



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

November 14, 2006

Paul D. Hinnenkamp
Site Vice President
Entergy Operations, Inc.
River Bend Station
5485 US Highway 61N
St. Francisville, LA 70775

SUBJECT: RIVER BEND STATION - NRC INTEGRATED INSPECTION
REPORT 05000458/2006004

Dear Mr. Hinnenkamp:

On September 30, 2006, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your River Bend Station. The enclosed integrated inspection report documents the inspection results, which were discussed on October 4, 2006, with you 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.

The report documents one NRC-identified finding and three self-revealing findings of very low safety significance (Green). Three of these findings were determined to involve violations of NRC requirements. However, because of the very low safety significance and because they are entered into your corrective action program, the NRC is treating these findings as noncited violations (NCVs), consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest any NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011-4005; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the River Bend Station facility.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of

Entergy Operations, Inc.

-2-

NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room). Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

/RA/

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

Docket: 50-458
License: NPF-47

Enclosure:
NRC Inspection Report 05000458/2006004
w/attachment: Supplemental Information

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

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

General Manager
Plant Operations
Entergy Operations, Inc.
River Bend Station
5485 US Highway 61N
St. Francisville, LA 70775

Director - Nuclear Safety
Entergy Operations, Inc.
River Bend Station
5485 US Highway 61N
St. Francisville, LA 70775

Entergy Operations, Inc.

-3-

Wise, Carter, Child & Caraway
P.O. Box 651
Jackson, MS 39205

Winston & Strawn LLP
1700 K Street, N.W.
Washington, DC 20006-3817

Manager - Licensing
Entergy Operations, Inc.
River Bend Station
5485 US Highway 61N
St. Francisville, LA 70775

The Honorable Charles C. Foti, Jr.
Attorney General
Department of Justice
State of Louisiana
P.O. Box 94005
Baton Rouge, LA 70804-9005

H. Anne Plettinger
3456 Villa Rose Drive
Baton Rouge, LA 70806

Bert Babers, President
West Feliciana Parish Police Jury
P.O. Box 1921
St. Francisville, LA 70775

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

Brian Almon
Public Utility Commission
William B. Travis Building
P.O. Box 13326
1701 North Congress Avenue
Austin, TX 78711-3326

Entergy Operations, Inc.

-4-

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

Electronic distribution by RIV:
 Regional Administrator (**BSM1**)
 DRP Director (**ATH**)
 DRS Director (**DDC**)
 DRS Deputy Director (**RJC1**)
 Senior Resident Inspector (**PJA**)
 Branch Chief, DRP/C (**KMK**)
 Senior Project Engineer, DRP/C (**WCW**)
 Team Leader, DRP/TSS (**RLN1**)
 RITS Coordinator (**KEG**)
 DRS STA (**DAP**)
 J. Lamb, OEDO RIV Coordinator (**JGL1**)
ROPreports
 RBS Site Secretary (**LGD**)
 W. A. Maier, RSLO (**WAM**)
 R. E. Kahler, NSIR (**REK**)

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

R:\ REACTORS\ RB\2006\RB2006-04RP-PJA.wpd

RIV:SRI:DRP/C	RI:DRP/C	C:DRS/OB	C:DRS/EB1	C:DRS/PSB, HP
PJAlter	MOMiller	ATGody	JAClark	DAPowers
/RA/	/RA/	/RA/	/RA/	/RA/
11/14/06	11/13/06	11/13/06	11/6/06	11/13/06
C:DRS/EB2	SRA:DRS	C:DRP/C		
LJSmith	DPLoveless	KMKennedy		
/RA/	/RA/	/RA/		
11/13/06	11/14/06	11/14/06		

OFFICIAL RECORD COPY

T=Telephone

E=E-mail

F=Fax

U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket: 50-458

License: NPF-47

Report: 05000458/2006004

Licensee: Entergy Operations, Inc.

Facility: River Bend Station

Location: 5485 U.S. Highway 61
St. Francisville, Louisiana

Dates: July 1 through September 30, 2006

Inspectors: P. Alter, Senior Resident Inspector, Project Branch C
S. Schwind, Senior Resident Inspector, Project Branch C
G. Miller, Senior Resident Inspector, Project Branch C
G. Larkin, Senior Resident Inspector, Project Branch E
M. Miller, Resident Inspector, Project Branch C
N. Taylor, Resident Inspector, Project Branch C
A. Barrett, Resident Inspector, Project Branch C
P. Goldberg, Reactor Inspector, Engineering Branch 2
R. Lantz, Senior Emergency Preparedness Inspector, Operations Branch
T. McKernon, Senior Operations Engineer, Operations Branch
B. Baca, Health Physicist, Plant Support Branch

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

TABLE OF CONTENTS

SUMMARY OF FINDINGS	3
REPORT DETAILS	6
REACTOR SAFETY	6
1R04 <u>Equipment Alignment</u>	6
1R05 <u>Fire Protection</u>	7
1R06 <u>Flood Protection Measures</u>	8
1R11 <u>Licensed Operator Requalification Program</u>	8
1R12 <u>Maintenance Effectiveness</u>	9
1R13 <u>Maintenance Risk Assessments and Emergent Work Control</u>	13
1R15 <u>Operability Evaluations</u>	14
1R19 <u>Postmaintenance Testing</u>	15
1R22 <u>Surveillance Testing</u>	17
1R23 <u>Temporary Plant Modifications</u>	18
1EP1 <u>Exercise Evaluation</u>	18
1EP4 <u>Emergency Action Level and Emergency Plan Changes</u>	19
1EP6 <u>Drill Evaluation</u>	20
RADIATION SAFETY	21
2OS1 <u>Access Control to Radiologically Significant Areas</u>	21
2OS2 <u>ALARA Planning and Controls</u>	25
OTHER ACTIVITIES	26
4OA1 <u>Performance Indicator Verification</u>	26
4OA2 <u>Identification and Resolution of Problems</u>	28
4OA5 <u>Other Activities</u>	29
4OA6 <u>Meetings, Including Exit</u>	30
SUPPLEMENTAL INFORMATION	A-1
KEY POINTS OF CONTACT	A-1
LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED	A-1
LIST OF DOCUMENTS REVIEWED	A-2
LIST OF ACRONYMS	A-9

SUMMARY OF FINDINGS

IR 05000458/2006004; 07/01/2006 - 09/30/2006; River Bend Station; Postmaintenance Testing; Access Controls to Radiologically Significant Areas.

