



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
612 EAST LAMAR BLVD, SUITE 400  
ARLINGTON, TEXAS 76011-4125

August 13, 2010

Joseph Kowalewski, Vice President, Operations  
Entergy Operations, Inc.  
Waterford Steam Electric Station, Unit 3  
17265 River Road  
Killona, LA 70057-0751

Subject: WATERFORD STEAM ELECTRIC STATION, UNIT 3 – NRC INTEGRATED  
INSPECTION REPORT 05000382/2010-003 AND 07200075/2010001

Dear Mr. Kowalewski:

On June 30, 2010, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Waterford Steam Electric Station, Unit 3. The enclosed integrated inspection report documents the inspection results, which were discussed on July 9, 2010, with Mr. Charles Arnone, General Manager, Plant Operations, and other 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.

This report documents one self-revealing finding of very low safety significance (Green). This finding is determined to involve a violation of NRC requirements. However, because the finding is of very low safety significance and because it is entered into your corrective action program, the NRC is treating the violation as a noncited violation, consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest the violation or the significance of the noncited violation, 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, D.C. 20555-0001, with copies to the Regional Administrator, Region IV, 612 E Lamar Blvd, Suite 400, Arlington, TX 76011-4125; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspectors at the Waterford Steam Electric Station, Unit 3. In addition, if you disagree with the cross-cutting aspect assigned to any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region IV, and the NRC Resident Inspector at the Waterford Steam Electric Station, Unit 3.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, and its enclosure, will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records 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/ RVA for**

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

Docket Nos.: 50-382 and 72-075  
License No.: NPF-38

Enclosure:  
NRC Inspection Report 05000382/2010003 and 072000054/2010001  
w/Attachment: Supplemental Information

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		<input type="checkbox"/> Non-publicly Available		<input type="checkbox"/> Sensitive	
RIV:SRI:DRP/E	RI:DRP/E	SPE:DRP/E	C:DRS/EB1	C:DRS/EB2	
MFDavis	DHOverland	RVAzua	TFarnholtz	NFO'Keefe	
<b>/RA/E</b>	<b>/RA/E</b>	<b>/RA/</b>	<b>/RA/</b>	<b>/RA/</b>	
08/09/2010	08/09/2010	08/10/2010	08/12/2010	08/11/2010	
C:DRS/OB	C: DRS/PSB1	C:DRS/PSB1	C:DRS/TSB	C:DRP/E	
MHaire	MPShannon	GEWerner	MHay	JAClark	
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**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION IV**

Docket Nos.: 50-382 and 72-075

License No.: NPF-38

Report: 05000382/2010003 and 072000054/2010001

Licensee: Entergy Operations, Inc.

Facility: Waterford Steam Electric Station, Unit 3

Location: 17265 River Road  
Killona, LA 70057-0751

Dates: April 1 through June 30, 2010

Inspectors: M. Davis, Senior Resident Inspector  
D. Overland, Resident Inspector  
C. Alldredge, Health Physicist  
L. Brookhart, Project Engineer  
P. Elkmann, Senior Emergency Preparedness Inspector  
C. Graves, Health Physicist  
L. Ricketson, Senior Health Physicist, PE

Approved By: Jeff Clark, Chief, Project Branch E  
Division of Reactor Projects

## SUMMARY OF FINDINGS

IR 05000382/2010003; 04/01/2010 – 06/30/2010; Waterford Steam Electric Station, Unit 3: Problem Identification and Resolution.

The report covered a 3-month period of inspection by resident inspectors and announced baseline inspections performed by region-based inspectors. One Green self-revealing finding, which was a noncited violation (NCV), was identified. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter 0609, "Significance Determination Process." The crosscutting aspect was determined using Inspection Manual Chapter 0310, "Components Within the Cross-Cutting Area." 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 4, dated December 2006.

### A. NRC-Identified Findings and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. A self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," occurred because the licensee did not conduct timely corrective actions to preclude repetition of a significant condition adverse to quality that involved Tyco relay replacements. Specifically, the licensee extended the due date of corrective actions to preclude repetition of suspected faulty relays without an adequate justification. As a result, this led to additional relay failures that challenged the reliability of risk significance safety systems. The immediate corrective actions after the additional failures included initiating work requests to replace the faulty relays. The planned corrective actions included an evaluation of the effectiveness and timeliness of the Tyco replacement project. The licensee entered this issue into their corrective action program for resolution as Condition Reports CR-WF3-2010-1330 and CR-WF3-2010-4199.

The finding is more than minor because it is associated with the equipment performance attribute of the Mitigating System Cornerstone and affects the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the licensee did not provide an adequate justification to extend corrective actions beyond its original due date such that it could not affect the availability, reliability, and capability of risk significance safety systems. Using NRC Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheets, the finding was determined to have very low safety significance because it is not a design or qualification deficiency, did not represent a loss of a safety function of a system or a single train greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to external events. The finding has a crosscutting aspect in the corrective action component of problem identification and resolution area because the licensee did not take appropriate corrective actions to address

safety issues in a timely manner, commensurate with their safety significance and complexity [P.1(d)](Section 4OA2).

**B. Licensee Identified Violations**

None

## REPORT DETAILS

### Summary of Plant Status

The Waterford Steam Electric Station, Unit 3, began the inspection period at 100 percent power and remained at 100 percent power for the rest of the inspection period.

#### 1. REACTOR SAFETY

##### **Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity and Emergency Preparedness**

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

##### Summer Readiness of Offsite and Alternate ac Power Systems

###### a. Inspection Scope

The inspectors performed a review of the licensee's preparations for hurricanes and summer readiness of offsite and alternate ac power systems. The inspectors reviewed the procedures affecting these areas and the communication protocols between the transmission system operator and the plant to verify that the appropriate information was being exchanged when issues arose that could affect the offsite power system. The inspectors verified that the procedures addressed the following: (1) the actions to be taken when notified by the transmission system operator that the posttrip voltage of the offsite power system at the plant will not be acceptable to assure the continued operation of the safety-related loads without transferring to the onsite power supply; (2) the compensatory actions identified to be performed if it is not possible to predict the post-trip voltage at the plant for the current grid conditions; (3) required re-assessment of plant risk based on maintenance activities which could affect grid reliability, or the ability of the transmission system to provide offsite power; and (4) required communications between the plant and the transmission system operator when changes at the plant could impact the transmission system, or when the capability of the transmission system to provide adequate offsite power is challenged. In addition, the inspectors reviewed the material condition of offsite ac power systems and onsite alternate ac power systems to the plant. This review included a partial walkdown of the switchyard and unit transformers.

