.

The inspectors completed one sample.

b. Findings

Introduction. A self-revealing violation of very low safety significance of Technical Specification 6.8.1.a was identified for an inadequate procedure for installing a bolted joint that provided structural support for the pressurizer. Specifically, the installation procedure required applying 8750 ft-lbs torque to make up a bolted joint. Following corrective actions, the licensee discovered that the break away torque on several bolts exceeded 13,400 ft-lbs. The improper bolt tensioning resulted in failure of 1 of 16 bolts and the partial cracking of 3 other bolts that potentially could affect the pressurizer's function in a safe shutdown earthquake event. The licensee has since replaced all pressurizer skirt bolting and installed the bolting to an approved torque specification.

Description. On December 11, 2006, while performing a walkdown of the pressurizer cubicle, a technician noted that a 2-inch diameter bolt had severed into two pieces. The bolt was part of a bolted flange that joined the pressurizer skirt to the pressurizer support structure. The pressurizer skirt is a cylindrical steel shell welded to the bottom head of the pressurizer and provides structural support to the pressurizer. The pressurizer is a Category 1 seismic component, which is designed to remain functional

in the event of a safe shutdown earthquake. A steel bolted flange is attached to the bottom of the pressurizer skirt. The bolted flange on the pressurizer skirt mates with the top flange of a support structure. The support structure is a weldment anchored by bolts embedded in the concrete floor below the pressurizer. The failed bolt clamped the pressurizer skirt flange to the top flange of the support structure. The licensee ultrasonically test inspected the remaining 15 pressurizer skirt bolts. They discovered flaws in 3 of the remaining 15 bolts. Licensee replaced all 16 bolts, nuts, and washers.

A licensee review of plant records indicated that an April 1979, Field Change Procedure FSC-AS-1232, "Pressurizer Support Structure, S.I. Tank Support Structures, R.C. Stops and Supports Structural Steel," installed the bolts to a torque value of 8750 ft-lbs. The procedure did not specify if the bolts should be installed lubricated or unlubricated, however all the originally installed bolts were lubricated. During installation, lubrication reduces the friction between thread mating surfaces resulting in a much higher bolt preload for the same torque values than for an unlubricated bolt. When replacing the existing bolts, the licensee noted that some bolt break away torque values exceeded 13,400 ft-lbs. Normally, following a bolted joint installation, some loss of preload is expected in the range of 5 to 15 percent. Additionally, vibration or time-varying mechanical or thermal loads on the joint due to system operations can reduce bolt preload values further. A preliminary root cause evaluation indicates that the bolts were overloaded during initial preloading at installation. This overloaded condition reduced the fatigue resistance of the bolting. Thermally induced prying on the bolts during pressurizer heatups and cooldowns was identified as a potentially significant low-cycle fatigue load. This loading occurs as a result of temperature differences between the pressurizer skirt and the support structure. This was an expected occurrence, but excessive bolt preload increased the magnitude of the prying and reduce the capacity of the bolts to accept it.

Analysis. The performance deficiency associated with this finding was the failure to establish appropriate instructions for installing the pressurizer support skirt bolts. The work instruction did not provide adequate direction to torque the pressurizer skirt bolts without lubrication. This contributed to the subsequent failure and cracking of several pressurizer skirt bolts. This finding is more than minor because if left uncorrected it could have become a more safety significant concern. The finding was associated with the equipment performance attribute of the Initiating Events cornerstone, and it affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. This finding is of very low safe significance (Green), because a seismic event was determined to not result in a loss-of-coolant accident that exceeds the Technical Specification limit for reactor coolant system leakage. Therefore, this issue screened out in Phase 1 of the Manual Chapter 0609 "Significance Determination Process," because there was no actual loss of safety functions.

Enforcement. Technical Specification Section 6.8.1.a requires that written procedures shall be established, implemented, and maintained covering applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Regulatory Guide 1.33, Appendix A, recommends that maintenance that can affect the performance of safety-related equipment be performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances.

Contrary to these requirements, the licensee failed to ensure that Field Change Request FCR-AS-1232 was adequate for the task. The pressurizer skirt bolted work instruction was inadequate because bolt lubrication was not addressed and resulted in the failure of 4 of the 16 pressurizer skirt bolts. This issue was entered into the licensee's corrective action program as Condition Report CR-WF3-2006-4274. (NCV 05000382/2006005-02, Excess Torque Resulting in Pressurizer Skirt Bolt Failures).

## 1R22 Surveillance Testing (71111.22)

### a. Inspection Scope

The inspectors reviewed the Updated Final Safety Analysis Report, procedure requirements, and Technical Specifications to ensure that the four below listed surveillance activities demonstrated that the structures, systems, and components tested were capable of performing their intended safety functions. The inspectors either witnessed or reviewed test data to verify that the following significant surveillance test attributes were adequate: (1) preconditioning; (2) evaluation of testing impact on the plant; (3) acceptance criteria; (4) test equipment; (5) procedures; (6) jumper/lifted lead controls; (7) test data; (8) testing frequency and method demonstrated Technical Specification operability; (9) test equipment removal; (10) restoration of plant systems; (11) fulfillment of ASME Code requirements; (12) updating of performance indicator data; (13) engineering evaluations, root causes, and bases for returning tested structures, systems, and components not meeting the test acceptance criteria were correct; (14) reference setting data; and (15) annunciators and alarms setpoints. The inspectors also verified that the licensee identified and implemented any needed corrective actions associated with the surveillance testing.

- October 18, 2006; Surveillance Procedure STA-001-005, "Leakage Testing of Air and Nitrogen Accumulators for Safety Related Valves," Revision 7. This test verified the leakage is within analyzed acceptable limits to fulfill the design function upon loss of instrument air.
- October 23, 2006; Operations Procedure OP-903-068, "Emergency Diesel Generator," Revision 14. This monthly test verified operability of emergency diesel Generator A to satisfy Technical Specification requirements.
- November 21, 2006; Maintenance Procedure MM-007-015, "Main Steam Safety Valve Test," Revision 9, Change 0. This test verified the lift pressures for three of the main steam safety valves prior to entering the refueling outage.
- December 5, 2006; Operations Procedure OP-903-108, "Safety Injection Flow Balance Test," Revision 5, Change 0. This test verified high-pressure safety injection (HPSI) flow from HPSI Pumps A, B, and AB through HPSI Headers A and B were within specifications.