The report covered a 3-month period of routine baseline inspections by resident inspectors and announced baseline inspections by regional emergency planning, engineering and maintenance, and operations inspectors. One Green finding and three Green noncited violations were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process." Findings for which the significance determination process does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

Green. A self-revealing finding of very low safety significance was reviewed involving an inadequate procedure for conducting maintenance on the turbine bypass valve hydraulic system filter cartridge. This resulted in the improper reassembly of the filter. The resultant hydraulic oil leak caused the main turbine bypass valves to be inoperable, and a power reduction to less than 23.8 percent power was required by Technical Specifications. This issue was entered into the licensee's corrective action program as Condition Report CR-RBS-2006-02632.

The performance deficiency associated with this finding was: (1) the failure to provide adequate instructions for reassembly of the turbine bypass valve hydraulic system filter cartridge to ensure that the cover gasket was properly installed, and (2) the failure to perform an adequate operational leak test of the system. The finding was more than minor because it was associated with the mitigating systems cornerstone attribute of equipment performance and it affected the associated cornerstone objective to ensure the availability and reliability of a system that responds to initiating events to prevent undesirable consequences. The inspectors performed a Phase 2 analysis using Manual Chapter 0609 and determined that the finding was of very low safety significance. The cause of the finding was related to the crosscutting element of human performance in that the licensee failed to provide complete, accurate, up-to-date instructions in the maintenance work package to change the hydraulic oil filter cartridge. (Section 1R19)

Cornerstone: Occupational Radiation Safety

Green. The inspector reviewed a self-revealing, noncited violation of Technical Specification 5.4.1 resulting from workers' failure to follow radiation work permit requirements. Two workers performing a scaffolding modification in the inclined fuel transfer system canal became externally and internally contaminated. As the workers were exiting the controlled access area, they alarmed the personnel contamination monitors. Based upon the whole-body count results, the licensee assigned a committed

effective dose equivalent of 30 millirem to one worker and 70 millirem to the other worker. The licensee's investigation determined that the workers did not inform radiation protection personnel that they would be lowering the scaffolding 3 feet below surveyed areas and contamination control devices. Consequently, the workers were in radiological conditions not bounded by the radiation work permit and as low as is reasonably achievable planners did not have a chance to conduct a total effective dose equivalent as low as is reasonably achievable review to determine if respiratory protection was necessary. As a corrective action, the licensee is incorporating a lessons learned item associated with this event into radiation worker training.

This finding is greater than minor because it is associated with one of the cornerstone attributes (exposure/contamination control) and affects the Occupational Radiation Safety cornerstone objective in that the failure to follow radiation work permit instructions resulted in additional personnel exposure. Using the Occupational Radiation Safety Significance Determination Process, the inspector determined that this finding was of very low safety significance because it did not involve: (1) an as low as is reasonably achievable finding, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess doses. Additionally, this finding has a crosscutting aspect in the area of human performance because the workers failed to use error prevention tools such as self- and peer-checking. (Section 2OS1)

Green. The inspector reviewed a self-revealing, noncited violation of 10 CFR 20.1501(a) resulting from the licensee's failure to correctly measure the airborne radioactivity where personnel worked. The licensee's review of the January 26, 2006, contamination event identified that the air sample taken to support the work activity was positioned above the high-efficiency particulate air hose suction in an air flow area above the actual work area. This meant that the air sample was not representative of the workers' actual work area. In addition, the radiation protection technician providing continuous job coverage failed to identify the deficiency and adjust the position of the air sampler. As a corrective action, the licensee is incorporating a lessons learned item associated with this event into the radiation protection technician training.

This finding is greater than minor because it is associated with one of the cornerstone attributes (exposure control) and affects the Occupational Radiation Safety cornerstone objective in that an inadequate evaluation of the hazards could lead to inadequate radiation protection and dose saving measures. This finding could also be reasonably viewed as a precursor to a significant event, such as a personnel overexposure, had contamination levels been higher. Using the Occupational Radiation Safety Significance Determination Process, the inspector determined that this finding was of very low safety significance because it did not involve: (1) an as low as is reasonably achievable finding, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess doses. Additionally, this finding has a crosscutting aspect in the area of human performance because radiation protection personnel failed to use error prevention tools such as self- and peer-checking. (Section 2OS1)

Green. The inspector identified a noncited violation of 10 CFR 20.1501(a), resulting from the licensee's use of an inadequate alpha contamination survey technique. The

inspector determined that the licensee's procedure for the use of the Eberline SAC-4 alpha scintillation counter established a screening limit that did not allow sufficient sample activity for the discovery of alpha emitting radionuclides. Therefore, the inspector concluded that surveys using this technique could not identify alpha contamination and were inadequate. As a corrective action, the licensee adapted the corporate procedural guidance, which raised the maximum sample activity. This finding is greater than minor because it is associated with one of the cornerstone attributes (exposure control) and affects the Occupational Radiation Safety cornerstone objective in that an inadequate evaluation of the hazards could lead to inadequate radiation protection and dose saving measures. This finding could also be reasonably viewed as a precursor to a significant event, such as a personnel overexposure, had contamination levels been higher. Using the Occupational Radiation Safety Significance Determination Process, the inspector determined that this finding was of very low safety significance because it did not involve: (1) an as low as is reasonably achievable finding, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess doses. Additionally, this finding has a crosscutting aspect in the area of human performance because the licensee used procedures that were inadequate to ensure that alpha contamination was identified. (Section 2OS1)

B. Licensee-Identified Violations

None.

REPORT DETAILS

Summary of Plant Status: The reactor was operated at 100 percent power from July 1-7, 2006, when power was reduced to 67 percent for a control rod sequence exchange and repairs to one reactor feedwater pump. Power was restored to 100 percent on July 9, 2006. On August 15, 2006, power was reduced to 85 percent to remove one feedwater regulating valve from service to repair a seal leak. Power was restored to 100 percent on August 16, 2006, and remained at 100 percent for the remainder of the inspection period, with the exception of regularly scheduled power reductions for control rod pattern adjustments and turbine testing.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness

1R04 Equipment Alignment

Partial System Walkdowns

a. Inspection Scope

The inspectors: (1) walked down portions of the three risk important systems listed below and reviewed plant procedures and documents to verify that critical portions of the selected systems were correctly aligned; and (2) compared deficiencies identified during the walkdown to the licensee's Updated Safety Analysis Report (USAR) and corrective action program (CAP) to verify problems were being identified and corrected.