These activities constitute completion of one summer readiness for offsite and alternate ac power system sample as defined in Inspection Procedure 71111.01-05. Specific documents reviewed during this inspection are listed in the attachment.

###### b. Findings

No findings were identified.

## **1R04 Equipment Alignments (71111.04)**

### Partial Walkdown

#### a. Inspection Scope

The inspectors conducted partial walkdowns of accessible portions of selected risk significant systems to verify equipment alignment. The inspectors attempted to identify any discrepancies that could affect the function of the system, and, therefore, potentially increase risk. The inspectors reviewed the applicable operating procedures, system diagrams, Updated Final Safety Analysis Report, technical specification requirements, technical requirements manual, outstanding work orders, condition reports, and the impact of ongoing work activities on redundant trains of equipment. The inspectors reviewed these documents to identify conditions that could have rendered the systems incapable of performing their intended functions. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no obvious deficiencies. The inspectors also verified that the licensee had properly identified and resolved equipment alignment problems that could cause initiating events or impact the availability and functional capability of mitigating systems or barriers. The inspectors performed a partial walkdown of the following risk-significant systems:

- Train A of the auxiliary component cooling water system due to maintenance on Train B of the auxiliary component cooling water system pump on April 22, 2010
- Emergency diesel generator B due to maintenance on emergency diesel generator A on June 7, 2010
- Containment spray system train B due to maintenance on containment spray pump A on June 10, 2010

These activities constitute completion of three partial system walkdown samples as defined in Inspection Procedure 71111.04-05. Specific documents reviewed during this inspection are listed in the attachment.

#### b. Findings

No findings were identified.

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

### Quarterly Fire Inspection Tours

#### a. Inspection Scope

The inspectors conducted walkdowns of plant areas listed below to evaluate the licensee's fire protection program for operational status, and material condition. The inspectors verified that licensee personnel had implemented a fire protection program that adequately controlled combustibles and ignition sources within the plant; effectively maintained fire detection and suppression capability; maintained passive fire protection features in good material condition; and had implemented adequate compensatory measures for out of service, degraded or inoperable fire protection equipment, systems,

or features, in accordance with the licensee's fire plan. The inspectors selected fire areas based on their overall contribution to the internal fire risk as documented in the plant's Individual Plant Examination for External Events, their potential to affect equipment that could initiate or mitigate a plant transient, or their impact on the plant's ability to respond to an event. As a part of the inspection activities, the inspectors verified that fire hoses and extinguishers were in their designated locations and available for immediate use; that fire detectors and sprinklers were unobstructed, that transient material loading was within the analyzed limits; and fire doors, dampers, and penetration seals appeared to be in satisfactory condition. The inspectors also verified that minor issues identified during the inspection were entered into the licensee's corrective action program. The inspectors performed a walkdown of the following risk-significant fire areas:

- Turbine generator building, fire area TGB
- Intake/discharge structure, fire area IS
- B safety injection pump room, fire area RAB 35
- A emergency diesel generator, fire area RAB 16
- A diesel oil storage tank, fire area RAB 40

These activities constitute completion of five quarterly fire-protection inspection samples as defined in Inspection Procedure 71111.05-05. Specific documents reviewed during this inspection are listed in the attachment.

b. Findings

No findings were identified.

**1R11 Licensed Operator Requalification Program (71111.11)**

a. Inspection Scope

On May 26, 2010, the inspectors observed a crew of licensed operators in the plant's simulator to verify that operator performance was adequate, evaluators were identifying and documenting crew performance problems and training was being conducted in accordance with plant procedures. The inspectors evaluated the following areas:

- Licensed operator performance
- Crew's clarity and formality of communications
- Crew's ability to take timely actions in the conservative direction
- Crew's prioritization, interpretation, and verification of annunciator alarms
- Crew's correct use and implementation of abnormal and emergency procedures
- Control board manipulations
- Oversight and direction from supervisors
- Crew's ability to identify and implement appropriate technical specification actions and emergency plan actions and notifications

The inspectors compared the crew's performance in these areas to pre-established operator action expectations and successful critical task completion requirements.

These activities constitute completion of one quarterly licensed-operator requalification program sample as defined in Inspection Procedure 71111.11-05. Specific documents reviewed during this inspection are listed in the attachment.

b. Findings

No findings were identified.

**1R12 Maintenance Effectiveness (71111.12)**

a. Inspection Scope

The inspectors evaluated degraded performance or condition issues that involved structures, systems and components within the scope of the licensee's Maintenance Rule Program. The inspectors verified the licensee's actions to address structures, systems and components performance or condition problems in terms of the following:

- Implementing appropriate work practices
- Identifying and addressing common cause failures
- Scoping of structures, systems and components in accordance with 10 CFR 50.65(b)
- Characterizing reliability issues for performance
- Charging unavailability for performance
- Balancing reliability and unavailability for performance
- Trending key parameters for condition monitoring
- Ensuring proper classification in accordance with 10 CFR 50.65(a)(1) or (a)(2)
- Verifying appropriate performance criteria for structures, systems and components classified as having an adequate demonstration of performance through preventive maintenance, as described in 10 CFR 50.65(a)(2), or as requiring the establishment of appropriate and adequate goals and corrective actions for systems classified as not having adequate performance, as described in 10 CFR 50.65(a)(1)

The inspectors assessed performance issues with respect to the reliability, availability, and condition monitoring of the structures, systems and components. In addition, the inspectors verified that the licensee entered maintenance effectiveness issues into their corrective action program with the appropriate significance characterization. The inspectors reviewed the following risk-significant maintenance effectiveness performance or condition issues.

- Tyco relays (Agastat E7024PB) on April 16, 2010

- D containment fan cooler component cooling water isolation valve (CC-822B) on May 20, 2010

These activities constitute completion of two quarterly maintenance effectiveness samples as defined in Inspection Procedure 71111.12-05. Specific documents reviewed during this inspection are listed in the attachment.