Documents reviewed by the inspectors are listed in the attachment. 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 Updated Final Safety Analysis Report, plant drawings, procedure requirements, and Technical Specifications to ensure that the two below listed temporary modifications were properly implemented. The inspectors: (1) verified that the modifications did not have an effect on system operability/availability; (2) verified that the installation was consistent with modification documents; (3) ensured that the postinstallation test results were satisfactory and that the impact of the temporary modifications on permanently installed structures, systems, and components were supported by the test; (4) verified that the modifications were identified on control room drawings and that appropriate identification tags were placed on the affected drawings; and (5) verified that appropriate safety evaluations were completed. The inspectors verified that licensee identified and implemented any needed corrective actions associated with temporary modifications.

- December 18, 2006: ER-W3-2006-0264-000, "Temporary Air Compressors to Augment Station Air," a temporary alteration to install a supplemental air compressor to support Refueling Outage 14.
- December 28, 2006: ER-W3-2006-0375-000 and -001, "Install Loose Parts Monitoring Sensors on the Steam Generators," a temporary alteration to install acoustic monitoring equipment to monitor for loose parts, associated with the tube support bar assemblies also known as batwings, in the steam generator secondary upper shell area.

Documents reviewed by the inspectors are listed in the attachment. The inspectors completed two samples.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness (EP)

1EP2 Alert Notification System Testing (71114.02)

a. Inspection Scope

The inspector discussed with licensee staff the status of offsite siren and tone alert radio systems to determine the adequacy of licensee methods for testing the alert and notification system in accordance with 10 CFR Part 50, Appendix E. The licensee's alert and notification system testing program was compared with criteria in NUREG-0654,

“Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,” Revision 1, Federal Emergency Management Agency (FEMA) Report REP-10, “Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants,” and the licensee’s current FEMA-approved alert and notification system design report, “Alert/Notification System, Waterford-3 Steam Electric Station,” dated March 2005. The inspector also reviewed the following procedures:

- EPP-422, “Siren and Helicopter Warning System Maintenance,” Revision 3
- EPP-424, “Siren Testing and Siren System Administrative Controls,” Revision 9
- Emergency Preparedness Desk Guide 16, “Siren System Administrative Data,” Revision 11

The inspector completed one sample during the inspection.

b. Findings

No findings of significance were identified.

1EP3 Emergency Response Organization Augmentation Testing (71114.03)

a. Inspection Scope

The inspector discussed with licensee staff the status of primary and backup systems for augmenting the on-shift emergency response staff to determine the adequacy of licensee methods for staffing emergency response facilities. The inspector reviewed the results of 15 licensee augmentation drills performed from August 2005 through November 2006 as listed in the Attachment to this report, and the listed references related to the emergency response organization augmentation system, to evaluate the licensee’s ability to staff the emergency response facilities in accordance with the licensee emergency plan and the requirements of 10 CFR Part 50 Appendix E.

The inspector completed one sample during the inspection.

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

a. Inspection Scope

The inspector performed an in-office review of Revision 33 to the Waterford Steam Electric Station Emergency Plan, and Revision 21 to Emergency Plan Implementing Procedure EP-001-001, “Recognition and Classification of Emergency Conditions.”

These revisions implemented an NEI 99-01, "Methodology for Development of Emergency Action Levels," Revision 4, emergency action scheme for which prior NRC approval was obtained.

These revisions were compared to the criteria of NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1, to the criteria of NEI 99-01, "Methodology for Development of Emergency Action Levels," Revision 4, to the NRC Safety Analysis Report dated June 20, 2005, and to the standards in 10 CFR 50.47(b) to determine if the revisions were adequately conducted according to the requirements of 10 CFR 50.54(q). These reviews were not documented in a safety evaluation report and did not constitute approval of licensee changes, therefore these revisions are subject to future inspection.

The inspector completed two samples during the inspection.

b. Findings

No findings of significance were identified.

1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies (71114.05)

a. Inspection Scope

The inspector reviewed the licensee's corrective action program requirements in Procedures EN-LI-102, "Corrective Action Process," Revision 2, and EN-LI-119, "Apparent Cause Evaluation Process," Revision 3. The inspector reviewed summaries of 194 corrective action requests associated with emergency preparedness issues during calendar years 2005 and 2006 and selected 15 for detailed review against the program requirements. The inspector reviewed the licensee's after-action report for a significant event (Hurricane Katrina) using the requirements of Procedure UNT-006-10, "Event Notification and Reporting," Revision 17. The inspector evaluated the response to the corrective action requests to determine the licensee's ability to identify, evaluate, and correct problems in accordance with the licensee program requirements and 10 CFR 50.47(b)(14) and 10 CFR Part 50, Appendix E.

The inspector reviewed the licensee's audit program requirements in Procedure EN-QV-109, "Audit Process," Revision 8, quality assurance audits conducted in 2005 and 2006, and licensee self-assessments of emergency preparedness. The inspector also reviewed other documents listed in the attachment to this report.

The inspector completed one sample during the inspection.

b. Findings

Introduction: A Green noncited violation was identified for failure to conduct a required offsite medical drill during calendar year 2005, as required by 10 CFR 50.54(q).

Description: The NRC identified a performance deficiency related to conduct of the licensee's drill and exercise program, in that an annual offsite medical drill involving a simulated contaminated individual was not performed during calendar year 2005 as required by the Waterford Steam Electric Station Emergency Plan. The licensee has two offsite medical support facilities, the Ochsner Clinic and West Jefferson Medical Center, and typically alternates performing the annual medical drill, so that each facility has the opportunity to perform the simulated medical treatment of a contaminated individual. Ochsner Clinic had last performed a drill with simulated medical treatment of a contaminated individual in 2003, and another drill was scheduled for October 17, 2006. That drill did not occur.