- Division I Standby Service Water, during the time that the service water cooling tower was degraded, on September 1, 2006
- Residual heat removal Train A, during maintenance on RHR Train B, on September 11, 2006
- Division II Emergency Diesel Generator (EDG), during maintenance on Division I EDG, on September 27, 2006

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed three inspection samples.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

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

- July 31, 2006, Fuel Building New Fuel Storage Vault Area, Fire Area FB-1/Z-1
- August 25, 2006, Emergency Core Cooling System Piping Penetration Area, Fire Areas AB-1 and AB-15
- September 1, 2006, Standby Cooling Tower Pump A Transformer Room, Fire Area PH-1/Z-2
- September 1, 2006, Standby Cooling Tower Pump A Room, Fire Area PH-1/Z-1
- September 1, 2006, Standby Cooling Tower Pump B Transformer Room, Fire Area PH-2/Z-2
- September 1, 2006, Standby Cooling Tower Pump B Room, Fire Area PH-2/Z-2

Documents reviewed by the inspectors included:

- Pre-Fire Plan/Strategy Book
- River Bend Station postfire safe shutdown analysis
- Calculation G13.18.12.2-022, "Combustible Loading," Revision 3
- Work Request 14702, Insulation falling from overhead in T-tunnel elevation 95'
- CR-RBS-2006-01368, fuel building straight stream fire nozzle handle broken

The inspectors completed six inspection samples.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures

a. Inspection Scope

The inspectors conducted an annual flooding assessment to verify that the licensee's flooding mitigation plans and equipment were consistent with design requirements and risk analysis assumptions. The inspectors interviewed station environmental personnel and conducted walkdowns of the onsite drainage systems on September 20, 2006. Specifically, the inspectors examined: (1) culverts for blockage; (2) the west creek fabricform channel liner for silt buildup, scour, and excessive vegetation growth; and (3) equipment used to dewater the Unit 2 excavation. The inspectors reviewed the following documents during the inspection:

- River Bend Station Individual Plant Examination of External Events
- USAR Section 3.4.1, "Flood Protection"
- USAR Section 2.4.2.3, "Effects of Local Intense Precipitation"
- Environmental Services Procedure ESP-8-048, "West Creek Inspection," Revision 6
- Work Order (WO) 50994955-01, "Clean out West Creek"

The inspectors completed one inspection sample.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program

1. Quarterly Requalification Activities Review

a. Inspection Scope

The inspectors observed testing and training of senior reactor operators and reactor operators to identify deficiencies and discrepancies in the training, to assess operator performance, and to assess the evaluator's critique. The evaluation Scenario RSMS-OPS-810, Revision 00, involved a single control rod scram, steam leak in the main steam tunnel, and a loss of offsite power. Other documents reviewed by the inspectors included:

- R-DAD-TQ-011, "Simulator Training," Revision 4
- OSP-0001, "Control of Operator Aids," Revision 12
- OSP-0046, "Operations Notifications," Revision 2
- CR-RBS-2006-03688, unapproved shift manager's checklist used in simulator

The inspectors completed one inspection sample.

b. Findings

No findings of significance were identified.

2. Biennial Examination Testing Cycle

a. Inspection Scope

This inspection was held during the first week of the biennial examination testing cycle, which ended the week of September 25, 2006. The inspector reviewed the overall pass/fail results of the individual job performance measure operating tests, simulator operating tests, and written examinations administered by the licensee during the operator licensing requalification cycles and biennial examination. Six separate crews participated in simulator operating tests, written examinations, and job performance measure operating tests, totaling 41 licensed operators. While there was an individual job performance measure failure, and one failure of the biennial written examination, all of the licensed operators tested passed the biennial examination.

During the inspection, the inspector reviewed and observed biennial examination simulator job performance measures, in-plant job performance measures, and the simulator dynamic examination. The inspector also reviewed a sample of licensed operator annual medical forms and procedures governing the medical examination process, a sampling of the licensed requalification program feedback system, and the remediation process.

The inspector completed one inspection sample.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

1. Quarterly Maintenance Effectiveness Review

a. Inspection Scope

The inspectors reviewed the two maintenance activities listed below to: (1) verify the appropriate handling of structures, systems, and components (SSC) performance or condition problems; (2) verify the appropriate handling of degraded SSC functional performance; (3) evaluate the role of work practices and common cause problems; and (4) evaluate the handling of SSC issues reviewed under the requirements of the maintenance rule; 10 CFR Part 50, Appendix B; and the Technical Specifications (TS).

- Condition Report (CR) CR-RBS-2006-03447, floor and equipment drain system maintenance effectiveness review, reviewed on September 7, 2006

- CR-RBS-2005-02231 and 2006-02337, NNS-ACB23 circuit breaker failures, reviewed on September 23, 2006

Documents reviewed by the inspectors included:

- NUMARC 93-01, Nuclear Energy Institute (NEI) Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants, Revision 2
- Maintenance rule function list
- Maintenance rule performance criteria list
- 4160 Vac System maintenance rule performance evaluations

The inspectors completed two inspection samples.

b. Findings

No findings of significance were identified.

2. Triennial Review

a. Inspection Scope

Periodic Evaluation Reviews

The inspector reviewed the licensee's overall implementation of the Maintenance Rule, 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." The inspector reviewed the scope and depth of the licensee's Maintenance Rule periodic assessment for June 2003 to December 2004. The inspector then assessed the effectiveness of corrective actions and program adjustments as a result of the assessment findings.