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspectors reviewed licensee personnel's evaluation and management of plant risk for planned maintenance and emergent work activities affecting risk-significant and safety-related equipment to verify that the appropriate risk assessments were performed prior to removing equipment for work. As applicable for each activity, the inspectors verified that licensee personnel performed risk assessments as required by 10 CFR 50.65(a)(4) and that the assessments were accurate and complete. When licensee personnel performed emergent work, the inspectors verified that licensee personnel promptly assessed and managed the plant risk. The inspectors reviewed the scope of maintenance work, discussed the results of the assessment with the probabilistic risk analyst or shift technical advisor, and verified that plant conditions were consistent with the risk assessment. The inspectors also reviewed the technical specification requirements and inspected portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met. The inspectors selected the following activities for review based on the relative plant risk and type of work activities at the site:

- Planned maintenance activities on train A of the control room emergency air filtration system with train A of the component cooling water system being out of service on April 5, 2010
- Planned maintenance activities for replacement of the high pressure safety inspection relay on April 16, 2010
- Planned maintenance activities on the startup transformer B with dry cooling tower fan 1B being out of service on April 20, 2010
- Emergent work activities on wet cooling tower fan 2B with high pressure safety inspection pump B out of service on April 23, 2010
- Emergent work activities on the K309A relay replacement with train A of the containment spray system out of service on June 1, 2010

These activities constitute completion of five maintenance risk assessments and emergent work control inspection samples as defined in Inspection Procedure 71111.13-05. Specific documents reviewed during this inspection are listed in the attachment.

b. Findings

No findings were identified.

**1R15 Operability Evaluations (71111.15)**

a. Inspection Scope

The inspectors selected operability evaluations of degraded and nonconforming conditions that involved risk-significant structures, systems and components. The inspectors reviewed the technical adequacy of the operability evaluations to ensure that the evaluations were properly justified and the subject component or system remained available such that no unrecognized increase in risk had occurred. The inspectors compared the operability evaluation with the Updated Final Safety Analysis Report and other design basis documents to determine whether the components or systems were operable. If the operability evaluations required compensatory measures to maintain operability then the inspectors determined whether the measures that were in place would work as intended, and were properly controlled. Additionally, the inspectors verified that degraded structures, systems and components or compensatory measures taken to address degraded and nonconforming conditions did not result in changes to tests or experiments described in the Updated Final Safety Analysis Report. The inspectors also reviewed a sampling of corrective action documents to verify that the licensee was identifying and correcting any deficiencies associated with operability evaluations. The inspectors reviewed the following degraded and nonconforming conditions that involved risk-significance structures, systems and components:

- Operability evaluation related to air voids in train A of the low pressure safety inspection system on April 1, 2010
- Operability evaluation related to the B fuel handling building emergency filtration unit sample pump not starting on April 11, 2010
- Operability evaluation related to a loss of the B static uninterruptible power supply inverter on April 11, 2010
- Operability evaluation related to a degraded airlock door located on the minus 4-foot elevation wing area on April 21, 2010
- Operability evaluation related to the wet cooling tower fan 2B tripping on thermal overload on April 23, 2010

These activities constitute completion of five operability evaluation inspection samples as defined in Inspection Procedure 71111.15. Specific documents reviewed during this inspection are listed in the attachment.

b. Findings

No findings were identified.

## **1R18 Plant Modifications (71111.18)**

### Permanent Modification

#### a. Inspection Scope

The inspectors reviewed plant modifications to verify that the modifications did not affect the safety functions of systems that are important to safety. The inspectors verified that the system design and licensing bases did not degrade due to modifications to ensure that the system maintained its availability, reliability, and functional capability. The inspectors conducted walkdowns of accessible portions of the modifications to verify that licensee personnel maintained the proper configuration control to ensure that the plant was not placed in an unsafe condition and that the modifications were implemented in accordance with plant procedures. The following modifications were reviewed as a part of this inspection activity:

- A permanent modification to install replacement timer relays in auxiliary panels 1C and 2C.

These activities constitute completion of one permanent modification inspection sample as defined in Inspection Procedure 71111.18-05. Specific documents reviewed during this inspection are listed in the attachment.

#### b. Findings

No findings were identified.

## **1R19 Post-Maintenance Testing (71111.19)**

#### a. Inspection Scope

The inspectors reviewed the postmaintenance test for the maintenance activities listed below to verify that procedures and test activities ensured system operability and functional capability. The inspectors evaluated these activities for the following:

- The effect of testing on the plant had been adequately addressed; testing was adequate for the maintenance performed
- Acceptance criteria were clear and demonstrated operational readiness; test instrumentation was appropriate

The inspectors evaluated the activities against the technical specification, the Updated Final Safety Analysis Report, 10 CFR Part 50 requirements, licensee procedures, and various NRC generic communications to ensure that the test results adequately ensured that the equipment met the licensing basis and design requirements. In addition, the inspectors reviewed corrective action documents associated with postmaintenance tests to determine whether the licensee was identifying problems and entering them in the corrective action program and that the problems were being corrected commensurate with their importance to safety. The inspectors selected the following postmaintenance testing activities based on the ability of the structures, systems and components to affect risk:

- Replaced fuse and diode for the B static uninterruptible power supply inverter on April 12, 2010
- Replaced the thermal overload circuit for the wet cooling tower fan 2B on April 23, 2010
- Torque flow control valve (SI-139A) on train A of the low pressure safety injection system on May 21, 2010
- Replaced solenoid on containment fan cooler D component cooling water isolation valve (CC-822B) on May 20, 2010
- Replaced K309A relay for the safety injection sump valve (SI-602A) on June 1, 2010

These activities constitute completion of five postmaintenance testing inspection samples as defined in Inspection Procedure 71111.19-05. Specific documents reviewed during this inspection are listed in the attachment.

b. Findings

No findings were identified.