As a result of the impact of Hurricanes Katrina and Rita on offsite infrastructure, Ochsner Clinic informally communicated to the licensee that conducting the drill as scheduled would be a hardship due to reduced staffing at the facilities. On October 3, 2005, the State of Louisiana Department of Environment Quality wrote to the U.S. Department of Homeland Security, Federal Emergency Management Agency, Region VI, requesting postponement of the 2005 Biennial Exercise and several offsite emergency preparedness drills scheduled for the week beginning October 17, 2005, one of which being the licensee's offsite medical drill. The licensee submitted a request (ML0529903030) to the NRC on October 24, 2005, requesting a rescheduling exemption for the 2005 Biennial Exercise. The inspector determined the licensee's request for a scheduling exemption was limited to the 2005 Biennial exercise and did not include a request for relief from the emergency plan requirement to conduct the offsite medical drill.

The U.S. Department of Homeland Security, Federal Emergency Management Agency, Region VI, responded on October 14, 2005, to the State of Louisiana letter of October 3, 2005, approving the postponement of the 2005 Biennial Exercise and the offsite emergency preparedness drills scheduled for the week beginning October 17, 2005. The Federal Emergency Management Agency, Region VI, letter stated in part, ". . . we concur that . . .the out of sequence drills scheduled for the week of October 17<sup>th</sup> should be postponed. . . .," and ". . . we will be contacting your organization in the near future to reschedule the drills. . . ." The inspector determined that the offsite medical drill was not subsequently rescheduled. The NRC responded (ML053270770) on November 17, 2005, to the licensee's letter of October 24, 2005, approving rescheduling the 2005 Biennial Exercise to 2006; this exercise was subsequently conducted June 28, 2006.

The inspector determined the licensee conducted an offsite medical drill with West Jefferson Medical Center on October 25, 2006 (Drill 2006-09), which the licensee intended as meeting the 2006 annual drill requirement, not the rescheduled 2005 drill requirement. West Jefferson Medical Center had also drilled the simulated medical treatment of a contaminated individual in 2004. Ochsner Clinic is scheduled to perform a drill with simulated medical treatment of a contaminated individual in October 2007, approximately 4 years after their most recent medical drill in 2003.

Analysis: The inspector determined that the failure to conduct a required offsite medical drill is a performance deficiency because the licensee failed to meet a requirement of the Waterford Steam Electric Station Emergency Plan, and the cause was within the

licensees's ability to foresee, correct, and prevent. The finding had a credible impact on the Emergency Preparedness cornerstone objective because it involved the ability to maintain the proficiency of offsite personnel whose assistance may be needed in the event of a radiation emergency, and affected the attributes of emergency response organization readiness and performance, and offsite emergency preparedness. This finding is more than minor because a degraded proficiency in providing appropriate medical treatment for a contaminated individual has a potential impact on the safety of licensee employees and the public. This finding was evaluated using the Emergency Preparedness Significance Determination Process and was determined to be of very low safety significance because the licensee failed to conduct only one required drill during the inspection period January 2005 through December 2006, and the drill was not appropriately rescheduled with NRC approval.

Enforcement: Part 50.54(q) of Title 10 of the Code of Federal Regulations states, in part, "A licensee authorized to possess and operate a nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in §50.47(b) and the requirements in Appendix E of this part." 10 CFR 50.47(b)(14) states, in part, "...periodic drills will be conducted to develop and maintain key skills..." 10 CFR Part 50, Appendix E, IV, F.1 states, in part, "The program to provide for: (a) The training of employees and exercising, by periodic drills, of radiation emergency plans to ensure that employees of the licensee are familiar with their specific emergency response duties, and (b) The participation in the training and drills by other persons whose assistance may be needed in the event of a radiation emergency shall be described. . . vii. Medical Support Personnel." Section 8.1.2.4(4) of the Waterford Steam Electric Station Emergency Plan, Revision 33, states, in part, "A medical emergency drill, involving a simulated contaminated individual, which includes provisions for participation by the local support services (i.e. ambulance and offsite medical treatment facility) shall be conducted annually." Between January 1 and December 31, 2005, the licensee did not conduct a drill involving a simulated contaminated individual with provision for participation by local support services. Because this failure is of very low safety significance and has been entered into the licensee's corrective action system (Condition Report 2006-4429), this violation is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy: NCV 05000382/2006-005-03, Failure to Conduct a Required Offsite Medical Drill in 2005.

## 2. RADIATION SAFETY

### Occupational Radiation Safety (OS)

#### 2OS1 Access Control to Radiologically Significant Areas (71121.01)

##### a. Inspection Scope

This area was inspected to assess the licensee's performance in implementing physical and administrative controls for airborne radioactivity areas, radiation areas, high radiation areas, and worker adherence to these controls. The inspector used the requirements in 10 CFR Part 20, the Technical Specifications, and the licensee's procedures required by Technical Specifications as criteria for determining compliance.



During the inspection, the inspector interviewed the radiation protection manager, radiation protection supervisors, and radiation workers. The inspector performed independent radiation dose rate measurements and reviewed the following items:

- Performance indicator events and associated documentation packages reported by the licensee in the Occupational Radiation Safety Cornerstone
- Controls (surveys, posting, and barricades) of multiple radiation, high radiation, or airborne radioactivity areas
- Radiation work permits, procedures, engineering controls, and air sampler locations
- Conformity of electronic personal dosimeter alarm set points with survey indications and plant policy; workers' knowledge of required actions when their electronic personnel dosimeter noticeably malfunctions or alarms
- Barrier integrity and performance of engineering controls in three airborne radioactivity areas
- Adequacy of the licensee's internal dose assessment for any actual internal exposure greater than 50 millirem Committed Effective Dose Equivalent
- Physical and programmatic controls for highly activated or contaminated materials (nonfuel) stored within spent fuel and other storage pools
- Self-assessments, audits, and special reports related to the access control program since the last inspection
- Corrective action documents related to access controls
- Licensee actions in cases of repetitive deficiencies or significant individual deficiencies
- Radiation work permit briefings and worker instructions
- Adequacy of radiological controls such as, required surveys, radiation protection job coverage, and contamination controls during job performance
- Dosimetry placement in high radiation work areas with significant dose rate gradients
- Changes in licensee procedural controls of high dose rate - high radiation areas and very high radiation areas
- Controls for special areas that have the potential to become very high radiation areas during certain plant operations
- Posting and locking of entrances to all accessible high dose rate - high radiation areas and very high radiation areas

- Radiation worker and radiation protection technician performance with respect to radiation protection work requirements

The inspector completed 17 of the required 21 samples.

b. Findings

No findings of significance were identified.

