



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION IV
1600 E. LAMAR BLVD.
ARLINGTON, TX 76011-4511

October 31, 2014

Mr. Eric W. Olson, Site Vice President
Entergy Operations, Inc.
River Bend Station
5485 U.S. Highway 61N
St. Francisville, LA 70775

**SUBJECT: RIVER BEND STATION – NRC INTEGRATED INSPECTION
REPORT 05000458/2014004**

Dear Mr. Olson:

On September 30, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at the River Bend Station, Unit 1. On October 8, 2014, the NRC inspectors discussed the results of this inspection with you and other members of your staff. Inspectors documented the results of this inspection in the enclosed inspection report.

The NRC inspectors documented one finding of very low safety significance (Green) in this report. This finding involved a violation of NRC requirements. Further, inspectors documented licensee-identified violations which were determined to be of very low safety significance or Severity Level IV in this report. The NRC is treating these violations as non-cited violations consistent with Section 2.3.2.a of the NRC Enforcement Policy.

If you contest the violations or significance of these non-cited violations, 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, Region IV; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC resident inspector at the River Bend Station.

If you disagree with a cross-cutting aspect assignment 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 River Bend Station.

E. Olson

- 2 -

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management 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/

Gerond A. George, Acting Branch Chief
Project Branch C
Division of Reactor Projects

Docket No.: 50-458
License No: NPF-47

Enclosure: Inspection Report
05000458/2014004

w/ Attachments:

- 1) Supplemental Information
- 2) Request for Information

cc w/ encl: Electronic Distribution

E. Olson

- 2 -

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Letter and Inspection Report to Eric W. Olson from Gerond A. George, dated October 31, 2014

SUBJECT: RIVER BEND STATION - NRC INTEGRATED INSPECTION
REPORT 05000458/2014004

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Acting DRP Deputy Director (Jason.Kozal@nrc.gov)
DRS Director (Anton.Vegel@nrc.gov)
DRS Deputy Director (Jeff.Clark@nrc.gov)
Senior Resident Inspector (Jeffrey.Sowa@nrc.gov)
Senior Resident Inspector (Grant.Larkin@nrc.gov)
Resident Inspector (Andy.Barrett@nrc.gov)
RBS Administrative Assistant (Lisa.Day@nrc.gov)
Acting Branch Chief, DRP/C (Gerond.George@nrc.gov)
Senior Project Engineer (Ray.Azua@nrc.gov)
Senior Project Engineer (Nick.Taylor@nrc.gov)
Project Engineer (Paul.Nizov@nrc.gov)
Project Engineer (Michael.Langelier@nrc.gov)
Public Affairs Officer (Victor.Dricks@nrc.gov)
Public Affairs Officer (Lara.Uselding@nrc.gov)
Project Manager (Alan.Wang@nrc.gov)
Branch Chief, DRS/TSB (Geoffrey.Miller@nrc.gov)
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ACES (R4Enforcement.Resource@nrc.gov)
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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket: 05000458

License: NPF-47

Report: 05000458/2014004

Licensee: Entergy Operations, Inc.

Facility: River Bend Station, Unit 1

Location: 5485 U.S. Highway 61N
St. Francisville, LA 70775

Dates: July 1 through September 30, 2014

Inspectors: J. Sowa, Senior Resident Inspector
G. Larkin, Senior Resident Inspector
A. Barrett, Resident Inspector
P. Elkmann, Senior Emergency Preparedness Inspector
H. Freeman, Senior Reactor Inspector
A. Meyen, Physical Security Inspector
E. Schrader, Emergency Preparedness Specialist, NSIR
S. Makor, Reactor Inspector
L. Ricketson, P.E., Senior Health Physicist
N. Greene, Ph.D., Health Physicist

Approved By: G. George, Acting Branch Chief
Project Branch C
Division of Reactor Projects

Enclosure

SUMMARY

IR 05000458/2014004; 07/01/2014 – 09/30/2014; River Bend Station; Integrated Resident and Regional Report; Radiological Hazard Assessment and Exposure Controls

The inspection activities described in this report were performed between July 1 and September 30, 2014, by the resident inspectors at River Bend Station with inspectors from the NRC's Region IV office and other NRC offices. One finding of very low safety significance (Green) is documented in this report. This finding involved a violation of NRC requirements. The significance of inspection findings is indicated by their color (Green, White, Yellow, or Red), which is determined using Inspection Manual Chapter 0609, "Significance Determination Process." Their cross-cutting aspects are determined using Inspection Manual Chapter 0310, "Aspects within the Cross-Cutting Areas." Violations of NRC requirements are dispositioned in accordance with the NRC Enforcement Policy. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

Cornerstone: Occupational Radiation Safety

- Green. The inspectors identified a non-cited violation of Technical Specification 5.7.2 because a radiation protection technician did not provide positive exposure control to workers entering an area with dose rates greater than 1,000 millirem/hour. Radiation protection representatives removed the workers' radiological controlled area access privileges, counseled the workers, conducted a stand-down meeting, and performed an apparent cause evaluation.

The failure to provide positive control to workers entering an area with dose rates greater than 1,000 millirem/hour is a performance deficiency. The significance of the performance deficiency was more than minor because it was associated with an Occupational Radiation Safety cornerstone attribute (exposure control) and adversely affected the associated cornerstone objective because it allowed workers to be exposed to higher-than-planned radiation dose rates. The violation had very low safety significance because: (1) it was not as low as is reasonably achievable finding because a collective dose threshold was not challenged, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. This violation has a cross-cutting aspect in the human performance area, associated with avoiding complacency, because the radiation protection technician did not recognize and plan for the possibility of mistakes by the operators in identifying the correct valve to tag, and the inherent risk of the operators entering an unsurveyed area [H.12]. (Section 2RS1)

Licensee-Identified Violations

Three violations of very low safety significance and one Severity Level IV violation that 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 associated corrective action tracking numbers are listed in Section 4OA7 of this report.

PLANT STATUS

The River Bend Station began the inspection period at 100 percent reactor power. It departed from full power as follows:

- On July 11, 2014, operators reduced power to 67 percent for a rod sequence exchange. The licensee returned the plant to full power on July 12.
- On August 5, 2014, operators reduced power to 85 percent to repair feedwater pump B leaking end bell. The licensee returned the plant to full power on August 6.
- On August 22, 2014, operators reduced power to 65 percent for maintenance on a feedwater heater dump valve. The licensee returned the plant to full power on August 22.
- On September 8, 2014, operators reduced power to 96 percent for control rod testing. The licensee returned the plant to full power on September 8.
- On September 19, 2014, operators reduced power to 75 percent for turbine valve repairs. The licensee returned the plant to full power on September 20.
- On September 26, 2014, operators reduced power to 92 percent for a rod pattern adjustment. The licensee returned the plant to full power on September 26.

The plant remained at 100 percent reactor power for the remainder of the inspection period.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R04 Equipment Alignment (71111.04)

.1 Partial Walkdown

a. Inspection Scope

The inspectors performed partial system walkdowns of the following risk-significant systems:

- August 18, 2014, Division I emergency diesel generator while Division II emergency diesel generator was out of service for surveillance testing
- August 18, 2014, reactor core isolation cooling after system maintenance
- August 20, 2014, Division I standby service water during system maintenance on Division II containment unit cooler

- August 21, 2014, high pressure core spray after temporary modification installation

The inspectors reviewed the licensee's procedures and system design information to determine the correct lineup for the systems. They visually verified that critical portions of the systems or divisions were correctly aligned for the existing plant configuration.

These activities constituted four partial system walkdown samples, as defined in Inspection Procedure 71111.04.

b. Findings

No findings were identified.

.2 Complete Walkdown

a. Inspection Scope

On July 10, 2014, the inspectors performed a complete system walkdown inspection of the standby liquid control system. The inspectors reviewed the licensee's procedures and system design information to determine the correct system lineup for the existing plant configuration. The inspectors also reviewed outstanding work orders, open condition reports, in-process design changes, temporary modifications, and other open items tracked by the licensee's operations and engineering departments. The inspectors then visually verified that the system was correctly aligned for the existing plant configuration.

These activities constituted one complete system walkdown sample, as defined in Inspection Procedure 71111.04.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

.1 Quarterly Inspection

a. Inspection Scope

The inspectors evaluated the licensee's fire protection program for operational status and material condition. The inspectors focused their inspection on five plant areas important to safety:

- August 18, 2014, auxiliary building, 68-foot elevation, and D tunnel
- August 18, 2014, reactor building, 186-foot elevation
- August 20, 2014, standby service water building, pump room (Division I)
- August 20, 2014, standby service water building, pump room (Division II)
- August 25, 2014, E tunnel west and F tunnel, 70-foot elevation

For each area, the inspectors evaluated the fire plan against defined hazards and defense-in-depth features in the licensee's fire protection program. The inspectors evaluated control of transient combustibles and ignition sources, fire detection and suppression systems, manual firefighting equipment and capability, passive fire protection features, and compensatory measures for degraded conditions.