**1R22 Surveillance Testing (71111.22)**

a. Inspection Scope

The inspectors reviewed the Updated Final Safety Analysis Report, technical specifications, and licensee procedure requirements to ensure that the surveillance test activities listed below demonstrated that the structures, systems and components being tested were capable of performing their intended safety functions. The inspectors either observed or reviewed test data to verify that the significant surveillance test attributes were adequate to address the following:

- Preconditioning
- Evaluation of testing impact on the plant
- Acceptance criteria
- Test equipment
- Procedures
- Jumper/lifted lead controls
- Test data
- Testing frequency and method demonstrated technical specification operability
- Test equipment removal

- Restoration of plant systems
- Fulfillment of ASME Code requirements
- Updating of performance indicator data
- Engineering evaluations, root causes, and bases for returning tested systems, structures, and components not meeting the test acceptance criteria were correct
- Reference setting data
- Annunciators and alarms setpoints

The inspectors also verified that licensee personnel identified and implemented any needed corrective actions associated with the surveillance testing activity.

- Scheduled surveillance of the component cooling water A pump on April 7, 2010
- Scheduled surveillance of the operability check for the emergency core cooling system train B on April 22, 2010
- Scheduled surveillance for the reactor coolant system water inventory balance on May 5, 2010
- Scheduled surveillance of the operability for the engineering safety feature actuation system B subgroup relay test on April 30, 2010
- Scheduled surveillance of the B essential feedwater valve (inservice) test on June 10, 2010

These activities constitute completion of five surveillance testing inspection samples as defined in Inspection Procedure 71111.22-05. Specific documents reviewed during this inspection are listed in the attachment.

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspectors performed an in-office of the Waterford Steam Electric Station, Unit 3 Emergency Plan, Revision 39, and emergency plan implementing Procedure EP-001-001, "Recognition and Classification of Emergency Conditions," Revision 25. These revisions:

- Added the definitions of 'imminent,' and 'security condition,' from Nuclear Energy Institute Report 99-01, "Emergency Action Level Methodology," Revision 5

- Revised the security-related emergency action levels HG1, HS1, HA1, and HU1, as described in Nuclear Energy Institute Report 99-01, "Emergency Action Level Methodology," Revision 5
- Changed the licensee's medical air service from West Jefferson Air Care to Ochsner Flight Care Helicopter Ambulance
- Updated site and emergency response facilities drawings
- Changed the title, "Duty Plant Manager," to "TSC Duty Emergency Coordinator"
- Made minor editorial changes

These revisions were compared to their previous revisions, 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 Nuclear Energy Institute Report 99-01, "Emergency Action Level Methodology," Revision 5, and to the standards in 10 CFR 50.47(b), to determine if the revisions adequately implemented 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-generated changes; therefore, these revisions are subject to future inspection.

These activities constitute completion of two samples as defined in Inspection Procedure 71114.04-05.

b. Findings

No findings were identified.

**1EP6 Drill Evaluation (71114.06)**

a. Inspection Scope

The inspectors evaluated the conduct of an emergency drill on May 26, 2010, to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the Simulator Control Room, Technical Support Center, and the Emergency Operations Facility to determine whether the event classification, notifications, and protective action recommendations were performed in accordance with procedures. The inspectors also attended a licensee's drill critique to compare any inspector-observed weakness with those identified by the licensee's staff in order to evaluate the critique and to verify whether the staff was properly identifying weaknesses and entering them into the corrective action program.

These activities constitute completion of one simulator drill evaluation inspection sample as defined in Inspection Procedure 71114.06-05. As part of the inspection, the inspectors reviewed the drill package and other documents listed in the attachment.

b. Findings

No findings were identified.

## 2. RADIATION SAFETY

### Cornerstone: Occupational and Public Radiation Safety

#### 2RS04 Occupational Dose Assessment (71124.04)

##### a. Inspection Scope

This area was inspected to: (1) determine the accuracy and operability of personal monitoring equipment; (2) determine the accuracy and effectiveness of the licensee's methods for determining total effective dose equivalent; and (3) ensure occupational dose is appropriately monitored. The inspectors 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 inspectors interviewed licensee personnel, performed walkdowns of various portions of the plant, and reviewed the following items:

- External dosimetry accreditation, storage, issue, use, and processing of active and passive dosimeters
- The technical competency and adequacy of the licensee's internal dosimetry program
- Adequacy of the dosimetry program for special dosimetry situations such as declared pregnant workers, multiple dosimetry placement, and neutron dose assessment
- Audits, self-assessments, and corrective action documents related to dose assessment since the last inspection

These activities constitute completion of the one required sample as defined in Inspection Procedure 71124.04-05. Specific documents reviewed during this inspection are listed in the attachment.

##### b. Findings

No findings were identified.

#### 2RS05 Radiation Monitoring Instrumentation (71124.05)

##### a. Inspection Scope

This area was inspected to verify the licensee is assuring the accuracy and operability of radiation monitoring instruments that are used to: (1) monitor areas, materials, and workers to ensure a radiologically safe work environment; and (2) detect and quantify radioactive process streams and effluent releases. The inspectors 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 inspectors interviewed licensee personnel, performed walkdowns of various portions of the plant, and reviewed the following items:

- Selected plant configurations and alignments of process, post-accident, and effluent monitors with descriptions in the Final Safety Analysis Report and the offsite dose calculation manual
- Select instrumentation, including effluent monitoring instrument, portable survey instruments, area radiation monitors, continuous air monitors, personnel contamination monitors, portal monitors, and small article monitors to examine their configurations and source checks
- Calibration and testing of process and effluent monitors, laboratory instrumentation, whole body counters, postaccident monitoring instrumentation, portal monitors, personnel contamination monitors, small article monitors, portable survey instruments, area radiation monitors, electronic dosimetry, air samplers, continuous air monitors
- Audits, self-assessments, and corrective action documents related to radiation monitoring instrumentation since the last inspection

These activities constitute completion of the one required sample as defined in Inspection Procedure 71124.05-05. Specific documents reviewed during this inspection are listed in the attachment.

b. Findings

No findings were identified.

## **OTHER ACTIVITIES**

### **40A1 Performance Indicator (PI) Verification (71151)**

.1 Data Submission Issue

a. Inspection Scope

The inspectors performed a review of the data submitted by the licensee for the first quarter 2010 performance indicators for any obvious inconsistencies prior to its public release in accordance with Inspection Manual Chapter 0608, "Performance Indicator Program."