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 Technical Specifications as criteria for determining compliance. The inspector interviewed licensee personnel and reviewed:

- Current 3-year rolling average collective exposure
- Five outage 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
- Interfaces between operations, radiation protection, maintenance, maintenance planning, scheduling, and engineering groups
- Integration of ALARA requirements into work procedure and radiation work permit documents
- Exposure tracking system
- Workers use of the low dose waiting areas
- First-line job supervisors' contribution to ensuring work activities are conducted in a dose efficient manner
- Source-term control strategy or justifications for not pursuing such exposure reduction initiatives
- Specific sources identified by the licensee for exposure reduction actions and priorities established for these actions, and results since the last refueling cycle
- Radiation worker and radiation protection technician performance during work activities in radiation areas, airborne radioactivity areas, or high radiation areas

The inspector completed 4 of the required 15 samples and 7 of the optional samples.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES (OA)

4OA1 Performance Indicator Verification (71151)

.1 Mitigating Systems and Barrier Integrity

a. Inspection Scope

The inspectors sampled licensee submittals for the three performance indicators listed below for the period from July 1, 2004, through September 30, 2006. The definitions and guidance of Nuclear Energy Institute 99-02, "Regulatory Assessment Indicator Guideline," Revision 4, were used to verify the licensee's basis for reporting each data element in order to verify the accuracy of performance indicator data reported during the assessment period. The inspectors reviewed licensee event reports, monthly operating reports, and operating logs as part of the assessment. Licensee performance indicator data were also reviewed against the requirements of Procedure EN-LI-114, "Performance Indicator Process," Revision 1.

- Safety System Functional Failures
- Reactor Coolant System Specific Activity
- Reactor Coolant System Leakage

Documents reviewed by the inspectors are listed in the attachment. The inspectors completed three samples.

b. Findings

No findings of significance were identified.

.2 (Closed) Temporary Instruction 2515/169: Mitigating Systems Performance Index Verification

a. Inspection Scope

During this inspection period, the inspectors completed a review of the licensee's implementation of the mitigating systems performance index in accordance with the guidance provided in Temporary Instruction 2515/169. The review examined the licensee's mitigating systems performance index basis documents (W3-SA-06-00001, Revision 0) and verified the established system boundaries and monitored components were consistent with guidance provided in NEI 99-02, "Reactor Oversight Process Performance Indicators," Revision 4. The inspectors verified that the licensee did not include credit for unavailability hours for "short term unavailability" or "operator recovery actions to restore the risk-significant function as is allowed by NEI 99-02.

Additionally, the inspectors reviewed the baseline mitigating systems performance index unavailability time using plant specific values for the period of 2002 to 2004. The verification included all planned and unplanned unavailability. The plant specific data for

2005 to 2006 was also reviewed to ensure the licensee properly accounted for the actual unavailability hours of mitigating systems performance index systems. For the same period, the mitigating systems performance index component unreliability data was examined to ensure the licensee identified all failures of monitored components. The accuracy and completeness of the reported unavailability and unreliability data was verified by reviewing operating logs, condition reports, and work order documents. The unavailability and unreliability data was compared with performance indicator data submitted to the NRC to ensure that any discrepancies would not result in a change to the index color.

b. Findings

No findings of significance were identified. This completes the inspection requirements for this Temporary Instruction.

.3 Emergency Preparedness

a. Inspection Scope

The inspector reviewed licensee evaluations for the three Emergency Preparedness cornerstone performance indicators of Drill and Exercise Performance, Emergency Response Organization Participation, and Alert and Notification System Reliability, for the period October 1, 2005, through September 30, 2006. The definitions and guidance of NEI 99-02, "Regulatory Assessment Indicator Guideline," Revisions 2 through 4, and the licensee Performance Indicator Procedures EN-LI-114, "Performance Indicator Process," Revision 2, and EN-EP-201, "Emergency Planning Performance Indicators," Revision 5, were used to verify the accuracy of the licensee's evaluations for each performance indicator reported during the assessment period.

The inspector reviewed 100 percent of drill and exercise scenarios and licensed operator simulator training sessions, notification forms, and attendance and critique records associated with training sessions, drills, and exercises conducted during the verification period. The inspector reviewed 18 emergency responder qualification, training, and drill participation records. The inspector reviewed alert and notification system testing procedures, maintenance records, and 100 percent of siren test records. The inspector also reviewed other documents listed in the attachment to this report.

The inspector completed three samples during the inspection.

b. Findings

No findings of significance were identified.

.4 Occupational Radiation Safety and Public Radiation Safety

a. Inspection Scope

The inspector sampled licensee submittals for the performance indicators listed below for the period from April 2006 through October 2006. To verify the accuracy of the performance indicator data reported during that period, performance indicator definitions

and guidance contained in NEI 99-02, "Regulatory Assessment Indicator Guideline," Revision 2, were used to verify the basis in reporting for each data element.

- Occupational Exposure Control Effectiveness Performance Indicators

Licensee records reviewed included corrective action documentation that identified occurrences in high radiation areas with dose rates greater than 1,000 millirem per hour at 30 centimeters (as defined in technical specifications), very high radiation areas (as defined in 10 CFR 20.1003), and unplanned personnel exposures (as defined in NEI 99-02). Additional records reviewed included ALARA records and whole-body counts of selected individual exposures. The inspector interviewed licensee personnel that were accountable for collecting and evaluating the performance indicator data. In addition, the inspector toured plant areas to verify that high radiation and very high radiation areas were properly controlled.

The inspector completed the required sample (1) in this cornerstone.

- Radiological Effluent Technical Specification/Offsite Dose Calculation Manual Radiological Effluent Occurrences

Licensee records reviewed included corrective action documentation that identified occurrences for liquid or gaseous effluent releases that exceeded performance indicator thresholds and those reported to the NRC. The inspector interviewed licensee personnel that were accountable for collecting and evaluating the performance indicator data.