The inspector evaluated whether the report contained adequate assessment of the performance of the Maintenance Rule Program as well as conformance with applicable programmatic and regulatory requirements. To accomplish this, the inspector verified that the licensee appropriately and correctly addressed the following attributes in the assessment report:

- Program treatment of nonrisk-significant SSC functions monitored against plant level performance criteria
- Program adjustments made in response to unbalanced reliability and availability
- Application of industry operating experience
- Performance review of Category (a)(1) systems

- Evaluation of the bases for system category status change (e.g., (a)(1) to (a)(2) or (a)(2) to (a)(1))
- Effectiveness of performance and condition monitoring at component, train, system, and plant levels
- Review and adjustment of definitions of functional failures

The inspector selected samples of SSCs within the scope of the licensee's Maintenance Rule program that had degraded performance at some point during the review period. These samples were used to assess the licensee's response to the degraded performance within the scope of the Maintenance Rule program. Inspection Procedure 71111.12B requires that the inspector review four to six SSC samples. The inspector selected the following four samples for a detailed review:

- Standby service water system
- Emergency diesel generators and starting air system
- High pressure core spray system
- Feedwater level control system

For these SSCs, the inspector reviewed the use of performance history and operating experience, both internal and industry wide, in adjusting preventive maintenance, (a)(1) goals, and (a)(2) performance criteria. For structures being monitored through condition monitoring, the inspector reviewed the licensee's performance criteria and condition monitoring procedures to determine whether there was consistency and monitoring of proper attributes which would be predictive of degradation. The inspector also reviewed adjustments to the scope of the Maintenance Rule program and changes made during the assessment period. Finally, the inspector reviewed the role of the Maintenance Rule Expert Panel in implementing the program.

The inspector completed four inspection samples.

b. Findings

Introduction: An unresolved item was identified associated with inadequate corrective actions for safety-related motor-operated butterfly valves (MOV) in the service water system that failed to close completely. The licensee stated that, during performance of Procedure STP-256-6604, "Division II Service Water 2 Year Position Indication Verification Tests," Valve SWP-MOV96B did not indicate fully closed locally. This was documented in CR-RBS-2005-01238, dated March 30, 2005. The licensee stated that the valve stroked approximately 85 degrees versus the expected 90 degrees and exhibited substantial flow noise. The inspector found that there were more failures for similar valves. This issue is unresolved for both significance and enforcement since additional technical review by the NRC was needed to assess this issue.

Description: The inspector reviewed CR-RBS-2005-01238 and noted that Valve SWP-MOV96B failed to close during the service water 2-year verification testing. Valve SWP-MOV96B is a torque seated butterfly valve. The valve is in the safety-related

service water line and its safety function is to close and separate safety-related loads from nonsafety-related loads during an accident to ensure that the safety loads receive sufficient flow. In addition, the inspector noted that the valve failed to close during an as-found dynamic signature test. This valve stroked approximately 85 degrees versus the expected 90 degrees during the test. During this test, the licensee found that the open and close running loads increased from 125 ft. lbs. to approximately 2500 ft. lbs., which required an increase for the close torque switch. The licensee also noted that the as-found running, seating, and unseating loads were greater than the previous as-left test, and the spring pack running loads were greater than the previous as-left test.

The inspector reviewed CR-RBS-2006-02815 and Engineering Request ER-2006-0263-000. The CR, dated July 7, 2006, addressed the failure of Valve E12-MOVF068A, a service water return valve, similar to Valve SWP-MOV96B, which did not fully close during testing. During subsequent testing, the licensee determined that the packing gland follower was binding on the stem due to corrosion. The licensee determined that, even though the valve could not be closed from the control room, it could be closed manually. During Refueling Outage 13, the licensee performed additional testing to determine the generic implications for similar valves (SWP-MOV55A, SWP-MOV96A, SWP-MOV57A/B, and SWP-MOV68B) and identified the onset of the same issue but not the same magnitude. When the inspector reviewed CR-RBS-2006-02815, the inspector noted that Valve SWP-MOV68B had the same packing gland follower design as Valve SWP-MOV96B and was susceptible to the same failure mechanism. In addition, the site has had several MOV failures stroke due to high resistance contacts on the torque switch. The inspector discussed the corrosion build-up with the licensee and noted that the stem was stainless steel and the packing gland follower was carbon steel. When asked what kind of lubricant was used between the stem and the follower, the licensee stated that the valve manufacturer did not recommend a lubricant, and the licensee had not used any lubricant for the past 3 years. The inspector discussed this issue with an NRC MOV expert who wanted to review the MOV testing in order to determine if the MOVs were capable of handling the increase in running loads and determine if the lack of lubrication was acceptable for the MOVs.

In CR-RBS-2006-02825 for corrective actions, the licensee specified conducting troubleshooting to identify the apparent cause and identify any additional corrective actions required to preclude recurrence. The due date for completing this item was September 24, 2006.

Analysis: To date, the licensee had failed to have adequate corrective actions to preclude recurrence of failures of the MOVs discussed above. This issue is potentially more than minor because it potentially could affect the mitigating systems cornerstone objective by causing the safety-related service water system to not supply enough water to support the safety-related systems.

Enforcement: Appendix B to 10 CFR Part 50, Criterion XVI, requires that conditions adverse to quality are promptly identified and corrected. For the case of a significant condition adverse to quality, measures shall be taken to identify the cause of the problem and corrective actions taken to preclude repetition.

Additional review by an NRC MOV expert is needed to determine if lack of lubrication on the packing gland follower to the stem, corrosion between the packing follower and the stem, or higher torque values required to close the valves will have a negative effect on the performance of the MOVs. Therefore, this item will be treated as an unresolved item pending additional review. (Unresolved Item 05000458/2006004-01, Corrective actions to prevent repetitive failures of safety-related service water MOVs to close)

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

.1 Risk Assessment and Management of Risk

The inspectors reviewed the planned work weeks listed below to verify: (1) performance of risk assessments when required by 10 CFR 50.65 (a)(4) and administrative Procedure ADM-096, "Risk Management Program Implementation and On-Line Maintenance Risk Assessment," Revision 04B, prior to changes in plant configuration for maintenance activities and plant operations; (2) the accuracy, adequacy, and completeness of the information considered in the risk assessment; (3) that the licensee recognized and/or entered, as applicable, the appropriate licensee established risk category according to the risk assessment results and licensee procedures; and (4) that the licensee identified and corrected problems related to maintenance risk assessments. Specific work activities evaluated included planned and emergent work for the weeks of:

- July 24, 2006, replace Division II Standby Cooling Tower Fans local operating switches
- September 4, 2006, degradation and repair efforts on Service Water Cooling Tower
- September 25, 2006, switchyard breaker work and Division I EDG outage

.2 Emergent Work Control

On September 13, 2006, following a trip of Service Water Cooling Fan 1A during repairs to other cooling tower cells, the inspectors: (1) verified that the licensee performed actions to minimize the probability of initiating events and maintained the functional capability of mitigating systems and barrier integrity systems; (2) verified that emergent work-related activities such as troubleshooting, work planning/scheduling, establishing plant conditions, aligning equipment, tagging, temporary modifications, and equipment restoration did not place the plant in an unacceptable configuration; and (3) reviewed the CAP to determine if the licensee identified and corrected risk assessment and emergent work control problems.