This review was performed as part of the inspectors' normal plant status activities and, as such, did not constitute a separate inspection sample.

b. Findings

No findings were identified.

.2 Reactor Coolant System Specific Activity (BI01)

a. Inspection Scope

The inspectors reviewed a sample of plant records and data against the reported reactor coolant system specific activity performance indicators for the period of April 2009

through May 2010. The inspectors conducted this review using the definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6. The inspectors reviewed the plant's reactor coolant system chemistry samples records, technical specification requirements, issue reports, event reports, and NRC integrated inspection reports to validate the accuracy of the submittals. The inspectors also reviewed the plant's issue report database to determine if any problems had been identified with the performance indicator data collected or transmitted for this indicator. In addition to the record reviewed, the inspectors observed a chemistry technician obtain and analyze a reactor coolant system sample.

These activities constitute completion of one reactor coolant system specific activity sample as defined in Inspection Procedure 71151-05. Specific documents reviewed are described in the attachment to this report.

b. Findings

No findings were identified.

.3 Reactor Coolant System Leakage (BI02)

a. Inspection Scope

The inspectors reviewed a sample of plant records and data against the reported reactor coolant system specific activity performance indicators for the period of April 2009 through May 2010. The inspectors conducted this review using the definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6. The inspectors reviewed the plant's operator logs; reactor coolant system leakage tracking data, issue reports, event reports, and NRC integrated inspection reports to validate the accuracy of the submittals. The inspectors also reviewed the plant's issue report database to determine if any problems had been identified with the performance indicator data collected or transmitted for this particular indicator. In addition to the record reviewed, the inspectors observed the surveillance activity that determines reactor coolant system identified leakage rate in conjunction with the surveillance testing inspection area.

These activities constitute completion of one reactor coolant system leakage sample as defined in Inspection Procedure 71151-05. Specific documents reviewed are described in the attachment to this report.

b. Findings

No findings were identified.

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

.1 Routine Reviews of Identification and Resolution of Problems

a. Inspection Scope

As part of the various baseline inspection procedures discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that they were being entered into the licensee's

corrective action program at an appropriate threshold, that adequate attention was being given to timely corrective actions, and that adverse trends were identified and addressed. The inspectors reviewed attributes that included: the complete and accurate identification of the problem; the timely correction, commensurate with the safety significance; the evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent of condition reviews, and previous occurrences reviews; and the classification, prioritization, focus, and timeliness of corrective actions. Minor issues entered into the licensee's corrective action program because of the inspectors' observations are included in the attached list of documents reviewed.

These routine reviews for the identification and resolution of problems did not constitute any additional inspection samples. The inspectors performed these daily reviews as part of their daily plant status monitoring activities.

b. Findings

No findings were identified.

.2 Semi-Annual Trend Review

a. Inspection Scope

The inspectors performed a review of the licensee's corrective action program and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspectors focused their review on repetitive equipment issues, licensee trending efforts, and human performance results. The inspectors included issues documented outside the normal corrective action program in major equipment problem lists, repetitive and/or rework maintenance lists, departmental problem/challenges lists, system health reports, quality assurance audit/surveillance reports, self-assessment reports, and Maintenance Rule assessments audits. The inspectors compared and contrasted their results with the results contained in the licensee's corrective action program trending reports.

These activities constitute completion of one required sample as defined in Inspection Procedure 71152-05.

b. Findings

No findings were identified.

.3 Selected Issue Follow-up Inspection

a. Inspection Scope

The inspectors performed an in-depth review of the licensee's evaluation and corrective actions related to additional failures of Tyco (Agastat E7024PB) relays. The inspectors reviewed the appropriateness of the assigned significance, the scope and depth of the causal analysis, and the timeliness of resolution. The inspectors assessed whether the evaluation identified likely causes for the issues and identified appropriate corrective actions to address the identified causes. The inspectors also conducted a review of the corrective actions to verify that appropriate measures were in place to prevent

reoccurrence of the issue. In addition, the inspectors assessed whether the licensee's evaluation considered extent of condition, generic implications, common cause, and previous occurrences. The inspectors reviewed the potential impact on nuclear safety and risk to verify that the licensee had taken corrective actions commensurate with the significance of the issue. The inspectors evaluated these actions against the requirements of the licensee's corrective action program and performance attributes contained in Inspection Procedure 71152, Section 03.06.

b. Findings

Introduction. A Green self-revealing finding associated with a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," occurred because the licensee did not conduct timely corrective actions to preclude repetition of a significant condition adverse to quality that involved Tyco relay replacements. Specifically, the licensee extended the due date of corrective actions to preclude repetition of suspected faulty relays without an adequate justification. As a result, this led to additional relay failures that challenged the reliability of risk significance safety systems.

Description. During the previous 18 months, the licensee experienced a higher than expected failure rate of normally energized Tyco relays. The failures caused unplanned entry into technical specification limiting conditions for operation and prevented critical equipment from automatically starting during safety injection actuation signal or a loss of offsite power testing. In June 2009, the licensee documented this issue as a significant condition adverse to quality in Condition Report CR-WF3-2009-3448. The licensee concluded that the time delay Tyco relays, model number E7024PB, were faulty. The licensee developed a corrective action plan to preclude repetition of the significant condition adverse to quality, which was to replace all Tyco relays with a new manufacturer. The licensee divided the replacement process into three phases, with the highest priority relays being replaced by January 17, 2010. However, three days before the scheduled due date, the licensee extended the corrective action plan to preclude repetition to May 15, 2010. The justification for the extension stated that the replacement modification was an enhancement and additional testing was in place to detect degraded relays. However, the licensee experienced two additional failures prior to replacing the faulty relay. On February 22, 2010, the low pressure safety injection pump B failed to start during a scheduled surveillance test. Upon further investigation, the licensee determined that the cause of the failure was a Tyco relay (E7024PB), in which the contacts did not change state when the relay was deenergized. Subsequently, on February 27, 2010, the battery exhaust fans for train B failed to start during their scheduled surveillance test. The fan did not start because the Tyco relay failed to change states.