The inspector completed the required sample (1) in this cornerstone.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

.1 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

The inspectors performed a daily screening of items entered into the licensee's corrective action program. This assessment was accomplished by reviewing condition reports and event trend reports and attending daily operational 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.

b. Findings

No findings of significance were identified.

.2 Selected Issue Follow-up Inspection

a. Inspection Scope

In addition to the routine review, the inspectors selected the one below listed issue for a more in-depth review. The inspectors considered the following during the review of the licensee's actions: (1) complete and accurate identification of the problem in a timely manner; (2) evaluation and disposition of operability/reportability issues; (3) consideration of extent of condition, generic implications, common cause, and previous occurrences; (4) classification and prioritization of the resolution of the problem; (5) identification of root and contributing causes of the problem; (6) identification of corrective actions; and (7) completion of corrective actions in a timely manner.

- December 18, 2006: Operator Workarounds

Documents reviewed by the inspectors are listed in the attachment. The inspectors completed one sample.

b. Findings

No findings of significance were identified.

.3 Semiannual Trend Review

a. Inspection Scope

The inspectors completed a semiannual trend review of repetitive or closely related issues associated with the essential chiller low evaporator pressure trips that were documented in condition reports, system and component health reports, quality assurance audits, trend reports, the licensee's internal performance indicators, and NRC inspection reports to identify trends that might indicate the existence of more safety significant issues. The inspectors' review consisted of the 6-month period of July 1 to December 31, 2006. 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 troubleshooting. The inspectors compared and contrasted their results with the results contained in the licensee's quarterly trend reports. Corrective actions associated with a sample of the issues identified in the licensee's trend report were reviewed for adequacy.

Documents reviewed by the inspectors are listed in the attachment. The inspectors completed one sample.

b. Findings

No findings of significance were identified.

#### .4 Annual Sample Review

##### a. Inspection Scope

The emergency preparedness inspector selected 15 condition reports for detailed review. The reports were reviewed to ensure that the full extent of the issues were identified, an appropriate evaluation was performed, and appropriate corrective actions were specified and prioritized. The inspector evaluated the condition reports using licensee Procedures EN-LI-102, "Corrective Action Process," Revision 2, and EN-LI-119, "Apparent Cause Evaluation Process," Revision 3.

The health physics inspector evaluated the effectiveness of the licensee's problem identification and resolution process with respect to the following inspection areas:

- Access Control to Radiologically Significant Areas (Section 20S1)
- ALARA Planning and Controls (Section 20S2)

##### b. Findings and Observations

No findings of significance were identified.

#### 40A3 Event Follow-up (71153)

##### .1 (Closed) LER 05000382/2005-005-00: Manual Reactor Trip Upon Loss of All Circulating Water Pumps and Lowering Condenser Vacuum

On November 11, 2005, the licensee manually tripped the reactor due to lowering main condenser vacuum, caused by a loss of all circulating water pumps. Lowering main condenser vacuum resulted in loss of main feedwater to the steam generators causing steam generator levels to lower resulting in an automatic actuation of the emergency feedwater system to restore steam generator level. Failure mode analysis identified a degraded timer relay in the CW pump discharge valve control circuit as the most likely cause. The relay was replaced prior to plant start up. The LER was reviewed by the inspectors and no findings of significance were identified and no violation of NRC requirements occurred. The licensee documented the failed equipment in Condition Report CR-WF3-2005-4593. This LER is closed.

##### .2 (Closed) LER 05000382/2005-002-01: RCS Leakage Detection Instrumentation and Regulatory Guide 1.45

On November 15, 2005, the licensee determined that Technical Specification 3.4.5.1, "Leakage Detection Systems," did not meet the design requirements of Regulatory Guide 1.45, "Reactor Coolant Pressure Boundary Leakage Detection System." Specifically, the containment fan cooler condensate flow switches did not meet the design requirements for detecting a one gallon per minute reactor coolant system leak. This deficiency was previously dispositioned in NRC Inspection Report 05000382/2005005, Section 1R22, "Surveillance Testing," as a Green noncited violation (NCV 05000382/2005005-01). This LER is closed.

#### 4OA5 Other Activities

##### .1 Institute of Nuclear Power Operations (INPO) Audit and Evaluation Review

The inspectors completed a review of the INPO audit and evaluation report for Entergy Operation's Waterford 3 Steam Electric Station during this inspection period. The INPO audit and evaluation was performed during spring of 2006.

##### .2 (Closed) NRC Temporary Instruction 2515/166: PWR Containment Sump Blockage

###### a. Inspection Scope

The inspectors reviewed Waterford 3's implementation of plant modifications and procedure changes committed to in their response to Generic Letter 2004-02.

The inspectors observed installation of the containment recirculation sump strainers and relocation of tri-sodium phosphate baskets. In addition, the inspectors verified that Waterford 3 has implemented specific procedure changes to control tags, labels, tape, and other objects inside the containment building. At the time of the exit meeting, Waterford 3 was in the final stages of implementing changes to the containment coatings assessment program, the latent debris assessment program, and the containment strainer inspection program.

At the time of the inspection, industry testing for chemical effects on containment recirculation sumps was not complete. Since the testing was not complete, Waterford 3 evaluated the new recirculation sump modifications to the original design basis, Regulatory Guide 1.82, Revision 0. The inspectors reviewed the 10CFR 50.59 evaluation to verify that the design meets the original design basis.

###### b. Findings

No findings of significance were identified. This completes the inspection requirements for this Temporary Instruction.

#### 4OA6 Meetings, Including Exit

##### Exit Meeting Summary

- .1 On September 25, 2006, the operations inspector discussed the inspection results of the licensed operator annual requalification examination with Mr. A. Hill, Operations Training Supervisor. A telephone exit was held with Mr. Hill on September 25, 2006. The licensee acknowledged the findings presented in both the briefing and the final exit meeting.
- .2 On December 1, 2006, the health physics inspector presented the Occupational Radiation Safety inspection results to Ms. K. Cook, Acting General Manager, Plant Operations, and other members of the staff who acknowledged the findings. The inspector confirmed that proprietary information was not provided or examined during the inspection.