These activities constituted five quarterly inspection samples, as defined in Inspection Procedure 71111.05.

b. Findings

No findings were identified.

.2 Annual Inspection

a. Inspection Scope

On September 22, 2014, the inspectors completed their annual evaluation of the licensee's fire brigade performance. This evaluation included observation of an unannounced fire drill for a fire in the turbine building, 123-foot elevation, due to iodine filter fan bearing failure.

During this drill, the inspectors evaluated the capability of the fire brigade members, the leadership ability of the brigade leader, the brigade's use of turnout gear and fire-fighting equipment, and the effectiveness of the fire brigade's team operation. The inspectors also reviewed whether the licensee's fire brigade met NRC requirements for training, dedicated size and membership, and equipment.

These activities constituted one annual inspection sample, as defined in Inspection Procedure 71111.05.

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

On September 10, 2014, the inspectors completed an inspection of the station's ability to mitigate flooding due to internal causes. After reviewing the licensee's flooding analysis, the inspectors chose one plant area containing risk-significant structures, systems, and components that were susceptible to flooding:

- G tunnel

The inspectors reviewed plant design features and licensee procedures for coping with internal flooding. The inspectors walked down the selected area to inspect the design

features, including the material condition of seals, drains, and flood barriers. The inspectors evaluated whether operator actions credited for flood mitigation could be successfully accomplished.

In addition, on August 26, 2014, the inspectors completed an inspection of underground bunkers susceptible to flooding. The inspectors selected three underground electrical manholes that contained risk-significant cables whose failure could disable risk-significant equipment:

- Electrical manhole 1EMH606
- Electrical manhole 1EMH607
- Electrical manhole 1EMH007

The inspectors observed the material condition of the cables and splices contained in the electrical manholes and looked for evidence of cable degradation due to water intrusion. The inspectors verified that the cables and vaults met design requirements.

These activities constitute completion of one flood protection measures sample and one bunker/manhole sample, as defined in Inspection Procedure 71111.06.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program and Licensed Operator Performance (71111.11)

.1 Review of Licensed Operator Requalification

a. Inspection Scope

On August 26, 2014, the inspectors observed simulator training for an operating crew. The inspectors assessed the performance of the operators and the evaluators' critique of their performance. The inspectors also assessed the modeling and performance of the simulator during the requalification activities.

These activities constitute completion of one quarterly licensed operator requalification program sample, as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

.2 Review of Licensed Operator Performance

a. Inspection Scope

On August 22, 2014, the inspectors observed the performance of on-shift licensed operators in the plant's main control room. At the time of the observations, the plant was in a period of heightened activity due to a plant downpower to 65 percent for repairs on a feedwater heater level control valve.

In addition, the inspectors assessed the operators' adherence to plant procedures, including the conduct of operations procedure and other operations department policies.

These activities constitute completion of one quarterly licensed operator performance sample, as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed three instances of degraded performance or condition of safety-related structures, systems, and components:

- July 17, 2014, remote shutdown panel
- August 26, 2014, instrument air system
- August 29, 2014, control room annunciator power supplies

The inspectors reviewed the extent of condition of possible common cause structures, systems, and component failures and evaluated the adequacy of the licensee's corrective actions. The inspectors reviewed the licensee's work practices to evaluate whether these may have played a role in the degradation of the structures, systems, and components. The inspectors assessed the licensee's characterization of the degradation in accordance with 10 CFR 50.65 (the Maintenance Rule), and verified that the licensee was appropriately tracking degraded performance and conditions in accordance with the Maintenance Rule.

These activities constituted completion of three maintenance effectiveness samples, as defined in Inspection Procedure 71111.12.

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspectors reviewed three risk assessments performed by the licensee prior to changes in plant configuration and the risk management actions taken by the licensee in response to elevated risk:

- July 21, 2014, risk impact review for emerged main transformer degraded fan power cable replacement
- August 22, 2014, welding in containment for refuel platform modification
- August 26, 2014, condensate transfer pump A failure

The inspectors verified that these risk assessments were performed timely and in accordance with the requirements of 10 CFR 50.65 (the Maintenance Rule) and plant procedures. The inspectors reviewed the accuracy and completeness of the licensee's risk assessments and verified that the licensee implemented appropriate risk management actions based on the result of the assessments.

The inspectors also observed portions of two emergent work activities that had the potential to affect the functional capability of mitigating systems or to impact barrier integrity:

- August 11, 2014, emergent standby liquid control system surveillance
- August 12, 2014, emergent work to clean and inspect containment cooler discharge valve HVN-MOV22A

The inspectors verified that the licensee appropriately developed and followed a work plan for these activities. The inspectors verified that the licensee took precautions to minimize the impact of the work activities on unaffected structures, systems, and components.

These activities constitute completion of five maintenance risk assessments and emergent work control inspection samples, as defined in Inspection Procedure 71111.13.

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15)

a. Inspection Scope

The inspectors reviewed three operability determinations that the licensee performed for degraded or nonconforming structures, systems, and components:

- July 8, 2014, operability determination of auxiliary building air accumulators leaking into standby service water (CR-RBS-2014-02501)
- August 22, 2014, operability determination of aggregate impact of steam leaks in reactor core isolation cooling room (CR-RBS-2014-04031)
- September 8, 2014, operability determination of standby service water pump packing leakage (CR-RBS-2014-04129)

The inspectors reviewed the timeliness and technical adequacy of the licensee's evaluations. Where the licensee determined the degraded structures, systems, and components to be operable, the inspectors verified that the licensee's compensatory measures were appropriate to provide reasonable assurance of operability. The inspectors verified that the licensee had considered the effect of other degraded conditions on the operability of the degraded structures, systems, and components.

These activities constitute completion of three operability and functionality review samples, as defined in Inspection Procedure 71111.15.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)

a. Inspection Scope

The inspectors reviewed two permanent plant modifications that affected risk-significant structures, systems, and components:

- July 14, 2014, reactor building ventilation damper lubricant type change
- September 2014, control building chilled water system chiller control digital upgrade

The inspectors reviewed the design and implementation of the modifications. The inspectors verified that work activities involved in implementing the modifications did not adversely impact operator actions that may be required in response to an emergency or other unplanned event. The inspectors verified that post-modification testing was adequate to establish the operability of the structures, systems, and components as modified.

These activities constitute completion of two samples of permanent modifications, as defined in Inspection Procedure 71111.18.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed eight post-maintenance testing activities that affected risk-significant structures, systems, or components:

- July 15, 2014, WO-52469352, "EHS-MCC2G 5A / SWP-MOV172 Test Molded Case Circuit Breaker"
- July 22, 2014, WO-00381261, "E12-PC003, Division II RHR Line Fill Pump Tripped"
- August 12, 2014, WO-00381316, "Troubleshoot BYS-EG1, Turns Over But Will Not Start"
- August 14, 2014, WO-52406645, "Static Signature Test on 1A Containment Cooler Discharge Valve HVN-MOV22A"
- August 20, 2014, WO-52560121, "LPCI Pump "C" Start Time Delay Channel Calibration and Channel Functional Test"
- September 4, 2014, WO-52576688, "Add Water to Drywell Pedestal Floor Drain Sump"
- September 5, 2014, WO-00392825, "B RHR HX Bypass Valve MOV 48B Did Not Fully Open"
- September 16, 2014, WO-00336938, "Install Diodes to Prevent Sneak Circuit on LPCS High Level Output Isolator Card"

The inspectors reviewed licensing- and design-basis documents for the structures, systems, and components, and the maintenance and post-maintenance test procedures. The inspectors observed the performance of the post-maintenance tests to verify that the licensee performed the tests in accordance with approved procedures, satisfied the established acceptance criteria, and restored the operability of the affected structures, systems, and components.

These activities constitute completion of eight post-maintenance testing inspection samples, as defined in Inspection Procedure 71111.19.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed five risk-significant surveillance tests and reviewed test results to verify that these tests adequately demonstrated that the structures, systems, and components were capable of performing their safety functions:

In-service test:

- July 10, 2014, STP-309-6301, "Division I Emergency Diesel Generator Fuel Oil Transfer Pump and Valve Operability Test," performed on April 8, 2014

Containment isolation valve surveillance tests:

- August 13, 2014, STP-203-6604, "HPCS Bypass and Test Return Valves to CST 24 Month Leak Test," performed on July 22, 2014

Other surveillance tests:

- STP-309-0201, "Division I Diesel Generator Operability Test," performed on August 5, 2014
- STP-309-0202, "Division II Diesel Generator Operability Test," performed on August 18, 2014
- STP-309-0203, "Division III Diesel Generator Operability Test," performed on August 25, 2014

The inspectors verified that these tests met technical specification requirements, that the licensee performed the tests in accordance with their procedures, and that the results of the test satisfied appropriate acceptance criteria. The inspectors verified that the licensee restored the operability of the affected structures, systems, and components following testing.

These activities constitute completion of five surveillance testing inspection samples, as defined in Inspection Procedure 71111.22.