Documents reviewed by the inspectors included:

- Calculation G13.18.6.0-11, "Service Water Cooling Tower Fan Control Setpoints," Revision 1

- Calculation G13.18.4.6-002, "Normal Service Water System Heat Loads," Revision 4
- CR-RBS-2006-03376, Service Water Cooling Tower Cell D degraded
- Operational Decision Making Issues Plan, "Degradation of Service Water Cooling Tower Basin/Loss of Service Water Cooling," Revision 0

The inspectors completed four inspection samples.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

For the operability evaluations associated with the documents listed below, the inspectors: (1) reviewed plants status documents, such as operator shift logs, emergent work documentation, deferred modifications, and standing orders, to determine if an operability evaluation was warranted for degraded components; (2) referred to the USAR and design basis documents to review the technical adequacy of licensee operability evaluations; (3) evaluated compensatory measures associated with operability evaluations; (4) determined degraded component impact on any TS; (5) used the significance determination process to evaluate the risk significance of degraded or inoperable equipment; and (6) verified that the licensee has identified and implemented appropriate corrective actions associated with degraded components. The licensee operability evaluations were documented in the following CRs:

- CR-RBS-2006-03552, Conduit cover missing on Standby Cooling Tower Switchgear Fan C, reviewed on September 5, 2006
- CR-RBS-2006-02854, Standby gas treatment system Train A heater failure, reviewed on September 27, 2006
- CR-RBS-2006-03777, Containment purge damper leakage test failure, reviewed on September 28, 2006

Other documents reviewed by the inspectors included: Nuclear Management Manual Procedure EN-OP-104, "Operability Determinations," Revision 01.

The inspectors completed three inspection samples.

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing

a. Inspection Scope

For the seven postmaintenance test activities of risk significant systems or components listed below, the inspectors: (1) reviewed the applicable licensing basis and/or design-basis documents to determine the safety functions; (2) evaluated the safety functions that may have been affected by the maintenance activity; and (3) reviewed the test procedure to verify that it adequately tested the safety function that may have been affected. The inspectors either witnessed or reviewed test data to verify that acceptance criteria were met, plant impacts were evaluated, test equipment was calibrated, procedures were followed, jumpers were properly controlled, the test data results were complete and accurate, the test equipment was removed, the system was properly realigned, and deficiencies during testing were documented. The inspectors also reviewed the CAP to determine if the licensee identified and corrected problems related to postmaintenance testing. The postmaintenance testing was part of the following WOs:

- WO 51030374, replace turbine bypass valve (TBV) hydraulic system Filter C85-FLT2B cartridge, June 15, 2006
- WO 00084893 and WO 00084894, replace standby cooling tower fan local control switches, July 25 and August 3, 2006
- WO 00092484, replace Division I EDG voltage regulator motor-operated potentiometer, August 2, 2006
- WO 50985902, electrical postmaintenance test on CCP-MOV-169, August 23, 2006
- WO 00083797, repair valve seat leakage for primary containment purge exhaust line Valves HVR-AOV128 and HVR-AOV166, reviewed during the week of September 25, 2006
- WO 00080928, Division I EDG governor replacement, September 26, 2006
- WO 51044081, inspection of Division I EDG air start check Valve EGA-V102, September 27, 2006

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed seven inspection samples.

b. Findings

Introduction: A self-revealing finding of very low safety significance (Green) was reviewed involving an inadequate procedure for conducting maintenance on the TBV hydraulic system filter cartridge. This resulted in the improper reassembly of the fullers

earth filter. The resultant hydraulic oil leak caused the TBVs to be inoperable, and a power reduction to less than 23.8 percent power was required to meet TS requirements.

Description: On June 15, 2006, maintenance personnel replaced the TBV hydraulic system filter cartridge as part of a planned maintenance activity. The operational leak test performed when the filter was returned to service did not reveal any leaks from the filter canister. Six hours later, during normal rounds, operators discovered a leak from the filter canister cover seal gasket. Level in the hydraulic system reservoir was not visible on the local sight glass, so the hydraulic system pumps were secured. This caused the TBVs to be inoperable.

Operators entered TS 3.7.5, "Main Turbine Bypass System," Condition A, which required restoration of the TBVs to service within 2 hours. Because of the large amount of hydraulic fluid lost and the time it would take to refill the system reservoir, operators entered TS 3.7.5, Condition B, which required them to reduce thermal power to less than 23.8 percent in the next 4 hours. The fullers earth filter subsystem was removed from service, the TBV hydraulic system was refilled, and the plant was returned to 100 percent power on June 18, 2006.

The inspectors reviewed the repetitive task work instructions for the filter cartridge replacement in WO 51039374 and interviewed the maintenance technicians who performed the work and another technician who had successfully performed the same task 6 months earlier. The inspectors determined that the instructions in the WO were not specific enough to ensure the cover gasket was installed properly, specifically there was no guidance to ensure the gasket was visible around the entire sealing surface before returning the filter to service. Additionally, the task for the postmaintenance operational leak test was assigned to the maintenance technicians, yet none were present when the system was returned to service. The inspectors interviewed and walked through the process of returning the filter subsystem to service with the operator assigned the task on June 15, 2006. The inspectors determined that the directions given to return the filter subsystem to service and perform the operational leak test were insufficient to ensure an adequate test.

Analysis: The performance deficiency associated with this finding was the failure to provide adequate instructions for reassembly of the TBV hydraulic system filter cartridge to ensure that the cover gasket was properly installed and the failure to perform an adequate operational leak test of the system. The finding was more than minor because it was associated with the mitigating systems cornerstone attribute of equipment performance. The finding affected the associated cornerstone objective to ensure the availability and reliability of a system that responds to initiating events to prevent undesirable consequences. The Phase 1 worksheets in Inspection Manual Chapter (MC) 0609, "Significance Determination Process," were used to conclude that a Phase 2 analysis was required because both the mitigating systems cornerstone and the fuel barrier integrity cornerstone were affected. According to TS 3.7.5 bases, the main turbine bypass system is required to be operable with reactor power greater than 23.8 percent to ensure the fuel cladding integrity safety limits are not violated during a feedwater controller maximum demand event. The inspectors performed a Phase 2 analysis using MC 0609, Appendix A, "Determining the Significance of Reactor