- .3 On December 8, 2006, the inspectors presented the results of Temporary Instruction 2515/166 to Mr. K. Walsh, Waterford 3 Site Vice President, and other members of licensee management. Licensee management acknowledged the inspection findings. The inspectors identified that they had reviewed proprietary information but had returned it to licensee personnel.
- .4 On December 20, 2006, the inspector presented the inspection results to Mr. K. Walsh, Site Vice President, and other members of his staff who acknowledged the findings. The inspector confirmed that proprietary information was not provided or examined during the inspection.
- .5 On January 16, 2007, the resident inspectors presented the inspection results to Mr. K. Walsh and other members of licensee management at the conclusion of the inspection. The licensee acknowledged the findings presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

#### 40A7 Licensee-Identified Violations

The following violation of very low safety significance (Green) was identified by the licensee and is a violation of NRC requirements, which meets the criteria of Section VI of the NRC Enforcement Policy for being dispositioned as an NCV.

- Part 50 of Title 10 of the Code of Federal Regulations, Appendix E, IV, B, requires a licensee establish emergency action levels based on in-plant conditions and instrumentation. Contrary to this, the licensee changed radiological accident assumptions in their Updated Final Safety Analysis Report in 1994, 2001, and 2003, and corresponding changes to emergency action levels were not made. This was identified in the licensee's corrective action program as Condition Report 2005-3292. This finding is of very low safety significance because the affected emergency action levels were at the Notification of Unusual Event and Alert emergency classifications and did not affect classification at the Site Area Emergency or General Emergency levels.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## SUPPLEMENTAL INFORMATION

### KEY POINTS OF CONTACT

#### Licensee Personnel

S. Anders, Superintendent, Plant Security  
J. Brawley, ALARA Coordinator, Radiation Protection  
K. Cook, Acting General manager, Plant Operations  
L. Dautat, Operations Supervisor, Radiation Protection  
R. Dodds, Manager, Operations  
C. Fugate, Assistant Manager, Operations (Shift)  
T. Gaudet, Manager, Quality Assurance  
J. Lewis, Manager, Emergency Preparedness  
C. Miller, Supervisor, Radiation Protection  
R. Murillo, Manager, Licensing  
R. Peters, Director, Planning and Scheduling  
B. Pilutti, Manager, Radiation Protection  
O. Pipkins, Senior Licensing Engineer  
R. Putnam, Manager, Engineering Programs  
G. Scott, Licensing Engineer  
K. Walsh, Vice President, Operations  
B. Williams, Director, Engineering  
R. Williams, Licensing Engineer

### ITEMS OPENED, CLOSED, AND DISCUSSED

#### Opened

05000382/2006-005-01	NCV	Recurring Failure of Valve SI-405B to Open (Section 1R19)
05000382/2006-005-02	NCV	Excess Torque Resulting in Pressurizer Skirt Bolt Failures (Section 1R20)
05000382/2006-005-03	NCV	Failure to Conduct a Required Offsite medical Drill in 2005 (Section 1EP5)

#### Closed

05000382/2006-005-01	NCV	Recurring Failure of Valve SI-405B to Open (Section 1R19)
05000382/2006-005-02	NCV	Excess Torque Resulting in Pressurizer Skirt Bolt Failures (Section 1R20)
05000382/2005-002-01	LER	RCS Leakage Detection Instrumentation and Regulatory Guide 1.45
05000382/2005-005-00	LER	Manual Reactor Trip Upon Loss of All Circulating Water Pumps and Lowering Condenser Vacuum
05000382/2006-005-03	NCV	Failure to Conduct a Required Offsite medical Drill in 2005 (Section 1EP5)

## LIST OF DOCUMENTS REVIEWED

### **Section 1R04: Equipment Alignment (71111.04)**

#### Procedures

Number	Title	Revision
OP-002-005	Chemical and Volume Control	Revision 21

#### Miscellaneous Documents

Updated Final Safety Analysis Report  
Flow Diagram - Chemical and Volume Control System, G168, Sheet 2, Rev. 48

### **Section 1R05: Fire Protection (71111.05)**

#### Procedure

NUMBER	TITLE	REVISION
Administrative Procedure UNT-005-013	Fire Protection Program	9
Operating Procedure 009-004	Fire Protection	11-8
Maintenance Procedure MM- 007-010	Fire Extinguisher Inspection and Extinguisher Replacement	13
Administrative Procedure UNT-005-013	Fire Protection Program	9
Fire Protection Procedure FP- 001-015	Fire Protection System Impairments	17
Fire Protection Procedure FP- 001-017	Transient Combustibles	19
Training Manual Procedure NTP-202	Fire Protection Training	11-4

### **Section 1R12: Maintenance Rule (71111.12)**

#### Procedures

Number	Title	Revision
DC-121	Maintenance Rule	1
NUMARC 93-01	Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants	3

Condition Reports

CR-WF3-2005-3084	CR-WF3-2006-0395	CR-WF3-2006-1926
CR-WF3-2005-3270	CR-WF3-2006-0397	CR-WF3-2006-2247
CR-WF3-2005-3692	CR-WF3-2006-0467	CR-WF3-2006-2384
CR-WF3-2005-4852	CR-WF3-2006-0733	CR-WF3-2006-2398
CR-WF3-2006-0007	CR-WF3-2006-0796	CR-WF3-2006-2736
CR-WF3-2006-0191	CR-WF3-2006-0857	CR-WF3-2006-2819
CR-WF3-2006-0212	CR-WF3-2006-1266	CR-WF3-2006-3276
CR-WF3-2006-0346	CR-WF3-2006-1297	CR-WF3-2006-3285

Miscellaneous Documents

Engineering Report W-SE-2005-001	Waterford 3 Maintenance Rule Periodic (a)(3) Assessment	0
----------------------------------	---	---

**Section 1R15: Operability Evaluations**

Procedures:

NUMBER	TITLE	REVISION
EN-OP-104	Operability Evaluation	1
OP-903-097	Pressurizer Heater Capacity Verification	8
OP-035-000	Notification Matrix	6

Miscellaneous Documents

NUMBER	TITLE/SUBJECT	REVISION
Waterford 3 LER 2003-001-000	Loose Breaker Fuse Rendered One Bank of Pressurizer Proportional Heaters Inoperable	0