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP7 Exercise Evaluation – Hostile Action Event (71114.07)

a. Inspection Scope

The inspectors observed the June 18, 2014, biennial emergency plan exercise to verify that the exercise acceptably tested the major elements of the emergency plan, provided opportunities for the emergency response organization to demonstrate key skills and functions, and demonstrated the licensee's ability to coordinate with offsite emergency responders. The scenario simulated the following to demonstrate the licensee's capability to implement its emergency plan under conditions of uncertain physical security:

- A probable threat to the plant from a hijacked aircraft
- The impact of a large aircraft in the plant protected area
- Casualties on the plant site
- A large area fire on the west side of the plant
- A loss of the condensate and feedwater system
- A loss of the high pressure core spray system
- A potential loss of reactor water inventory leading to core damage, depending on participant actions

During the exercise, the inspectors observed activities in the Control Room Simulator and the following emergency response facilities:

- Alternate Technical Support Center
- Alternate Operations Support Center
- Alternate Emergency Operations Facility
- Central and/or Secondary Alarm Station(s)
- Incident Command Post

The inspectors focused their evaluation of the licensee's performance on event classification, offsite notification, recognition of offsite dose consequences, development of protective action recommendations, staffing of alternate emergency response facilities, and the coordination between the licensee and offsite agencies to ensure reactor safety under conditions of uncertain physical security.

The inspectors also assessed recognition of, and response to, abnormal and emergency plant conditions, the transfer of decision-making authority and emergency function responsibilities between facilities, on-site and offsite communications, protection of plant employees and emergency workers in an uncertain physical security environment,

emergency repair evaluation and capability, and the overall implementation of the emergency plan to protect public health and safety and the environment. The inspectors reviewed the current revision of the facility emergency plan, emergency plan implementing procedures associated with operation of the licensee's primary and alternate emergency response facilities, and procedures for the performance of associated emergency and security functions.

The inspectors attended the post-exercise critiques in each emergency response facility to evaluate the initial licensee self-assessment of exercise performance. The inspectors also attended a subsequent formal presentation of critique items to plant management conducted June 30, 2014.

The inspectors reviewed the scenarios of previous biennial exercises and licensee drills conducted between January 2013 and May 2014, to determine whether the June 18, 2014, exercise was independent of past drills and exercises and avoided participant preconditioning in accordance with the requirements of 10 CFR Part 50, Appendix E, IV.F(2)(g). The inspectors also compared observed exercise performance with corrective action program entries for drills and exercises conducted between January 2013 and May 2014 to determine whether weaknesses previously identified by the licensee had been corrected in accordance with the requirements of 10 CFR 50.47(b)(14), and 10 CFR Part 50, Appendix E, IV.F. The specific documents reviewed during this inspection are listed in the attachment.

These activities constituted completion of one exercise evaluation sample, as defined in Inspection Procedure 71114.07.

b. Findings

No findings were identified.

1EP8 Exercise Evaluation – Scenario Review (71114.08)

a. Inspection Scope

The licensee submitted the preliminary exercise scenario for the June 18, 2014, biennial exercise to the NRC on April 16, 2014, in accordance with the requirements of 10 CFR Part 50, Appendix E, IV.F(2)(b). The inspectors performed an in-office review of the proposed scenario to determine whether it would acceptably test the major elements of the licensee's emergency plan and provide opportunities for the emergency response organization to demonstrate key skills and functions.

b. Findings

No findings were identified.

2. RADIATION SAFETY

Cornerstones: Public Radiation Safety and Occupational Radiation Safety

2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01)

a. Inspection Scope

The inspectors assessed the licensee's performance in assessing the radiological hazards in the workplace associated with licensed activities. The inspectors assessed the licensee's implementation of appropriate radiation monitoring and exposure control measures for both individual and collective exposures. The inspectors walked down various portions of the plant and performed independent radiation dose rate measurements. The inspectors interviewed the radiation protection manager, radiation protection supervisors, and radiation workers. The inspectors reviewed licensee performance in the following areas:

- The hazard assessment program, including a review of the licensee's evaluations of changes in plant operations and radiological surveys to detect dose rates, airborne radioactivity, and surface contamination levels
- Instructions and notices to workers, including labeling or marking containers of radioactive material, radiation work permits, actions for electronic dosimeter alarms, and changes to radiological conditions
- Programs and processes for control of sealed sources and release of potentially contaminated material from the radiologically controlled area, including survey performance, instrument sensitivity, release criteria, procedural guidance, and sealed source accountability
- Radiological hazards control and work coverage, including the adequacy of surveys, radiation protection job coverage and contamination controls, the use of electronic dosimeters in high noise areas, dosimetry placement, airborne radioactivity monitoring, controls for highly activated or contaminated materials (non-fuel) stored within spent fuel and other storage pools, and posting and physical controls for high radiation areas and very high radiation areas
- Radiation worker and radiation protection technician performance with respect to radiation protection work requirements
- Audits, self-assessments, and corrective action documents related to radiological hazard assessment and exposure controls since the last inspection

These activities constitute completion of one sample of radiological hazard assessment and exposure controls, as defined in Inspection Procedure 71124.01.

b. Findings

Introduction. The inspectors identified a Green non-cited violation of Technical Specification 5.7.2 because a radiation protection technician did not provide positive exposure control to workers entering an area with dose rates greater than 1,000 millirem/hour.

Description. On June 5, 2013, two equipment operators entered the suppression pool cleanup system demineralizer room on the 136-foot elevation of the radwaste building to tag a valve out-of-service. The room was controlled as a locked high radiation area because areas within the room contained radiation dose rates that exceeded 1,000 millirem/hour at 30 centimeters from the source of radiation. The operators did not find the valve where they were looking and walked around a labyrinth wall and into another area of the room. As they did, both operators received electronic dosimeter dose rate alarms. According to their electronic dosimeters, one operator entered an area with a dose rate of 13,500 millirem/hour and the other entered an area with a dose rate of 10,300 millirem/hour. Both operators left the area after receiving the alarms and reported to a radiation protection technician. Radiation protection representatives determined one operator received a radiation dose of 20.6 millirem and the other received 11.8 millirem. Radiation protection representatives removed the operators' radiological controlled area access privileges, counseled the operators, conducted a stand-down meeting, and performed an apparent cause evaluation.

Licensee representatives confirmed the operators were briefed on radiation dose rates in the area where valve CNS-232 was located, but they were not briefed on radiation dose rates as high as 22,000 millirem/hour at 30 centimeters from the source of the radiation, on the other side of a labyrinth wall. The licensee's apparent cause evaluators determined, "The operators did not see [valve] CNS-232 when they entered the room. However, they did see another valve in the un-surveyed area and they proceeded to that valve to check its label. Neither operator questioned [the fact] this was not how the job was briefed or that this valve was larger than the one they were looking for." As the apparent cause of the occurrence, the licensee's evaluators concluded, "The two operators that entered the un-surveyed area did not exercise a questioning attitude which led to a failure to maintain situational awareness and hazard recognition while entering a locked high radiation area."

The inspectors noted the apparent cause evaluation did not discuss the actions of the radiation protection technician providing job coverage. Through interviews with the licensee personnel, the inspectors determined the radiation protection technician did not accompany the operators into the locked high radiation area. Licensee personnel stated the radiation protection technician decided not to enter the locked high radiation area in order to prevent the accrual of additional dose. However, the operators' entry into the area with high dose rates confirmed the radiation protection technician did not provide positive exposure control. Positive exposure control was required by Technical Specification 5.7.2 because the operators were not aware of the dose rates in the area and teledosimetry was ineffective in preventing entry into the area with high dose rates. Therefore, direct continuous surveillance was required to be provided by personnel qualified in radiation protection procedures (i.e., the radiation protection technician).

Analysis. The failure to provide positive control to workers entering an area with dose rates greater than 1,000 millirem/hour is a performance deficiency. The requirement not met was Technical Specification 5.7.2. The significance of the performance deficiency was more than minor because it was associated with an Occupational Radiation Safety cornerstone attribute (exposure control) and adversely affected the associated cornerstone objective because it allowed workers to be exposed to higher-than-planned radiation dose rates. The inspectors used Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," August 19, 2008, to determine the significance of the violation. The violation had very low safety significance (Green) because: (1) it was not an as low as is reasonably achievable (ALARA) finding because a collective dose threshold was not challenged (the final collective dose for the work activity did not exceed the planned dose by 50 percent and did not exceed five person-rem), (2) there was no overexposure because no individual worker's dose exceeded 10 CFR Part 20 dose limits, (3) there was no substantial potential for an overexposure because the inspectors determined from review of applicable radiation survey records that it was not possible to construct a reasonable scenario in which a minor alteration of circumstances would have resulted in a violation of the 10 CFR Part 20 limits, and (4) the ability to assess dose was not compromised because the workers wore passive dosimetry and electronic dosimetry. The violation was considered NRC-identified because the inspectors identified a previously unknown weakness in the licensee's evaluation of the cause. This violation has a cross-cutting aspect in the human performance area, associated with avoiding complacency, because the radiation protection technician did not recognize and plan for the possibility of mistakes by the operators in identifying the correct valve to tag, and the inherent risk of the operators entering unsurveyed areas [H.12].