After the additional failures, the inspectors reviewed the root cause evaluation (CR-WF3-2009-3448) from June of 2009, other associated condition reports, work orders, and related documents. The inspectors also interviewed site personnel associated with this issue and the justification to extend the due date for the implementation of the replacement modification. The inspectors noted that the replacement modification was not an enhancement but was in fact the corrective action to preclude repetition of this significant condition adverse to quality. The inspectors determined that both the low pressure safety injection pump and the battery room exhaust fan Tyco relays were scheduled to be replaced during Phase 1 of the modification, which had the highest priority for competition. However, the licensee did

not perform an adequate evaluation to justify extending the due date of the replacement modification. As a result, this led to additional relay failures that challenged the reliability of risk significance safety systems. The licensee entered this issue into their corrective action program for resolution as Condition Reports CR-WF3-2010-1330 and CR-WF3-2010-4199. The immediate corrective actions after the additional failures included initiating work requests to replace the faulty relays. The planned corrective actions included an evaluation of the effectiveness and timeliness of the Tyco replacement project.

Analysis. The performance deficiency is that the licensee did not conduct timely corrective actions to preclude repetition of a significant condition adverse to quality that involved Tyco relay replacements. Specifically, the licensee extended the due date of corrective actions to preclude repetition of suspected faulty relays without an adequate justification. As a result, this led to additional relay failures that challenged the reliability of risk significance safety systems. The finding is more than minor because it is associated with the equipment performance attribute of the Mitigating System Cornerstone and affects the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the licensee did not provide an adequate justification to extend corrective actions beyond its original due date such that it could not affect the availability, reliability, and capability of risk significance safety systems. The inspectors evaluated this finding using Inspection Manual Chapter 0609 Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings." The inspectors determined that the finding is of very low safety significance (Green) because it is not a design or qualification deficiency, did not represent a loss of a safety function of a system or a single train greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to external events. The finding has a cross-cutting aspect in the corrective action component of problem identification and resolution area because the licensee did not take appropriate corrective actions to address safety issues in a timely manner, commensurate with their safety significance and complexity (P.1.d).

Enforcement. Title 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," states, in part, measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances 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. Contrary to the above, prior to January 17, 2010, the licensee did not assure that corrective actions were timely to preclude repetition of a significant condition adverse to quality. Specifically, the licensee extended the due date of the corrective actions to preclude repetition of suspected faulty relays without an adequate justification. As a result, this led to additional relay failures that challenged the reliability of risk significance safety systems. However, because this was of very low safety significance and it was entered into the corrective action program as Condition Reports CR-WF3-2010-1330 and CR-WF3-2010-4199, consistent with Section VI.A of the Enforcement Policy, this violation is being treated as a noncited violation, NCV 05000382/2010003-01: "Failure to Conduct Timely Corrective Actions to Replace Faulty Relays."

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

##### (Closed) Licensee Event Report 05000382/2008-001-00, Mispositioned Essential Chiller AB Return Header B Isolation Valve

On March 2, 2008, operators received a chiller B expansion tank hi/lo level alarm in the control room. Upon further investigation, operators identified that an essential chiller AB return header B isolation valve (CHW-786B) was not properly aligned. Operators found isolation valve CHW-786B in the open position. However, the normal operating position for this valve must be closed to maintain train independence. The licensee personnel noted that with this valve being found in the open position then both essential services chilled water system trains were cross-connected and the train independence was not met. The licensee declared both essential services chilled water system trains inoperable and entered Technical Specifications 3.7.12 and 3.0.3. This issue and associated noncited violation were discussed in NRC Inspection Report 2008002 as NCV 05000382/2008002-03. The licensee documented this issue in Condition Report CR-WF3-2008-0778. This licensee event report is closed.

#### **40A5 Other Activities**

##### Onsite Fabrication of Components and Construction of an Independent Spent Fuel Storage Installation (Inspection Procedure 60853)

###### a. Inspection Scope

The inspectors reviewed records and observed pad construction activities at the Waterford Steam Electric Station independent spent fuel storage installation to verify that the independent spent fuel storage installation pad's subsoil met the specifications defined in the design basis documents for the dry cask storage system. The inspectors conducted this inspection through a review of records and direct observation during the weeks of April 5 and May 5, 2010, respectively.

During the week of April 5, 2010, the inspectors performed an in-office review of the preparations required for the concrete placement of the independent spent fuel storage installation pad. The inspectors reviewed the overall pad design and setup which consisted of four main sections: the timber piles; the pile cap; the structural fill; and the concrete independent spent fuel storage installation pad. The inspectors reviewed records that included but not limited to the following: the design specifications; purchase orders; quality control receipt inspection records; and timber pile placement records; structural fill effective modulus of elasticity test results; design specifications of the rebar/concrete, quality control of the rebar/concrete, placement of the rebar, and tests required for the concrete mix design.

Additionally, during the week of May 5, 2010, the inspectors observed the pouring of the north section of the independent spent fuel storage installation pad. The inspectors completed a tour of the independent spent fuel storage installation pad area prior to the pour to inspect forms, rebar placement, and cleanliness of the area to be poured. The pouring activities observed by the inspector included: conveying practices, placement rate, and sampling activities. The inspectors also interviewed selected workers and supervisors to determine if the individuals were familiar with the design and construction specifications for the independent spent fuel storage installation pad.

b. Findings

No findings were identified.

40A6 Meetings

Exit Meeting Summary

On May 12, 2010, the inspectors conducted a telephonic exit meeting to present the results of the in-office inspection of changes to the licensee's emergency plan to Mr. G. Fey, Manager, Emergency Preparedness, and other members of the licensee's staff. The licensee acknowledged the issues presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

On June 11, 2010, the inspectors presented the results of the of the radiation safety inspections to Mr. J. Kowalewski, Vice President, Operations, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

On July 9, 2010, the resident inspectors presented the inspection results to Mr. C. Arnone, Plant General Manager, Operations, and other members of the licensee staff who acknowledged the findings presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. There was no proprietary information identified.