Condition Reports

CR-WF3-2006-3125	CR-WF3-2006-4501	CR-WF3-1997-2226
CR-WF3-2006-3128	CR-WF3-1997-2491	CR-WF3-2002-1757
CR-WF3-2004-0846	CR-WF3-2006-3357	CR-WF3-2003-0827
CR-WF3-2006-4510	CR-WF3-2006-2418	
CR-WF3-2000-0228		

**Section 1R19: Postmaintenance Testing (71111.19)**

Procedures

NUMBER	TITLE	REVISION
MI-003-115	Startup and Control Drawer Calibration Channel 1 or 2	3
MI-012-012	Removal and Installation of Excore Detectors	3
OP-903-101	Startup Channel Functional Test Channel 1 and 2	6
OP-903-033	Cold Shutdown IST Valve Tests	20
OP-903-003	Charging Pump operability Check	Rev. 11. Change 1
ENS-MA-114	Post Maintenance Testing	5

Miscellaneous Documents

NUMBER	TITLE/SUBJECT	REVISION
CEP-IST-1	IST Bases Document	3

Condition Reports

CR-WF3-2006-3610                      CR-WF3-2000-1347  
CR-WF3-2005-1362

Work Orders

44779-01, 65817-01, 73483,

Procedures

Number	Title	Revision
OP-903-003	Charging Pump Operability Check	Revision 11, Change 1
OP-903-121	Safety Systems Quarterly IST Valve Tests	7
OP-903-127	Reactor Trip Circuit Breaker Post Maintenance Test	3
OP-903-013	Monthly Channel Checks	14
OP-903-011	High Pressure Safety Injection Pump Preservice Operability Check	9

CEP-IST-1

IST Bases Document

3

Work Orders

50947-1, 51041014-01, 63598-01,

**Section 1R23: Temporary Plant Modifications (71111.23)**

Procedure

NUMBER	TITLE	REVISIONS
EN-LI-113	Licensing Basis Document Change Process	1

Miscellaneous Documents

NUMBER	TITLE/SUBJECT	REVISION
ER-W3-2006-0264-000	Temporary Air Compressors to Augment Station Air	0
NRC Information Notice 2004-17	Loose Part Detection and Computerized Eddy Current Data Analysis in Steam Generators	0
ER-W3-2006-0375-000	Install Loose Parts Monitoring Sensors on the Steam Generators	0

Condition Reports

CR-WF3-2006-4524

Work Order

84381

**Section 1EP3: Emergency Response Organization Augmentation Testing (71114.03)**

EP-002-015, "Emergency Responder Activation," Revision 8

EP-003-070, "Emergency Communications Systems Routine Testing," Revision 24

EPP-462, "Evaluation of Pager Tests," Revision 0

Desk Guide 20, "Evaluation of Pager Tests," Revision 20

Drill 2005-03, "Unannounced Off-Hours Callout Drill," conducted August 11, 2005

Drill 2005-07, "Backup Emergency Response Organization Pager Code Drill," conducted

September 12, 2005

Drill 2006-07, "Backup Emergency Response Organization Pager Code Drill," conducted November 14, 2006

Evaluation Worksheets for Pager Tests conducted: January 31, February 22, March 18, April 9, May 9, June 22, July 25, November 8 (all 2005), January 15, February 22, September 6, and November 2 (all 2006)

**Section 1EP4: Emergency Action Level and Emergency Plan Changes (71114.04)**

Safety Evaluation Report, "Proposed Emergency Action Levels Based on Revision 4 to Nuclear Energy Institute 99-01, Entergy Operations Inc., Waterford Steam Electric Station, Unit 3," dated June 20, 2005

**Section 1EP5: Correction of Emergency Preparedness Weaknesses and Deficiencies (71114.05)**

EP-002-150, "Emergency Plan Implementing Records,"

W3D3-2005-011, "Hurricane Katrina Event Report"

QA-7-2005-WF3-1, "Quality Assurance Audit Report: Emergency Plan"

QA-7-2005-WF3-1, Followup to the 2005 QA Emergency Planning Audit

QA-7-2006-WF3-1, "Quality Assurance Audit Report: Emergency Plan"

QS-2005-W3-003, "Quality Assurance Surveillance Report: Emergency Plan Respiratory Equipment and Reviews of CR-ECH-2004-00096 and CR-ECH-2004-0389"

Evaluation Reports for:

Drill 2005-01, conducted February 17, 2005

Drill 2005-04, conducted August 4, 2005

Drill 2005-06, conducted December 7, 2005

Drill 2006-02, conducted May 25, 2006

Drill 2006-03, conducted June 28, 2006

Drill 2006-04, conducted July 27, 2006

Drill 2006-05, conducted September 21, 2006

Drill 2006-09, "Offsite Medical Response Drill," conducted October 25, 2006

LO-WLO-2005-0043, "1<sup>st</sup> and 2<sup>nd</sup> Quarter 2005 Roll-Up Assessment: Emergency Planning Department"

LO-WLO-2005-0082, "3<sup>rd</sup> Quarter 2005 Roll-Up Assessment: Emergency Planning Department"

LO-WLO-2005-0106, "4<sup>th</sup> Quarter 2005 Roll-Up Assessment: Emergency Planning Department"

LO-WLO-2006-0044, "1<sup>st</sup> Quarter 2006 Roll-Up Assessment: Emergency Planning Department"

LO-WLO-2006-0069, "2<sup>nd</sup> Quarter 2006 Roll-Up Assessment: Emergency Planning Department"

LO-WLO-2006-0103, "3<sup>rd</sup> Quarter 2006 Roll-Up Assessment: Emergency Planning Department"

SNAPSHOT Assessment, "Siren Battery Storage," October 19, 2005

Assessment Report LO-WLO-2005, "Emergency Planning Performance Indicator Assessment," October 26, 2005

Assessment Report LO-WLO-2006-00, "Emergency Response Organization Staffing," September 25, 2006

Assessment Report LO-WLO-2006-041, "Emergency Planning Performance Indicator Assessment," April 21, 2006