Enforcement. Technical Specification 5.7.2 requires, for areas with radiation levels greater than or equal to 1,000 millirem/hour, doors remain locked except during periods of access by personnel under an approved radiation work permit that shall specify the dose rate levels in the immediate work areas and the maximum allowable stay times for individuals in those areas. In lieu of the stay time specification of the radiation work permit, direct or remote continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities being performed within the area. Contrary to this requirement, on June 5, 2013, the licensee failed to provide direct or remote continuous surveillance by personnel qualified in radiation protection procedures to provide positive exposure control over the activities being performed within the area. Specifically, a radiation protection technician waited outside a room with radiological conditions exceeding 1,000 millirem/hour and did not keep two equipment operators in the line of sight (direct surveillance) or provide radiation dose rate information to the operators when the operators entered the suppression pool cleanup system demineralizer room. The room contained an area with dose rates as high as 22,000 millirem/hour at 30 centimeters from the source of radiation.

In response to this event, radiation protection representatives removed the operators' radiological controlled area access privileges, counseled the operators, conducted a stand-down meeting, and performed an apparent cause evaluation. This violation is

being treated as a non-cited violation, consistent with Section 2.3.2.a of the Enforcement Policy. The violation was entered into the licensee's corrective action program as Condition Report CR-RBS-2013-04083. (NCV 05000458/2014004-01, "Failure to Provide Positive Exposure Control Within a Locked High Radiation Area")

2RS3 In-Plant Airborne Radioactivity Control and Mitigation (71124.03)

a. Inspection Scope

The inspectors verified that the licensee controlled in-plant airborne radioactivity concentrations consistent with ALARA principles and that the use of respiratory protection devices did not pose an undue risk to the wearer. During the inspection, the inspectors interviewed licensee personnel, walked down various portions of the plant, and reviewed licensee performance in the following areas:

- The licensee's use, when applicable, of ventilation systems as part of its engineering controls
- The licensee's respiratory protection program for use, storage, maintenance, and quality assurance of National Institute for Occupational Safety and Health-certified equipment, qualification and training of personnel, and user performance
- The licensee's capability for refilling and transporting self-contained breathing apparatuses (SCBAs) air bottles to and from the control room and operations support center during emergency conditions, status of SCBA staged and ready for use in the plant and associated surveillance records, and personnel qualification and training
- Audits, self-assessments, and corrective action documents related to in-plant airborne radioactivity control and mitigation since the last inspection

These activities constitute completion of one sample of in-plant airborne radioactivity control and mitigation, as defined in Inspection Procedure 71124.03.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, Occupational Radiation Safety, and Security

40A1 Performance Indicator Verification (71151)

.1 Mitigating Systems Performance Index: Heat Removal Systems (MS08)

a. Inspection Scope

The inspectors reviewed the licensee's mitigating system performance index data for the period of July 2013 through June 2014 to verify the accuracy and completeness of the reported data. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data.

These activities constituted verification of the mitigating system performance index for heat removal systems, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.2 Mitigating Systems Performance Index: Residual Heat Removal Systems (MS09)

a. Inspection Scope

The inspectors reviewed the licensee's mitigating system performance index data for the period of July 2013 through June 2014 to verify the accuracy and completeness of the reported data. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data.

These activities constituted verification of the mitigating system performance index for residual heat removal systems, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.3 Mitigating Systems Performance Index: Cooling Water Support Systems (MS10)

a. Inspection Scope

The inspectors reviewed the licensee's mitigating system performance index data for the period of July 2013 through June 2014 to verify the accuracy and completeness of the reported data. The inspectors used definitions and guidance contained in

Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data.

These activities constituted verification of the mitigating system performance index for cooling water support systems, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.4 Drill/Exercise Performance (EP01)

a. Inspection Scope

The inspectors reviewed the licensee's evaluated exercises, emergency plan implementations, and selected drill and training evolutions that occurred between January 2013 and March 2014 to verify the accuracy of the licensee's data for classification, notification, and protective action recommendation opportunities. The inspectors reviewed a sample of the licensee's completed classifications, notifications, and protective action recommendations to verify their timeliness and accuracy. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data. The specific documents reviewed are described in the attachment to this report.

These activities constituted verification of the drill/exercise performance indicator, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.5 Emergency Response Organization Drill Participation (EP02)

a. Inspection Scope

The inspectors reviewed the licensee's records for participation in drill and training evolutions between January 2013 and March 2014 to verify the accuracy of the licensee's data for drill participation opportunities. The inspectors verified that all members of the licensee's emergency response organization in the identified key positions had been counted in the reported performance indicator data. The inspectors reviewed the licensee's basis for reporting the percentage of emergency response organization members who participated in a drill. The inspectors reviewed drill attendance records and verified a sample of those reported as participating. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data. The specific documents reviewed are described in the attachment to this report.

These activities constituted verification of the emergency response organization drill participation performance indicator, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.6 Alert and Notification System Reliability (EP03)

a. Inspection Scope

The inspectors reviewed the licensee's records of alert and notification system tests conducted between January 2013 and March 2014 to verify the accuracy of the licensee's data for siren system testing opportunities. The inspectors reviewed procedural guidance on assessing alert and notification system opportunities and the results of periodic alert and notification system operability tests. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data. The specific documents reviewed are described in the attachment to this report.

These activities constituted verification of the alert and notification system reliability performance indicator, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.7 Occupational Exposure Control Effectiveness (OR01)

a. Inspection Scope

The inspectors reviewed corrective action program records documenting unplanned exposures and losses of radiological control over locked high radiation areas and very high radiation areas during the period of January 1, 2013, to June 30, 2014. The inspectors reviewed a sample of radiologically controlled area exit transactions showing exposures greater than 100 mrem. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data.

These activities constituted verification of the occupational exposure control effectiveness performance indicator, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.8 Radiological Effluent Technical Specifications (RETS)/Offsite Dose Calculation Manual (ODCM) Radiological Effluent Occurrences (PR01)

a. Inspection Scope

The inspectors reviewed corrective action program records for liquid or gaseous effluent releases that occurred between January 1, 2013, and June 30, 2014, and were reported to the NRC to verify the performance indicator data. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data.

These activities constituted verification of the radiological effluent technical specifications (RETS)/offsite dose calculation manual (ODCM) radiological effluent occurrences performance indicator, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

40A2 Problem Identification and Resolution (71152)

Routine Review

a. Inspection Scope

Throughout the inspection period, the inspectors performed daily reviews of items entered into the licensee's corrective action program and periodically attended the licensee's condition report screening meetings. The inspectors verified that licensee personnel were identifying problems at an appropriate threshold and entering these problems into the corrective action program for resolution. The inspectors verified that the licensee developed and implemented corrective actions commensurate with the significance of the problems identified. The inspectors also reviewed the licensee's problem identification and resolution activities during the performance of the other inspection activities documented in this report.

b. Findings

No findings were identified.

40A3 Follow-up of Events and Notices of Enforcement Discretion (71153)

.1 (Closed) Licensee Event Report 05000458/2013-002-00: Potential Loss of Safety Function of Secondary Containment Due to Employee Leaving a Door Unsecured

This Licensee Event Report (LER) described an event on September 19, 2013, where a secondary containment pressure boundary door was left unsecured by an employee entering the auxiliary building. Upon closing the door, the employee mistakenly rotated the handwheel slightly, causing the latch bolts to extend partially. The latch bolts

contacted the outside of the keepers in the door frame, blocking the door open. The employee did not notice that the door was slightly open when he rotated the handwheel to the "closed" position, and then did not properly challenge the door to confirm its security prior to leaving the area. A security officer responded to the resultant alarm and fully closed the door approximately four minutes later.

The licensee submitted LER 05000458/2013-002-00 to report this event in accordance with 10 CFR 50.73(a)(2)(v) as an event that could have caused the loss of the safety function of the secondary containment pressure boundary. The licensee entered this issue into its corrective actions program as Condition Report CR RBS-2013-06091. The inspectors interviewed station personnel and reviewed the licensee's causal determination and corrective actions. The inspectors identified a minor violation of Technical Specification 5.4.1.a, "Procedures," for failing to properly secure the secondary containment door in accordance with Station Procedure SDI-006, "Security Guide for Employees," Step 4.11.6., which states, in part, that employees are responsible for securing doors and verifying they are properly locked. The failure to properly secure the secondary containment door is a performance deficiency. The performance deficiency is minor because the configuration control attribute of the Barrier Integrity Cornerstone objective of providing reasonable assurance that the containment barrier protects the public from radionuclide releases caused by accidents or events was not adversely affected. This failure to comply with Technical Specification 5.4.1.a, "Procedures," constitutes a minor violation that is not subject to enforcement action in accordance with the NRC's Enforcement Policy. LER 05000458/2013-002-00 is closed.