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### **Licensee Personnel**

J. Kowalewski, Site Vice President  
C. Arnone, General Manager, Plant Operations  
C. Alday, Manager, System Engineering  
D. Becker, Technical Specialist IV, Programs and Components  
E. Begley, Senior Engineer, Programs and Components  
D. Boan, Supervisor, Radiation Protection  
E. Brauner, Supervisor, System Engineering  
B. Briner, Technical Specialist IV, Programs and Components  
A. Buford, Engineer II, System Engineering  
K. Christian, Director, Nuclear Safety Assurance  
K. Cook, Manager, Operations  
G. Fey, Manager, Emergency Preparedness  
C. Fugate, Assistant Manager, Operations  
J. Hashim, Senior Engineer, Programs and Components  
M. Haydel, Supervisor, Programs and Components  
J. Hornsby, Manager, Chemistry  
J. Kowalewski, Vice President of Operations  
H. Landeche, Jr., Senior Technician, Instruments and Controls  
B. Lanka, Manager, Design Engineering  
B. Lindsey, Manager, Maintenance  
M. Mason, Senior Licensing Specialist, Licensing  
W. McKinney, Manager, Corrective Action and Assessments  
R. Murillo, Manager, Licensing  
K. Nichols, Director, Engineering  
R. Perry, Senior Emergency Planner  
A. Piluti, Manager, Radiation Protection  
J. Pollack, Engineer, Licensing  
C. Pramono, Engineer, Systems Engineering  
R. Putnam, Manager, Programs and Components  
T. Qualantone, Manager, Plant Security  
J. Williams, Senior Licensing Specialist, Licensing

### **LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED**

#### **OPENED AND CLOSED**

05000382/20100003-01	NCV	Failure to Conduct Timely Corrective Actions to Replace Faulty Relays (Section 40A2)
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## LIST OF DOCUMENTS REVIEWED

### Section 1R01: Adverse Weather Protection

#### PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
OP-006-001	Plant Distribution	307
OP-006-008	Transformer Operation	301
OP-006-009	Electrical Bus Outages	5
OP-902-003	Loss of Offsite Power	6
OP-901-314	Degraded Grid Conditions	1

### Section 1R04: Equipment Alignment

#### PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
OP-002-003	Component Cooling Water System	305
OP-002-001	Auxiliary Component Cooling Water System	302
OP-009-001	Containment Spray	301
OP-009-002	Emergency Diesel Generator	311
OP-903-034	Containment Spray Valve Line-up Verification	301
OP-903-049	CCW/ACCW Loop Operability Check	10

#### CONDITION REPORTS

CR-WF3-2010-1325	CR-WF3-2010-1452	CR-WF3-2010-1545	CR-WF3-2010-1957
CR-WF3-2010-1326	CR-WF3-2010-1512	CR-WF3-2010-1618	CR-WF3-2010-1999
CR-WF3-2010-1335	CR-WF3-2010-1541	CR-WF3-2010-1885	CR-WF3-2010-2406

### Section 1R05: Fire Protection

#### PROCEDURES/DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
UNT-005-013	Fire Protection Program	10
OP-009-004	Fire Protection	307
MM-007-010	Fire Extinguisher Inspection and Replacement	304
FP-001-015	Fire Protection System Impairments	303
OP-903-060	Fire Hose Station Inspection	8
G-1370	Fire Protection Turbine Bldg. Ground Floor Plan EL +15.00'	9

CONDITION REPORTS

CR-WF3-2010-0435	CR-WF3-2010-0987	CR-WF3-2010-1111	CR-WF3-2010-1280
CR-WF3-2010-0964	CR-WF3-2010-1008	CR-WF3-2010-1179	CR-WF3-2010-1683

**Section 1R11: Licensed Operator Requalification Program**

PROCEDURES/DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
OP-901-111	RCS Leak	301
OP-901-402	High Airborne Activity in Reactor Auxiliary Building	3
OP-901-523	Security Events	6

**Section 1R12: Maintenance Effectiveness**

DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-DC-206	Maintenance Rule (a)(1) Process	1

CONDITION REPORTS

CR-WF3-2010-1029	CR-WF3-2010-1142	CR-WF3-2010-1287
CR-WF3-2010-1330	CR-WF3-2010-2343	CR-WF3-2010-3163

**Section 1R13: Maintenance Risk Assessment and Emergent Work Controls**

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-WM-101	On-line Work Management Process	6
OI-037-000	Operations' Risk Assessment Guideline	2
OP-903-066	Electrical Breaker Alignment Check	300
EOS-10-0349	Startup Transformer 3B	
EOS-10-0392	HPSI Pump A and AB	

CONDITION REPORTS

CR-WF3-2010-2481	CR-WF3-2010-2558
CR-WF3-2010-0964	CR-WF3-2010-3383

WORK ORDERS

97560                      213201                      232563

**Section 1R15: Operability Evaluations**

PROCEDURES/DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-OP-104	Operability Determination Process	4
EN-WM-101	On-Line Work Management Process	6
OI-037-000	Operations Risk Management Guideline	300
OP-100-010	Equipment Out of Service	303
W2.502	Configuration Risk Management Program Implementation	0
OP-901-312	Loss of Vital Instrument Bus	300
EOS-10-0390	SUPS B	
OP-903-124	CVAS Pressure Boundary Testing	301
OP-002-010	Reactor Auxiliary Building HVAC and Containment Purge	303
EOS-10-0429	CVAS B	
EOS-10-0434	WCT Fan 2B Inoperable	
EOS-10-0495	SI Train A and CA Train A Inoperable due to ESFERLK309	

CONDITION REPORTS

CR-WF3-2010-2278      CR-WF3-2010-2526      CR-WF3-2010-2558      CR-WF3-2010-3163  
CR-WF3-2010-3383

**Section 1R18: Plant Modifications**

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EC-17646 and 17647	Install Replacement Timer Relays in Aux Panels 1C and 2C	0

## Section 1R19: Post Maintenance Testing

### PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
OP-008-003	Containment Cooling System	300
OP-903-094	ESFAS Subgroup Relay Test	15

### CONDITION REPORTS

CR-WF3-2010-2278	CR-WF3-2010-2558	CR-WF3-2010-3383	CR-WF3-2010-3163
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### WORK ORDERS