Inspection Findings for At-Power Situations,” and the Phase 2 worksheets in the “Risk Informed Inspection Notebook for River Bend Station.” The inspectors assumed that the TBVs were unavailable for less than 12 hours. The dominant core damage sequences included the following:

- Transient - Power Conversion System (PCS) - Reactor Core Isolation Cooling - High Pressure Core Spray - Depressurization
- Loss of Division I Vital dc - PCS - Containment Heat Removal - Backup Containment Heat Removal
- Loss of Division II Vital dc - PCS - Containment Heat Removal - Backup Containment Heat Removal

Based on the results of the Phase 2 analysis, the finding was determined to have very low safety significance. The cause of the finding was related to the crosscutting element of human performance in that the licensee failed to provide complete, accurate, up-to-date instructions in the maintenance work package to change the hydraulic oil filter cartridge. Because this finding does not involve a violation of regulatory requirements and has very low safety significance, it was identified as Finding FIN 05000458/2006004-02, “Inadequate procedure for reassembly of the turbine bypass valve hydraulic system filter cartridge.”

Enforcement: Enforcement action does not apply because the performance deficiency did not involve a violation of regulatory requirements.

1R22 Surveillance Testing

a. Inspection Scope

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

- STP-000-0201, “Power Distribution Alignment Check,” Revision 04, performed on July 25, 2006

- STP-208-6301, "Division I MSIV Leakage Control Quarterly Valve Operability Test," Revision 4, (inservice test program surveillance) performed on August 28, 2006
- STP-309-0203, "Division 3 Diesel Generator Operability Test," Revision 26A, performed on September 6, 2006
- STP-050-3700, "Reactivity Anomalies," Revision 19, performed on September 14, 2006

The inspectors completed four inspection samples.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed the USAR, plant drawings, procedure requirements, and TS to ensure that the temporary modifications listed below were properly implemented. The inspectors: (1) verified that the modifications did not have an affect on system operability/availability; (2) verified that the installation was consistent with modification documents; (3) ensured that the postinstallation test results were satisfactory and that the impact of the temporary modifications on permanently installed SSCs were supported by the test; (4) verified that the modifications were identified on control room drawings and that appropriate identification tags were placed on the affected drawings; and (5) verified that appropriate safety evaluations were completed. The inspectors verified that the licensee identified and implemented any needed corrective actions associated with temporary modifications.

- Temporary Alteration TA 06-0017-00, Temporary power for the Diesel Driven fire Water Pumps during NJS-LDC1K bus outage, reviewed during the week of July 24, 2006
- Temporary Alteration TA 06-0019-00, Temporary shoring below fill support system of the service water cooling tower Cell A, reviewed during the week of September 4, 2006

The inspectors completed two inspection samples.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP1 Exercise Evaluation

a. Inspection Scope

The inspectors reviewed the objectives and scenario for the 2006 biennial emergency plan exercise to determine if the exercise would acceptably test major elements of the emergency plan. The scenario simulated multiple equipment failures resulting in loss of high and low pressure injection sources to the reactor pressure vessel. The scenario continued with a failure of the manual scram system, a main steam line rupture with a failure to isolate, and a subsequent loss of cooling to the reactor resulting in a loss of all fission product barriers. These events resulted in a radiological release to the environment and enabled the licensee to demonstrate their capability to implement the emergency plan.

The inspectors evaluated exercise performance by focusing on the risk-significant activities of event classification, offsite notification, recognition of offsite dose consequences, and development of protective action recommendations in the simulator control room and the following dedicated emergency response facilities:

- Technical Support Center
- Operations Support Center
- Emergency Operations Facility

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, onsite and offsite communications, protection of emergency workers, 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 and emergency plan implementing procedures associated with operation of the above facilities and performance of the associated emergency functions. These procedures are listed in the attachment to this report.

The inspectors compared the observed exercise performance to the requirements in the facility emergency plan; 10 CFR 50.47(b); 10 CFR Part 50, Appendix E; and the guidance in the emergency plan implementing procedures and other federal guidance.

The inspectors attended the postexercise critiques in each of the above facilities to evaluate the initial licensee self-assessment of exercise performance. The inspectors also attended a subsequent formal presentation of critique items to plant management.

The inspectors completed one inspection sample.

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level and Emergency Plan Changes

a. Inspection Scope

The inspector performed an in-office review of Revisions 29 and 30 to the Emergency Plan submitted in December 2005 and August 2006, respectively, and Revision 13 to Emergency Plan Implementing Procedure 2-001, "Classification of Emergencies," submitted December 2005. These revisions implemented the enhancements described in NRC Bulletin 2005-002, "Emergency Preparedness and Response Actions for Security-Based Events," added an emergency action level for independent spent fuel storage installation emergencies, and made several administrative changes and corrections.

These revisions were compared to the previous revision(s), 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; NEI 99-01, "Methodology for Development of Emergency Action Levels," Revision 4; and the standards in 10 CFR 50.47(b) to determine if the revisions were adequately conducted following the requirements of 10 CFR 50.54(q). This review was not documented in a safety evaluation report and did not constitute approval of licensee changes; therefore, these revisions are subject to future inspection.

The inspectors completed three inspection samples.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation

a. Inspection Scope

For the simulator-based training evolution listed below which contributed to Drill/Exercise Performance and Emergency Response Organization Performance Indicators (PI), the inspectors: (1) observed the operations training evaluation to identify any weaknesses and deficiencies in classification, notification, and Protective Action Requirements development activities; (2) compared the identified weaknesses and deficiencies against licensee identified findings to determine whether the licensee is properly identifying failures; and (3) determined whether licensee performance was in accordance with the guidance of the NEI 99-02, "Voluntary Submission of Performance Indicator Data," Revision 2, acceptance criteria.