.2 (Closed) Licensee Event Report 05000458/2014-001-00: Unanalyzed Condition Associated With Unfused Ammeters in DC Battery Indication Circuits

This LER described an unanalyzed condition affecting the wiring design for the station battery ammeter circuits at River Bend Station. Specifically, the licensee identified that the original plant wiring design for the station battery ammeter circuits contained a shunt in the current flow from each battery which was connected to the ammeters in the Control Room via Institute of Electrical and Electronics Engineers (IEEE) IEEE-383 qualified leads and cables. The ammeter wiring attached to the shunt did not have fuses, and if one of the ammeter wires shorted to ground at the same time as another DC wire from the opposite polarity on the same battery, a ground loop through the unfused ammeter cable could occur. Thermal and/or arcing effects from the damaged ammeter cable could damage other cables resulting in loss of the associated safe shutdown capability. This design condition existed in one Division III DC ammeter circuit.

The licensee submitted LER 05000458/2014-001-00 to report this event in accordance with 10 CFR 50.73(a)(2)(ii)(B) as an event or condition that resulted in the nuclear power plant being in an unanalyzed condition that significantly degraded plant safety. The licensee entered this issue into its corrective actions program as Condition Report CR RBS-2013-04654. The licensee heightened operator awareness and implemented procedure changes to minimize fire hazards as immediate compensatory measures. The licensee has planned a modification to install a fuse on the ammeter circuit. This action is tracked in the licensee's corrective action program.

The significance and enforcement aspects of this issue are discussed in Section 4OA7.1 of this inspection report. LER 05000458/2014-001-00 is closed.

These activities constitute completion of two event follow-up samples, as defined in Inspection Procedure 71153.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On May 1, 2014, the inspectors discussed the in-office review of the preliminary scenario for the June 18, 2014, biennial exercise, submitted April 16, 2014, with Mr. F. Hurst, Emergency Preparedness Planner, and other members of the licensee staff. The licensee acknowledged the issues presented.

On June 20, 2014, the inspectors discussed the preliminary results of the on-site inspection of the licensee's emergency preparedness exercise conducted June 18, 2014, and inspection of the licensee's performance indicators during an on-site inspection debrief with Mr. E. Olson, Site Vice President, and other members of the licensee staff. The licensee acknowledged the issues presented.

On July 29, 2014, the inspectors conducted a telephonic exit meeting with Mr. E. Olson, Site Vice President, and other members of the licensee staff to present the results of the in-office and on-site inspection of the licensee's biennial emergency preparedness exercise conducted June 18, 2014. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed.

On August 15, 2014, the inspectors presented the radiation safety inspection results to Mr. R. Gadbois, General Manager, Plant Operations, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed.

On October 8, 2014, the inspectors presented the integrated inspection results to Mr. E. Olson, Site Vice President, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed.

4OA7 Licensee-Identified Violations

The following violations of very low safety significance (Green) or Severity Level IV were identified by the licensee and are violations of NRC requirements which meet the criteria of the NRC Enforcement Policy for being dispositioned as non-cited violations:

- .1 River Bend Station License Condition 2.C.10, Attachment 4, requires, in part, that the licensee implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Safety Analysis Report, as amended, and as approved in the Station Safety Evaluation Report, dated May 1984, and Supplement 3. Station Safety Evaluation Report, Supplement 3, concluded that the fire protection program was acceptable because it was in conformance with the guidelines of

Appendix R, Section III.G. Appendix R, Section III.G, Paragraph 1.a, states, "One train of systems necessary to achieve and maintain hot shutdown conditions from either the control room or emergency control station(s) is free from fire damage."

Contrary to the above, on January 9, 2014, the licensee identified that non-safe shutdown cables that shared a common enclosure with safe shutdown cables were not electrically protected and, therefore, did not meet the requirements of Appendix R, Section III.G. Specifically, the licensee identified that the battery ammeter circuits routed from the DC motor control centers to the ammeters located in the Control Room were not fused. These cables were routed in trays and installed in panels with other safe shutdown cables. During a fire event in the Control Room, fire-induced failures could have damaged the ammeter circuit and could have resulted in damaging other safe shutdown cables that are in direct physical contact with these cables in different fire zones. This issue was entered in the licensee's corrective action program as Condition Report CR-RBS-2013-04654. A senior reactor analyst performed a detailed risk evaluation and determined that the bounding change to the core damage frequency was approximately $6.5E-8$ /year. Since this value was less than $1E-7$ /year, quantification of the large early release frequency was not required. The finding was of very low safety significance (Green). The dominant core damage sequences involved a control room fire initiating event in Panel H13-P808-87B, loss of Division II and Division III emergency AC power sources, and a secondary fire which caused the loss of the Division I emergency AC train. The availability of the reactor core isolation cooling system as well as the station blackout diesel generator helped to minimize the risk. This violation is associated with LER 05000458/2014-001-00. Refer to Section 4OA3.2 of this inspection report for the review and closure of the licensee event report.

- .2 Title 10 CFR 50.65(a)(1) requires, in part, that holders of an operating license shall monitor the performance or condition of systems, structures, and components within the scope of the rule against licensee-established goals in a manner sufficient to provide reasonable assurance that such systems, structures, and components are capable of fulfilling their intended safety functions. Title 10 CFR 50.65(a)(2) requires, in part, that monitoring specified in paragraph (a)(1) is not required where it has been demonstrated the performance or condition of a system, structure, and component is being effectively controlled through appropriate preventive maintenance, such that the system, structure, and component remains capable of performing its intended function. Contrary to the above, from May 13, 2013, to February 28, 2014, the licensee failed to demonstrate that the performance of the remote shutdown system was being effectively controlled through appropriate preventive maintenance. Specifically, station personnel failed to appropriately evaluate repetitive component failures of Gould J11 relays across system boundaries, resulting in the remote shutdown system exceeding the functional failure criteria without implementing appropriate preventive maintenance to improve system performance. The licensee entered this deficiency into the corrective action program as Condition Report CR-RBS-2014-01006. The finding was more than minor since violations of 10 CFR 50.65(a)(2) necessarily involve degraded system performance which, if left uncorrected, could become a more significant safety concern. This finding has very low safety significance (Green) because the finding did not lead to an actual loss of safety function of the system or cause a component to be inoperable, nor did it screen as potentially risk-significant due to a seismic, flooding, or severe weather initiating event.

- .3 Title 10 of the Code of Federal Regulations, Appendix E to Part 50, Section V, states that licensees who are authorized to operate a nuclear power facility shall submit any changes to the emergency plan or procedures to the Commission, as specified in Section 50.4, within 30 days of such changes. Title 10 of the Code of Federal Regulations, Section 50.54(q)(5) states, in part, that licensees shall submit a report of changes made after February 21, 2012, that includes a summary of its analysis, within 30 days after the change is put into effect. Contrary to the above, River Bend Station did not submit changes to emergency plan implementing procedures within 30 days of such changes, and did not submit a summary of its analysis of the changes within 30 days after the changes were put into effect. Specifically, the license did not submit changes to Procedures EN-TQ-110, "Fleet EP Training Course Summary," Revisions 1 through 11, and EN-EP-306, "Drills and Exercises," Revisions 1 through 5. The licensee did not have a process to ensure that fleet procedures necessary to implement the site emergency plan were submitted to the NRC in accordance with the requirements of Appendix E to 10 CFR Part 50. This violation was evaluated using the NRC Enforcement Policy because the licensee's failure to submit required procedures affected the NRC's ability to perform adequate regulatory oversight, and was evaluated as a Severity Level IV violation because the violation was not related to the licensee's ability to perform notification or assessment during an emergency. This issue has been entered into the licensee's corrective action program as Condition Report CR-HQN-14-0380, dated April 26, 2014.
- .4 Title 10 CFR 20.1501(a) requires that each licensee make, or cause to be made, surveys that may be necessary for the licensee to comply with the regulations in 10 CFR Part 20 and that are reasonable under the circumstances to evaluate the extent of radiation levels, concentrations or quantities of radioactive materials, and the potential radiological hazards that could be present. Pursuant to 10 CFR 20.1003, a survey means an evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal, or presence of radioactive material or other sources of radiation. Title 10 CFR 20.1201(c) states, in part, the assigned deep-dose equivalent must be for the part of the body receiving the highest exposure. Contrary to this requirement, the licensee did not make or cause to be made surveys that were necessary for the licensee to comply with the regulations of 10 CFR 20.1201(c). Specifically, licensee representatives did not perform surveys to evaluate the radiation dose gradient in the reactor cavity, caused by placement of the reactor pressure vessel head, during work on March 15 and 16, 2013. The failure to provide dose gradient surveys was identified by the outage control center radiation protection representative while reviewing radiation survey records. Licensee personnel documented the failure to survey for radiation dose gradients in Condition Report CR-RBS-2013-02426 and performed an apparent cause evaluation. During follow-up actions, licensee personnel identified an example in which a worker received 104 millirem of unplanned radiation dose and reported it as an occupational exposure control effectiveness performance indicator occurrence.