Assessment Report LO-WLO-2006-000, "Emergency Planning Performance Indicator Assessment," October 29, 2006

EN-HU-103, "Human Performance Error Reviews," Revision 0

Condition Reports:

2005-0046, -1060, -3292, -3471, -3602, -3702, -4407, -4899

2006-0234, -897, -1195, -1639, -1900, -2088, -2852, -3247, -4418

## **Section 2OS1: Access Controls to Radiologically Significant Areas (71121.01)**

### Corrective Action Documents

2006-03645, 2006-03661, 2006-03721, 2006-03736, 2006-03739, 2006-03741, 2006-03812,

### Procedures

ENS-RP-102, Radiological Control, Revision 0

ENS-RP-105, Radiation Work Permits, Revision 7

ENS-RP-106, Radiological Survey Documentation, Revision 0

### Audits and Assessments

LO-WLO-2006-00067-01, Access Control to Radiologically Significant Areas

### Radiation Work Permit

RWP-2006-0005, Tours and Inspections

RWP-2006-0508, Reactor Coolant Pump Motor and Seal Replacement

RWP-2006-0509, Primary Manways

RWP-2006-0510, Nozzle Dams

RWP-2006-0511, Eddy Current Steam Generators

RWP-2006-0600, Health Physics Surveys

RWP-2006-0601, Rigging RWP



RWP-2006-0603, Minor Maintenance Locked High Radiation Areas  
 RWP-2006-0608, Safety Injection Sump Installation  
 RWP-2006-0614, Pressurizer Manway and Valves  
 RWP-2006-0618, Remove/Replace Insulation in the Reactor Building and Annulus  
 RWP-2006-0702, Reactor Disassembly  
 RWP-2006-0708, Remove/Replace Startup Detector No. 2

**Section 2OS2: ALARA Planning and Controls (71121.02)**

Procedures

CE-002-006, Maintaining Reactor Coolant Chemistry, Revision 13  
 EN-RP-104, Personnel Contamination Events, Revision 1  
 EN-RP-109, Hot Spot Program, Revision 2  
 EN-RP-110, ALARA Program, Revision 2  
 HP-002-222, Steam Generator Radiological Controls, Revision 7

**Section 4OA1: Performance Indicator Verification (71151)**

Procedures

EN-LI-114, Performance Indicator Process, Revision 1

Miscellaneous Documents

QA/Oversight Observations, November 28, 2008  
 RF-14 Actual RCS Cleanup, November 28, 2008

**4OA2 Identification and Resolution of Problems (71152)**

Procedure

NUMBER	TITLE	REVISIONS
OP-903-094	ESTAS Subgroup Relay Test - Operating	10
EN-LI-113	Licensing Basis Document Change Process	1
EN-LI-102	Corrective Action Process	7
OP-002-004	Chilled Water System	12
OP-002-003	Component Cooling Water System	12 and 13
EP-001-001	Recognition and Classification of Emergency Conditions	20-2 and 21
EP-002-010	Notifications and Communications	30
EP-002-052	Protective Action Guidelines	19

Miscellaneous Documents

<u>NUMBER</u>	<u>TITLE/SUBJECT</u>	<u>REVISION</u>
ER-W3-00-0541-00	Evaluate the Essential Chilled Water Leaving Temperature Setpoint	0
Quarterly Trend Report	2 <sup>nd</sup> Quarter 2006	0
Desk Guide 17	Drill Control Team Documentation	2
	Training Evaluation Action Request 2006-1230	
	Waterford Steam Electric Station Emergency Plan	33
	Operations Department Performance Indicator	2006

Condition Reports

CR-WF3-1993-0265	CR-WF3-1996-1852	CR-WF3-2002-1876
CR-WF3-1993-0289	CR-WF3-1997-0028	CR-WF3-2006-3402
CR-WF3-1994-0642	CR-WF3-1997-0288	CR-WF3-2006-3487
CR-WF3-1995-0963	CR-WF3-1997-2778	CR-WF3-2006-4165
CR-WF3-1995-0963	CR-WF3-1999-0816	CR-WF3-2006-0609
CR-WF3-1995-1047	CR-WF3-2000-0054	CR-WF3-2006-1145
CR-WF3-1996-0043	CR-WF3-2000-0150	CR-WF3-2006-3402
CR-WF3-1996-0084	CR-WF3-2000-1553	

**40A5 Other: NRC Temporary Instructions 2515/166**

Calculation

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
GENE-0000-0054-9349	SIS Sump Strainer Stress Report	0

Engineering Requests

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
ER-W3-2003-0394-001	Safety Injection Sump Modifications	0

Drawings

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
06-594, Sht. #1	Waterford 3 Containment & Strainers	A
06-595, Sht. #2	Waterford 3 Containment & Strainers	A
06-596, Sht. #3	Waterford 3 Containment &	A

06-597, Sht. #4	Strainers Waterford 3 Containment & Strainers	A
06-598, Sht. #5	Waterford 3 Containment & Strainers	A
06-486, Sht. #0	LT-SI-7145AS & LT-SI-7145BS Local Mounts	4
B430, Sht. X-23J-45	Instrument Installation Details	1
B430, Sht. X-23D-8A	Instrument Installation Details	2
B430, Sht. X-23J-25A	Instrument Installation Details	5
B430, Sht. X-23J-44	Instrument Installation Details	2
B430, Sht. X-23J-28	Instrument Installation Details	8

Condition Reports

CR-WF3-2006-03273

Miscellaneous

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION/DATE</u>
LPL-EQMI-08.01	Environmental Qualification Maintenance Input for Rosemount Model 1153 Series A, B &D, 1154 & 1154 Series H Transmitters and 1159 Remote Seals	9
SQ-IC-03	Rosemount Pressure Transmitters	13
LPL-EQA-08.01B	Environmental Qualification Assessment for the Rosemount 1154 Transmitters Used in the Waterford SES Unit No. 3	3
LPL-EQA-08.01F	Environmental Qualification Assessment for the Rosemount 1159 Remote Seal System Used in the Waterford SES Unit No. 3	0
NOECP-333, Att. 7.1	Construction Material Testing Document, Grout/Mortar Data, Lab No. W2576, WO No. 76399	2