- September 13, 2006, RSMS-OPS-816, Moisture Separator Reheater High Level, Turbine Trip, ATWS, Revision 01

Documents reviewed by the inspectors included:

- EIP-2-001, "Classification of Emergencies," Revision 14

- EIP-2-006, "Notifications," Revision 32

The inspectors completed one inspection sample.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control to Radiologically Significant Areas

a. Inspection Scope

This area was inspected to assess the licensee's performance in implementing physical and administrative controls for airborne radioactivity areas, radiation areas, high radiation areas, and worker adherence to these controls. The inspector used the requirements in 10 CFR Part 20, the TSs, and the licensee's procedures required by TSs as criteria for determining compliance. During the inspection, the inspector interviewed the radiation protection manager, radiation protection supervisors, and radiation workers. The inspector reviewed the following items:

- PI events and associated documentation packages reported by the licensee in the Occupational Radiation Safety Cornerstone
- Controls (surveys, posting, and barricades) of three radiation, high radiation, or airborne radioactivity areas
- Radiation work permits (RWPs), procedures, engineering controls, and air sampler locations
- Adequacy of the licensee's internal dose assessment for any actual internal exposure greater than 50 millirem Committed Effective Dose Equivalent
- Self-assessments, audits, licensee event reports, and special reports related to the access control program since the last inspection
- Corrective action documents related to access controls
- Licensee actions in cases of repetitive deficiencies or significant individual deficiencies
- RWP briefings and worker instructions
- Adequacy of radiological controls such as, required surveys, radiation protection job coverage, and contamination controls during job performance
- Radiation worker and radiation protection technician performance with respect to radiation protection work requirements

The inspector also reviewed the circumstances associated with an inclined fuel transfer system contamination event that occurred on January 26, 2006. The event occurred during a scaffolding modification activity and revealed itself when workers alarmed the personnel contamination monitors as they attempted to exit the controlled access area. The licensee conducted whole body counts for the two workers to determine the dose consequences. Dose estimates indicated that the highest individual committed effective dose equivalent was 70 millirems. The inspector interviewed staff and other personnel to determine the facts associated with the event.

The inspector completed 14 of the required 21 samples.

b. Findings

- .1 Introduction: The inspector reviewed a self-revealing, noncited violation of TS 5.4.1, resulting from workers' failure to follow RWP requirements. The violation had very low safety significance (Green).

Description: On January 26, 2006, two workers performing a scaffolding modification in the inclined fuel transfer system canal became externally and internally contaminated. As the workers were exiting the controlled access area, they alarmed the personnel contamination monitors. This alerted the licensee to a problem and the individuals were surveyed and decontaminated. Because both individuals yielded positive nasal smears and repeatedly alarmed the personnel contamination monitors, the workers were sent for whole-body counts. Based upon the whole-body count results, the licensee assigned a committed effective dose equivalent of 30 millirem to one worker and 70 millirem to the other.

The licensee performed a root cause analysis and determined the workers did not inform radiation protection personnel that they would be lowering the scaffolding 3 feet below surveyed areas and contamination control devices. Consequently, the workers were in radiological conditions not bounded by the RWP. Radiation protection personnel surveyed this area after the personnel contamination event and identified beta-gamma contamination levels of up to 90 millirad per hour per 100 square centimeters. Another result of the workers going beyond what was allowed by the RWP is that as low as is reasonably achievable (ALARA) planners did not have a chance to conduct a total effective dose equivalent as low as is reasonably achievable review to determine if respiratory protection was necessary.

Analysis: The failure to follow RWP requirements is a performance deficiency. This finding is greater than minor because it is associated with one of the cornerstone attributes (exposure/contamination control) and affects the Occupational Radiation Safety cornerstone objective in that the failure to follow RWP instructions resulted in additional personnel exposure. This finding could also be reasonably viewed as a precursor to a significant event, such as a personnel overexposure, had contamination levels been higher. Using the Occupational Radiation Safety Significance Determination Process, the inspector determined that this finding was of very low safety significance because it did not involve: (1) an ALARA finding, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess doses. Additionally, this finding has a crosscutting aspect in the area of human performance because the workers failed to use error prevention tools, such as self- and peer-checking.

Enforcement: TS 5.4.1 requires that procedures listed in Regulatory Guide 1.33, Appendix A, be established, implemented, and maintained. Section 7e. lists procedures for access control to radiation areas, including an RWP system. Procedure EN-RP-105, "Radiation Work Permits," Revision 0, implemented this requirement and stated, in part, that radiation workers are responsible for reviewing the RWP and complying with the requirements. RWP 2006-1052, Revision 1, stated, in part, that this RWP was to allow for the installation of the scaffolding with radiation protection surveying after the initial installation to determine if additional changes were required to the RWP. The work plan was to assemble the scaffolding at the fuel building 113' elevation and lower it into the transfer canal. No entries into the transfer canal were to be made until radiation protection performed a survey. However, the two workers violated this requirement when they entered the transfer canal after the initial installation to modify the scaffolding prior to the survey. Because this finding is of very low safety significance and has been entered into the licensee's CAP as CR-RBS-2006-0326, this violation is being treated as a Notice of Violation (NCV), consistent with Section VI.A of the NRC Enforcement Policy: NCV 05000458/2006004-03, Failure to follow radiation work permit requirements.

- .2 Introduction: The inspector reviewed a self-revealing, noncited violation of 10 CFR 20.1501(a) resulting from the licensee's failure to representatively measure the airborne radioactivity where personnel worked. The violation had very low safety significance (Green).

Description: The licensee's review of the January 26, 2006, contamination event identified the air sample taken to support the work activity was positioned above the high-efficiency particulate air hose suction in an air flow area above the actual work area. This meant that the air sample was not representative of the workers' actual work area. In addition, the radiation protection technician providing continuous job coverage failed to identify the deficiency and adjust the position of the air sampler.

Analysis: The failure to evaluate the potential radiological hazards associated with airborne radioactivity is a performance deficiency. This finding is greater than minor because it is associated with one of the cornerstone attributes (exposure control) and affects the Occupational Radiation Safety cornerstone objective in that an inadequate evaluation of the hazards could lead to inadequate radiation protection and dose saving measures. This finding could also be reasonably viewed as a precursor to a significant event, such as a personnel overexposure, had contamination levels been higher. Using the Occupational Radiation Safety Significance Determination Process, the inspector determined that this finding was of very low safety significance because it did not involve: (1) an ALARA finding, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess doses. Additionally, this finding has a crosscutting aspect in the area of human performance because radiation protection personnel failed to use error prevention tools such as self- and peer-checking.

Enforcement: Part 20.1501(a) of Title 10 CFR 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. Part 20.1201(a) of Title 10 CFR states, in part, that the licensee shall control the occupational dose to individual adults to specified limits. The licensee violated these requirements when it failed to evaluate the potential radiological hazard associated with airborne radioactivity during work conducted on January 26, 2006. Because this finding is of very low safety significance and has been entered into the licensee's CAP as CR-RBS-2006-0326, this violation is being treated as an NCV, consistent with Section VI.A of the NRC Enforcement Policy: NCV 05000458/2006004-04, Failure to evaluate radiological conditions.