Using Inspection Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," the inspectors determined the violation had very low safety significance because: (1) it was not an as low as is reasonably achievable (ALARA) finding, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

J. Brown, Technician, Radiation Protection
T. Brumfield, Director, Regulatory & Performance Improvement
D. Burnett, Manager, Emergency Planning
G. Bush, Manager, Material, Procurement, and Contracts
A. Carter, Master Technician, Radiation Protection
M. Chambers, Supervisor, Radiation Protection
M. Chase, Manager, Training
J. Clark, Manager, Regulatory Assurance
B. Cole, Manager, Radiation Protection
F. Corley, Manager, Design & Program Engineering
L. Dautel III, Supervisor, Radiation Protection
B. Ford, Senior Manager, Fleet Regulatory Assurance
R. Gadbois, General Manager, Plant Operations
T. Gates, Manager, Operations Support
J. Goudeau, Supervisor, Radiation Protection
K. Hallaran, Manager, Chemistry
J. Henderson, Assistant Manager, Operations
K. Huffstatler, Senior Licensing Specialist, Licensing
R. Leasure, Superintendent, Radiation Protection
P. Lucky, Manager, Performance Improvement
J. Maher, Manager, Systems & Components Engineering
W. Mashburn, Director, Engineering
E. Olson, Site Vice President
W. Renz, Director, Emergency Planning, Entergy South
J. Reynolds, Senior Manager, Maintenance
T. Santy, Manager, Security
T. Shenk, Manager, Operations
J. Vukovics, Supervisor, Reactor Engineering
J. Wieging, Senior Manager, Production
D. Yoes, Manager, Quality Assurance

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000458/2014-004-01 NCV Failure to Provide Positive Exposure Control Within A Locked High Radiation Area (Section 2RS1)

Closed

05000458/2013-002-00	LER	Potential Loss of Safety Function of Secondary Containment Due to Employee Leaving a Door Unsecured (Section 4OA3.1)
05000458/2014-001-00	LER	Unanalyzed Condition Associated With Unfused Ammeters in DC Battery Indication Circuits (Section 4OA3.2)

LIST OF DOCUMENTS REVIEWED

Section 1R04: Equipment Alignment

Condition Reports

CR-RBS-2010-05250	CR-RBS-2012-05644	CR-RBS-2013-00570	CR-RBS-2013-00750
CR-RBS-2013-04194	CR-RBS-2013-05957	CR-RBS-2013-07524	CR-RBS-2014-02062
CR-RBS-2014-03160	CR-RBS-2014-04029	CR-RBS-2014-04031	CR-RBS-2014-04058
CR-RBS-2014-04060	CR-RBS-2014-04061	CR-RBS-2014-04064	CR-RBS-2014-04065
CR-RBS-2014-04118	CR-RBS-2014-04129	CR-RBS-2014-04132	

Drawing

<u>Number</u>	<u>Title</u>	<u>Revision</u>
PID-27-16A	Engineering P&I Diagram - System 201, Standby Liquid Control System	14

Maintenance Documents

WO 00337146	WO 00362066	WO 00366324	WO 00366647	WO 00366823
WO 00372810	WO 00372811	WO 00374317	WO 00374580	WO 00378572
WO 00379114	WO 00380231	WO 00380558	WO 00381177	WO 00387488
WO 00390335	WO 00391212	WO 00392097	WO 00392098	WO 00393125
WO 00393127				

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
SOP-0028	Standby Liquid Control (SYS #201)	017
SOP-0030	High Pressure Core Spray (SYS #203)	029
SOP-0053	Standby Diesel Generator and Auxiliaries (SYS #309)	330

Training Document

<u>Number</u>	<u>Title</u>	<u>Revision</u>
R-STM-0201	Standby Liquid Control	7

Section 1R05: Fire Protection

Condition Reports

CR-RBS-2012-00604	CR-RBS-2012-01013	CR-RBS-2012-01260	CR-RBS-2012-01263
CR-RBS-2012-01581	CR-RBS-2012-01729	CR-RBS-2013-04257	CR-RBS-2013-05777
CR-RBS-2013-05906	CR-RBS-2013-05910	CR-RBS-2013-05942	CR-RBS-2013-06439
CR-RBS-2013-06446	CR-RBS-2013-06447	CR-RBS-2013-06456	CR-RBS-2013-06458
CR-RBS-2013-07089	CR-RBS-2013-07215	CR-RBS-2014-00244	CR-RBS-2014-00245
CR-RBS-2014-02281			

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
EN-DC-127	Control of Hot Work and Ignition Sources	14
EN-DC-128	Fire Protection Impact Reviews	7
EN-DC-330	Fire Protection Program	3
EN-TQ-125	Fire Brigade Drills	2
FPP-0101	Fire Suppression System Inspection	014
FB-148-340	Pre-Fire Strategies - Crescent Area Fire Area FB-1/Z-1	2
PT-070-427	Pre-Fire Strategies - E-Tunnel West and F-Tunnel Fire Area PT-1	3
RB-186-012	Pre-Fire Strategies - Hydrogen Recombiner Area Fire Area RC-3/Z-6 and RC-4/Z-6	3
SEP-FPP-RBS-002	River Bend Station Fire Fighting Procedure	2
SP-118-450	Standby Cooling Tower Pump A Room Fire Area PH-1/Z-1	3

Section 1R06: Flood Protection Measures

Calculation

<u>Number</u>	<u>Title</u>	<u>Revision</u>
G13.18.12.3*15	Internal Flooding Screen Analysis	0

Condition Reports

CR-RBS-2014-04120 CR-RBS-2014-04256 CR-RBS-2014-04260

Section 1R11: Licensed Operator Requalification Program and Licensed Operator Performance

Procedure

<u>Number</u>	<u>Title</u>	<u>Revision</u>
RSMS-OPS-0910	Rapid Fire Scenarios	10

Section 1R12: Maintenance Effectiveness

Condition Reports

CR-RBS-2010-04842 CR-RBS-2011-01416 CR-RBS-2011-04812 CR-RBS-2011-06821
CR-RBS-2012-05805 CR-RBS-2012-05975 CR-RBS-2013-05995 CR-RBS-2014-01006
CR-RBS-2014-01412

Miscellaneous Document

<u>Title</u>	<u>Revision</u>
System Health Report, RBS Unit 1, 121 and 122 - Service and Instrument Air	January 1, 2014 - March 31, 2014

Procedure

<u>Number</u>	<u>Title</u>	<u>Revision</u>
EN-DC-205	Maintenance Rule Monitoring	5

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Condition Report

CR-RBS-2014-04247

Maintenance Documents

WO 00381797 WO 00391027 WO 52557278

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
ADM-0096	Risk Management Program Implementation and On-Line Maintenance Risk Assessment	315

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
OSP-0048	Switchyard, Transformer Yard, and Sensitive Equipment Controls	025
STP-201-6310	SLC Pump and Valve Operability Test	309

Section 1R15: Operability Determinations and Functionality Assessments

Condition Reports

CR-RBS-2014-02501	CR-RBS-2014-03386	CR-RBS-2014-04118	CR-RBS-2014-04129
CR-RBS-2014-04132	CR-RBS-2014-04160		

Engineering Document

<u>Number</u>	<u>Title</u>	<u>Revision</u>
EC 37493	Evaluate the Use of Tom-Pac for SWP-P2A, B, C, and D	0

Maintenance Document

WO 00339910

Section 1R18: Plant Modifications

Calculations

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
G13.18.3.6-016	The Degraded Voltage Calculation for Class IE Buses and 480V Motor Operated Valves	2
G13.18.3.6-018	ETAP Data Base Input Source Study	2
PX-998	ASME III Adequacy Evaluation for Thermowell	000
SQE-12-31807	Seismic Qualification Evaluation EC 31807	February 14, 2014
Z-781-7092A	Pipe Support Design-Control Building-Chilled Water	0
AX-19J	Pipe Stress Calculation for Service Water Piping in the Control Building	4
AX-019Q	Service Water Piping for HVK - Chiller 1C in Control Building	4
AX-781D	Pipe Stress Calculation for Chilled Water Piping in Control Building	3

Calculations

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
AX-109T	Pipe Stress Calculation for SWP in Control Building for Static and Dynamic Load Cases	5
AX-781E	Chilled Water Piping - Control Building	3

Condition Reports

CR-RBS-2014-01368	CR-RBS-2014-01418	CR-RBS-2014-01659	CR-RBS-2014-01756
CR-RBS-2014-02030	CR-RBS-2014-02031	CR-RBS-2014-02389	CR-RBS-2014-02715
CR-RBS-2014-03009	CR-RBS-2014-03010	CR-RBS-2014-03619	CR-RBS-2014-03638
CR-RBS-2014-03714	CR-RBS-2014-04292	CR-RBS-2014-04293	CR-RBS-2014-04294
CR-RBS-2014-04295			

Engineering Information Record

<u>Number</u>	<u>Title</u>	<u>Revision</u>
ECT-31808	Post-Modification Test of EC-31808 that Digitally Upgraded HVK-CHL1D Controls and Instruments	0

Maintenance Documents

EC 31803	ECN 41020	ECN 41517	ECN 41732	ECN 42254
ECN 48765	ECN 49045	ECN 49398		

Miscellaneous Document

<u>Number</u>	<u>Title</u>	<u>Revision</u>
EC-31808	Operation and Maintenance Manual for Adaptive Chiller Control Upgrade	300