239041	232563	237926
106927	234185	

## Section 1R22: Surveillance Testing

### PROCEDURES/DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
OP-002-003	Component Cooling Water System	305
OP-903-118	Primary Auxiliaries Quarterly IST Valve Test	20
OP-903-094	ESFAS Subgroup Relay Test	15
EOS-10-0370	Dry Cooling Tower A	
CNRO-2007-00005	Inspection and Mitigation of Alloy 600/82/182 Pressurizer Butt Welds	February 21, 2007
OP-903-024	Reactor Coolant System Water Inventory Balance	19
EC-19897	Reactor Vessel Head Leakoff Pressure Alarm	0

### WORK ORDERS

221201

## Section 1EP6: Drill Evaluation

### PROCEDURES/DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
EP-001-001	Recognition and Classification of Emergencies	25
EP-002-010	Notifications and Communications	304
EP-002-052	Protective Action Guidelines	21

2010-02  
W3D3-2010-0017

Waterford 3 Red Team Site Drill  
Drill Report Summary

1  
June 24, 2010

### **Section 2RS04: Occupational Dose Assessment**

#### PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-RP-201	Dosimetry Administration	3
EN-RP-202	Personnel Monitoring	7
EN-RP-203	Dose Assessment	3
EN-RP-205	Prenatal Monitoring	3
EN-RP-208	Whole Body Counting/In-Vitro Bioassay	3

#### CONDITION REPORTS

CR-WF3-2010-0660    CR-WF3-2010-0798    CR-WF3-2010-1768    CR-WF3-2010-2137  
CR-HQN-2010-0379

#### MISCELLANEOUS

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
100518-0	National Voluntary Laboratory Accreditation Program for Landauer, Inc.	
	Alpha Trending Report RF15	2008
	Alpha Trending Report RF16	2009
	Whole Body Counting System Library Evaluation	2008
	Whole Body Counting System Library Evaluation	2009

### **Section 2RS05: Radiation Monitoring Instrumentation**

#### PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
MI-003-380	Plant Vent Stack Safety Channel A or B Particulate and Gaseous Radiation Monitor Calibration PRMIR0100 or PRMIR0100.2	301
MI-003-383	Plant Vent Stack High Range Noble Gas Monitor Channel Calibration PRM-IR-0110	12
MI-003-463	Waste Condensate and Laundry Discharge Liquid Effluent Radiation Monitor Channel Calibration PRMIR0647	302
MI-005-906	Radiation Monitoring System Desk Guide	1

EN-RP-306	Calibration and Operation of the Eberline PM-7	2
EN-RP-307	Operation and Calibration of the Eberline Personal Contamination Monitors	1
EN-RP-308	Operation and Calibration of Gamma Scintillation Tool Monitors	4

AUDITS/SELF-ASSESSMENTS/SURVEILLANCES

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
LO WLO 2009-35	Radiation Protection Instrument Assessment	July 28, 2009
	Waterford 3 2009 Instrumentation and Whole Body Counter Library Evaluation	April 15, 2010

CALIBRATION PACKAGES

<u>TITLE</u>	<u>DATE</u>
Canberra FASTSCAN in vivo Counting System #6985	September 1, 2009
Scintillation Tool Monitor HP-DS-064	June 9, 2010
Scintillation Tool Monitor HP-DS-064	September 29, 2009
Scintillation Tool Monitor HP-DS-069	November 1, 2009
Eberline PM-7 #290	July 13, 2009
Eberline PM-7 #218	July 22, 2010
ARGOS HP-DS-076	April 22, 2010
Eberline PCM-2 HP-DS-075	October 14, 2009
Plant Vent Stack Safety Channel A or B Particulate and Gaseous Radiation Monitor Calibration PRMIR0100 or PRM-IR-0100.2	December 7, 2009
Plant Vent Stack High Range Noble Gas Monitor Channel Calibration PRM-IR-0110	July 23, 2009
Waste Condensate and Laundry Discharge Liquid Effluent Radiation Monitor Channel Calibration PRMIR0647	March 17, 2010

WORK ORDERS

51794245	52222807
52033831	52024103

CONDITION REPORTS

CR-WF3-2009-3987	CR-WF3-2009-5401	CR-WF3-2010-1516	CR-WF3-2010-1739
CR-WF3-2010-2140	CR-WF3-2010-2255	CR-WF3-2010-2420	CR-WF3-2010-2429
CR-WF3-2010-2738	CR-WF3-2010-2761		

**Section 40A1: Performance Indicator**

PROCEDURES/DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
NEI 99-02	Regulatory Assessment Performance Indicator Guideline	6
EN-LI-114	Performance Indicator Process	4
OP-903-024	Reactor Coolant System Water Inventory Balance	19

**Section 40A2: Problem Identification and Resolution**

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
EN-LI-102	Corrective Action Process	15
EN-LI-118	Root Cause Analysis Process	12

CONDITION REPORTS

CR-WF3-2008-2352	CR-WF3-2008-5401	CR-WF3-2010-1765	CR-WF3-2008-5786
CR-WF3-2009-1190	CR-WF3-2009-1649	CR-WF3-2010-2693	CR-WF3-2009-3102
CR-WF3-2009-3448	CR-WF3-2009-1142	CR-WF3-2010-2693	

**Section 40A3: Follow-up of Events and Notices of Enforcement Discretion**

DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
LER 08-001-00	Mispositioned Essential Chiller AB Return Header B Isolation Valve	0

CONDITION REPORTS

CR-WF3-2008-0778

**Section 4OA5: Other Activities**

DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
HI-STORM Report HI-2002444	Final Safety Analysis Report	7
HSP-1874-102	Rebar Design Placement and Inspection Procedure for Waterford ISFSI Pad Construction	1
HSP-186	Aggregate and Ready Mixed Concrete Testing Requirements for ITS "B" Applications	6
EC - 134669-D-S-002	Design Criteria for ISFSI Area	1
DWG - G1028	DFSP ISFSI Pad Pile Plan and Site Earthwork Sections	0

MISCELLANEOUS

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
	Engineering Design Change Report #48	04/22/2010
	Mix Design Proposal	03/23/2010
	Cement Mil Test Report	February 2010
	Larfarge Quality Test Reports	02/10/2010
	Alpha Testing and Inspection Report No 8	12/18/2009
	Tolunay-Wong Pile Load Test Report	11/19/2009
Timber Piling Council American Wood Preservers Institute	Timber Pile Design and Construction Manual	2002