Procedure

<u>Number</u>	<u>Title</u>	<u>Revision</u>
EN-LI-101	10 CFR 50.59 Evaluations	12

Section 1R19: Post-Maintenance Testing

Condition Reports

CR-RBS-2014-02085	CR-RBS-2014-02113	CR-RBS-2014-02115	CR-RBS-2014-04306
CR-RBS-2014-04313	CR-RBS-2014-04327	CR-RBS-2014-04456	

Drawing

<u>Number</u>	<u>Title</u>	<u>Revision</u>
GE-828e534AA	Elementary Diagram - Residual Heat Removal System	28

Maintenance Documents

WO 00336938	WO 00381261	WO 00381316	WO 00392825	WO 00892825
WO 52406645	WO 52469352	WO 52576688		

Miscellaneous Documents

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
E12-MOVF048B-ST-005	MOV Test Report (WO 00892825)	09/02/2014
VTD-G080-0146	General Electric Instructions - Instantaneous Auxiliary Relays Types HMA124A, HMA125A [PUB. #gek-45490	0

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
SOP-0054	Contingency Equipment Operations	320
STP-000-0001	Daily Operating Logs	078
STP-204-1302	LPCI Pump "C" Start Time Delay Channel Calibration and Channel Functional Test	18
STP-204-6304	Div II RHR Quarterly Valve Operability Test	022

Section 1R22: Surveillance Testing

Condition Reports

CR-RBS-2014-03302 CR-RBS-2014-04212 CR-RBS-2014-04213

Maintenance Documents

WO 52331359	WO 52372045	WO 52536786	WO 52553681	WO 52568909
WO 52571905				

Miscellaneous Document

<u>Number</u>	<u>Title</u>	<u>Date</u>
LTR-2062-0002-01	Letter from MPR Associates, Inc. to Entergy Operations, Inc. - Evaluation of River Bend Station EDG Bendix Fuel Injection Pump	September 3, 2014

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
STP-203-6501	HPCS Pump and Valve Operability Test	010
STP-203-6604	HPCS Bypass and Test Return Valves to CST 24 Month Leak Rate Test	303
STP-309-0201	Division I Diesel Generator Operability Test	055
STP-309-0203	Division III Diesel Generator Operability Test	321

Section 1EP7: Exercise Evaluation – Hostile Action Event (71114.07)

Condition Reports

CR-RBS-2012-01580	CR-RBS-2014-00307	CR-RBS-2014-03003	CR-RBS-2014-03028
CR-RBS-2014-03051	CR-RBS-2014-03071	CR-RBS-2014-03072	CR-RBS-2014-03073

Procedures and Documents

<u>Number</u>	<u>Title</u>	<u>Revision</u>
AOP-0054	Security Events	25
AOP-0063	Outside Threats	0
EIP-2-002	Classification Actions	31
EIP-2-006	Notifications	41
EIP-2-018	Technical Support Center	36
EIP-2-020	Emergency Operations Facility	37
EIP-2-022	Alternate EOF, Activation and Transfer of Functions	29
EIP-2-026	Evacuation, Personnel Accountability, and Search and Rescue	20
EIP-2-102	Training, Drills, and Exercises	25
RDRL-EP-1403	EP Evaluated Exercise	

Procedures and Documents

<u>Number</u>	<u>Title</u>	<u>Revision</u>
SDI-19	Security Response to National Terrorism Advisory Level Changes	0
SPI-1	Security Shift Supervisor	65

Work Tracking System (WTRBS-)

2014-00052-69	2014-00052-70	2014-00052-71	2014-00052-73	2014-00052-74
2014-00052-75	2014-00052-80	2014-00052-81		

Section 2RS1: Radiological Hazard Assessment and Exposure Controls

Audits, Self-Assessments, and Surveillances

<u>Number</u>	<u>Title</u>	<u>Date</u>
LO-RLO-2012-0169	Annual 10CFR20 1101(c) Program Content And Implementation	May 28, 2013
RLO-2012-00168	Radiological Surveys	October 31, 2013
LO-RLO-2014-00065	Pre-NRC Inspection Focused Assessment: Radiological Hazard Assessment and Exposure Controls, and Occupational Exposure Control and Effectiveness Assessment	May 28, 2014

Condition Reports

CR-RBS-2013-01063	CR-RBS-2013-02426	CR-RBS-2013-04083	CR-RBS-2013-04637
CR-RBS-2013-06175	CR-RBS-2013-06445	CR-RBS-2013-06754	CR-RBS-2013-06758
CR-RBS-2013-06825	CR-RBS-2014-00951	CR-RBS-2014-01361	

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
EN-RP-100	Radiation Worker Expectations	8
EN-RP-101	Access Control For Radiologically Controlled Areas	9
EN-RP-106	Radiological Survey Documentation	5
EN-RP-108	Radiation Protection Posting	14
EN-RP-121	Radioactive Material Control	9
EN-HR-137	Complying with the Standards for Selecting Nuclear Power Plant Personnel	4

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
EN-RP-143	Source Control	9
EN-RP-203	Dose Assessment	5
EN-RP-204	Special Monitoring Requirements	6
RPP-0006	Performance of Radiological Surveys	22

Radiation Survey Records

<u>Number</u>	<u>Title</u>	<u>Date</u>
1301-0441	4302 Radwaste 136-foot and 147-foot SPC	January 25, 2013
1306-0021	4302 Radwaste 136-foot and 147-foot SPC	June 3, 2013
1306-0043	4302 Radwaste 136-foot and 147-foot SPC	June 6, 2013
1303-0704	186-foot Reactor Vessel Cavity	March 15, 2013
1303-0736	186-foot Reactor Vessel Cavity	March 16, 2013

Radiation Work Permits

<u>Number</u>	<u>Title</u>	<u>Revision</u>
2013-1069	Suppression Pool Cooling Filter Replacement, Valve Work and Support Activities	01
2013-1800	Refuel Disassembly, Reassembly, Support Activities	06
2014-1204	High Risk Investigations, Surveillances, and Maintenance Activities	03
2014-1280	High Risk Activities, Work Which Could Result in a Direct, Unmonitored Release of Radioactive Material to the Environment	03

Section 2RS3: In-Plant Airborne Radioactivity Control and Mitigation

Audits, Self-Assessments, and Surveillances

<u>Number</u>	<u>Title</u>	<u>Date</u>
LO-RLO-2012-00165	Respiratory Protection Program Focused Assessment	August 30, 2013
LO-RLO-2014-00065	Pre-NRC Inspection Focused Assessment	May 28, 2014

Condition Reports

CR-RBS-2013-01692	CR-RBS-2013-06222	CR-RBS-2013-06698	CR-RBS-2013-07227
CR-RBS-2014-00067	CR-RBS-2014-01502	CR-RBS-2014-01637	CR-RBS-2014-02408
CR-RBS-2014-02466	CR-RBS-2014-02625	CR-RBS-2014-03078	

Miscellaneous Documents

<u>Number</u>	<u>Title</u>	<u>Date</u>
Att. 9.1 to EN-RP-502	Face Piece Inspection Log – Monthly	2013 and 2014
Att. 9.2 to EN-RP-502	SCBA Inspection Log – Monthly	2013 and 2014
226086-0	Tri-Air Testing Laboratory Report – Compressed Air/Gas Quality Testing	June 18, 2014
	Radiation Protection Qualification Report	August 11, 2014

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
EN-RP-501	Respiratory Protection Program	5
EN-RP-502	Inspection and Maintenance of Respiratory Protection Equipment	9
EN-RP-502-01	FireHawk M7 SCBA	0
EN-RP-502-02	Flow Testing MSA Breathing Apparatus	0
EN-RP-503	Selection, Issue and Use of Respiratory Protection Equipment	6
EN-RP-504	Breathing Air	3
EN-RP-504-03	Operation and Maintenance of the Baron II SCBA Fill System	0
EN-RP-505-01	OHD Quantifit Respirator Fit Testing	1

Section 40A1: Performance Indicator Verification

Condition Reports

CR-RBS-2013-02426	CR-RBS-2013-04083	CR-RBS-2013-04191	CR-RBS-2013-04291
CR-RBS-2013-04295	CR-RBS-2013-04458	CR-RBS-2013-04920	CR-RBS-2013-04928
CR-RBS-2013-05422	CR-RBS-2013-05593	CR-RBS-2013-05861	CR-RBS-2013-06405
CR-RBS-2013-06495	CR-RBS-2013-06549	CR-RBS-2013-06902	CR-RBS-2013-06966
CR-RBS-2013-06970	CR-RBS-2013-07048	CR-RBS-2013-07178	CR-RBS-2013-07222
CR-RBS-2013-07582	CR-RBS-2014-00200	CR-RBS-2014-00318	CR-RBS-2014-00319
CR-RBS-2014-00403	CR-RBS-2014-00597	CR-RBS-2014-00627	CR-RBS-2014-00645
CR-RBS-2014-00798	CR-RBS-2014-00835	CR-RBS-2014-00904	CR-RBS-2014-01020

Condition Reports

CR-RBS-2014-01036	CR-RBS-2014-01054	CR-RBS-2014-01307	CR-RBS-2014-01350
CR-RBS-2014-01540	CR-RBS-2014-01541	CR-RBS-2014-01670	CR-RBS-2014-01675
CR-RBS-2014-01680	CR-RBS-2014-01700	CR-RBS-2014-01811	CR-RBS-2014-01854
CR-RBS-2014-01855	CR-RBS-2014-01857	CR-RBS-2014-01926	CR-RBS-2014-01955
CR-RBS-2014-01987	CR-RBS-2014-01990	CR-RBS-2014-02085	CR-RBS-2014-02115
CR-RBS-2014-02150	CR-RBS-2014-02191	CR-RBS-2014-02200	CR-RBS-2014-02202
CR-RBS-2014-02212	CR-RBS-2014-02230	CR-RBS-2014-02238	CR-RBS-2014-02501
CR-RBS-2014-02559	CR-RBS-2014-02790	CR-RBS-2014-02826	CR-RBS-2014-03046
CR-RBS-2014-03098	CR-RBS-2014-03127	CR-RBS-2014-03160	CR-RBS-2014-03212
CR-RBS-2014-03580	CR-RBS-2014-03597	CR-RBS-2014-03640	CR-RBS-2014-03820
CR-RBS-2014-04020	CR-RBS-2014-04029	CR-RBS-2014-04064	CR-RBS-2014-04065
CR-RBS-2014-04084	CR-RBS-2014-04118	CR-RBS-2014-04129	CR-RBS-2014-04130
CR-RBS-2014-04160	CR-RBS-2014-04277	CR-RBS-2014-04302	CR-RBS-2014-04306
CR-RBS-2014-04307	CR-RBS-2014-04327	CR-RBS-2014-04332	CR-RBS-2014-04407
CR-RBS-2014-04413	CR-RBS-2014-04415	CR-RBS-2014-04417	

Maintenance Documents

WO 00336727	WO 00337146	WO 00345985	WO 00362066	WO 00364867
WO 00365790	WO 00365904	WO 00366324	WO 00366347	WO 00366647
WO 00366823	WO 00368289	WO 00370699	WO 00371261	WO 00372810
WO 00372811	WO 00373377	WO 00374317	WO 00374580	WO 00378572
WO 00378731	WO 00379114	WO 00379632	WO 00380231	WO 00380558
WO 00381177	WO 00381261	WO 00381318	WO 00381947	WO 00382094
WO 00384245	WO 00386096	WO 00386113	WO 00387488	WO 00390335
WO 00391212	WO 00392011	WO 00392012	WO 00392097	WO 00392098
WO 00392667	WO 00392825	WO 00393010	WO 00393123	WO 00393124
WO 00393125	WO 00393127	WO 00393128	WO 00393129	WO 00393130
WO 00393132	WO 00393133	WO 00393135	WO 00393136	WO 00393137

Miscellaneous Documents

<u>Title</u>	<u>Date</u>
Selected Control Room Logs	August 2013 - August 2014
River Bend Station Consolidated Data Entry, MSPI Derivation Report, Heat Removal System	August 2014
River Bend Station Consolidated Data Entry, MSPI Derivation Report, Residual Heat Removal System	August 2014
System Health Report, RBS Unit 1, 204 - Residual Heat Removal - LPCI	April 1, 2014 - June 30, 2014
System Health Report, RBS Unit 1, 209 - Reactor Core Isolation Cooling	April 1, 2014 - June 30, 2014

Miscellaneous Documents

<u>Title</u>	<u>Date</u>
System Health Report, RBS Unit 1, 256 - Service Water Standby	April 1, 2014 - June 30, 2014

Procedures and Documents

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
EN-LI-114	Performance Indicator Process	6
EN-FAP-EP-005	Emergency Preparedness Performance Indicators	3
EIP-2-002	Classification Actions	31
EIP-2-006	Notifications	40-41
EPP-2-701	Prompt Notification System Maintenance and Testing	27
NEI 99-02	Regulatory Assessment Performance Indicator Guideline	7
	River Bend Station Alert and Notification System	October 7, 2013

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

Condition Report

CR-RBS-2013-04654

Procedure

<u>Number</u>	<u>Title</u>	<u>Revision</u>
SDI-006	Security Guide for Employees	11

Section 40A7: Licensee-Identified Violations

Condition Reports

CR-HQN-2014-00380 CR-RBS-2014-02462

**The following items are requested for the
Occupational Radiation Safety Inspection
at River Bend Station
August 11 – 15, 2014
Integrated Report 2014004**

Inspection areas are listed in the attachments below.

Please provide the requested information on or before July 14, 2014.

Please submit this information using the same lettering system as below. For example, all contacts and phone numbers for Inspection Procedure 71124.01 should be in a file/folder titled "1- A," applicable organization charts in file/folder "1- B," etc.

If information is placed on *ims.certrec.com*, please ensure the inspection exit date entered is at least 30 days later than the on-site inspection dates, so the inspectors will have access to the information while writing the report.

In addition to the corrective action document lists provided for each inspection procedure listed below, please provide updated lists of corrective action documents at the entrance meeting. The dates for these lists should range from the end dates of the original lists to the day of the entrance meeting.

If more than one inspection procedure is to be conducted and the information requests appear to be redundant, there is no need to provide duplicate copies. Enter a note explaining in which file the information can be found.

If you have any questions or comments, please contact Larry Ricketson at (817) 200-1165 or Larry.Ricketson@nrc.gov.

PAPERWORK REDUCTION ACT STATEMENT

This letter does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing information collection requirements were approved by the Office of Management and Budget, control number 3150-0011.

1. Radiological Hazard Assessment and Exposure Controls (71124.01)

Date of Last Inspection: February 25, 2013

- A. List of contacts and telephone numbers for the Radiation Protection Organization staff and technicians
- B. Applicable organization charts
- C. Audits, self-assessments, and LERs written since date of last inspection, related to this inspection area
- D. Procedure indexes for the radiation protection procedures
- E. Please provide specific procedures related to the following areas noted below. Additional specific procedures may be requested by number after the inspector reviews the procedure indexes.
 - 1. Radiation Protection Program Description
 - 2. Radiation Protection Conduct of Operations
 - 3. Personnel Dosimetry Program
 - 4. Posting of Radiological Areas
 - 5. High Radiation Area Controls
 - 6. RCA Access Controls and Radworker Instructions
 - 7. Conduct of Radiological Surveys
 - 8. Radioactive Source Inventory and Control
 - 9. Declared Pregnant Worker Program
- F. List of corrective action documents (including corporate and subtiered systems) since date of last inspection
 - a. Initiated by the radiation protection organization
 - b. Assigned to the radiation protection organization

NOTE: The lists should indicate the significance level of each issue and the search criteria used. Please provide documents which are "searchable" so that the inspector can perform word searches.

If not covered above, a summary of corrective action documents since date of last inspection involving unmonitored releases, unplanned releases, or releases in which any dose limit or administrative dose limit was exceeded (for Public Radiation Safety Performance Indicator verification in accordance with IP 71151)

- G. List of radiologically significant work activities scheduled to be conducted during the inspection period (If the inspection is scheduled during an outage, please also include a list of work activities greater than 1 rem, scheduled during the outage with the dose estimate for the work activity.)
- H. List of active radiation work permits
- I. Radioactive source inventory list

3. In-Plant Airborne Radioactivity Control and Mitigation (71124.03)

Date of Last Inspection: June 4, 2012

- A. List of contacts and telephone numbers for the following areas:
1. Respiratory Protection Program
 2. Self-contained breathing apparatus (SCBA)
- B. Applicable organization charts
- Copies of audits, self-assessments, vendor or Nuclear Procurement Issues Committee (NUPIC) audits for contractor support, and LERs, written since date of last inspection related to:
1. Installed air filtration systems
 2. SCBAs
- D. Procedure index for:
1. use and operation of continuous air monitors
 2. use and operation of temporary air filtration units
 3. Respiratory protection
- E. Please provide specific procedures related to the following areas noted below. Additional Specific Procedures may be requested by number after the inspector reviews the procedure indexes.
1. Respiratory protection program
 2. Use of self-contained breathing apparatuses
 3. Air quality testing for SCBAs
- F. A summary list of corrective action documents (including corporate and subtiered systems) written since date of last inspection, related to the Airborne Monitoring program including:
1. continuous air monitors
 2. SCBAs
 3. respiratory protection program
- NOTE: The lists should indicate the significance level of each issue and the search criteria used. Please provide documents which are "searchable."
- G. List of SCBA-qualified personnel - reactor operators and emergency response personnel
- H. Inspection records for SCBAs staged in the plant for use since date of last inspection.
- I. SCBA training and qualification records for control room operators, shift supervisors, shift technical advisor, and operational support center personnel for the last year.
- A selection of personnel may be asked to demonstrate proficiency in donning, doffing, and performance of functionality check for respiratory devices.