- .3 Introduction: The inspector identified a noncited violation of 10 CFR 20.1501(a), resulting from the licensee's use of an inadequate alpha contamination survey technique. The violation had very low safety significance (Green).

Description: The licensee analyzed 10 percent of its surveys for the presence of alpha contamination. To do this, the licensee used an alpha scintillation counter (Eberline SAC-4). However, the inspector determined that the licensee's procedure for the use of this device established a screening limit that did not allow sufficient sample activity for the discovery of alpha emitting radionuclides. Procedure RP-304, "Operation of Counting Equipment," Revision 2, Appendix 9.2, Section 2.1.1, provided guidance on the use of the SAC-4 and stated, "Do not intentionally count samples (smears or air samples) which exceed 10K counts per minute (cpm) beta-gamma without RP supervisor approval." Assuming a typical 10 percent beta-gamma counting efficiency, 10,000 cpm equals 100,000 disintegrations per minute (dpm). Procedure RP-304, Attachment 9.2, Section 3.1.5.4, stated, "Ensure a minimum detectable activity (MDA) of less than 20 dpm alpha." According to the licensee's statements and instrument records, a typical MDA for the licensee's SAC-4 instruments was 12-14 dpm. Using this information, the inspector calculated that this survey technique could only work if the facility's beta-gamma to alpha ratio was no greater 8,333 to 1 (100,000 dpm beta-gamma maximum smear activity divided by 12 dpm or the MDA for alpha contamination). Licensee representatives acknowledged that the beta-gamma to alpha ratio was higher than 8333 to 1 and that there was no technical basis for the 10,000 cpm limit. Therefore, the inspector concluded that surveys using this technique could not identify alpha contamination and were inadequate. As a corrective action, the licensee adapted the corporate procedural guidance, which raised the maximum sample activity to 50,000 cpm (or 500,000 dpm).

Analysis: The failure to use a viable alpha contamination survey technique is a performance deficiency. This finding is greater than minor because it is associated with one of the cornerstone attributes (exposure control) and affects the Occupational Radiation Safety cornerstone objective in that an inadequate evaluation of the hazards could lead to inadequate radiation protection and dose saving measures. This finding could also be reasonably viewed as a precursor to a significant event, such as a personnel overexposure, had contamination levels been higher. Using the Occupational Radiation Safety Significance Determination Process, the inspector determined that this finding was of very low safety significance because it did not involve: (1) an ALARA finding, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess doses. Additionally, this finding has a crosscutting aspect in the area of human performance because the licensee used procedures that were inadequate to ensure that alpha contamination was identified.

Enforcement: Part 20.1501(a) of Title 10 CFR 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 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. Part 20.1201(a) of Title 10 CFR states, in part, that the licensee shall control the occupational dose to individual adults to specified limits. The licensee violated these requirements when it failed to use a viable alpha contamination survey technique. Because this finding is of very low safety significance and has been entered into the licensee’s CAP as CR-RBS-2006-2932, this violation is being treated as an NCV, consistent with Section VI.A of the NRC Enforcement Policy: NCV 05000458/2006004-05, NRC identified failure to evaluate radiological conditions.

2OS2 ALARA Planning and Controls

a. Inspection Scope

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

- Current 3-year rolling average collective exposure
- Ten work activities from previous work history data which resulted in the highest personnel collective exposures
- Site-specific trends in collective exposures, plant historical data, and source-term measurements
- Site-specific ALARA procedures
- Five work activities of highest exposure significance completed during the last outage
- ALARA work activity evaluations, exposure estimates, and exposure mitigation requirements
- Intended versus actual work activity doses and the reasons for any inconsistencies
- Integration of ALARA requirements into work procedure and radiation work permit (or radiation exposure permit) documents
- Person-hour estimates provided by maintenance planning and other groups to the radiation protection group with the actual work activity time requirements
- Dose rate reduction activities in work planning

- Postjob (work activity) reviews
- Assumptions and basis for the current annual collective exposure estimate, the methodology for estimating work activity exposures, the intended dose outcome, and the accuracy of dose rate and man-hour estimates
- Method for adjusting exposure estimates, or replanning work, when unexpected changes in scope or emergent work were encountered
- Exposures of individuals from selected work groups
- Declared pregnant workers during the current assessment period, monitoring controls, and the exposure results
- Self-assessments, audits, and special reports related to the ALARA program since the last inspection
- Resolution through the CAP process of problems identified through postjob reviews and postoutage ALARA report critiques
- Corrective action documents related to the ALARA program and follow-up activities, such as initial problem identification, characterization, and tracking

The inspector completed 11 of the required 15 samples and 7 of the optional samples.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification

a. Inspection Scope

1. Mitigating Systems Cornerstone

The inspectors sampled licensee submittals for the Mitigating System PI, MS05, "Safety System Functional Failures," for the period January 2005 through June 30, 2006. The definitions and guidance of Nuclear Energy Institute 99-02, "Regulatory Assessment Indicator Guideline," Revision 4, and licensee PI Procedure EPP-2-703, "Performance Indicators," Revision 2, were used to verify the licensee's basis for reporting each data element in order to verify the accuracy of PI data reported during the assessment period. The inspectors reviewed licensee event reports, CRs and operator logs as part of the assessment.

The inspectors completed one inspection sample.

2. Emergency Preparedness Cornerstone

The inspectors reviewed licensee evaluations for the PIs listed below for the period from October 1, 2005, through June 30, 2006. To verify the accuracy of the PI data reported during that period, PI definitions and guidance contained in Nuclear Energy Institute 99-02, "Regulatory Assessment Indicator Guideline," Revisions 3 and 4, and licensee Performance Indicator Procedure EPP-2-703, "Performance Indicators," Revision 2, were used to verify the basis in reporting for each data element.

- Drill/Exercise Performance
- Emergency Response Organization Drill Participation
- Alert and Notification System Reliability

The inspectors reviewed a sample of drill and exercise scenarios, licensed operator simulator training sessions, notification forms, and attendance and critique records associated with training sessions, drills, and exercises conducted during the verification period. The inspectors reviewed the qualification, training, and drill participation records for selected emergency responders. The inspectors reviewed alert and notification system maintenance records and procedures and a 100 percent sample of siren test results. The inspectors also interviewed licensee personnel that were responsible for collecting and evaluating the PI data.

The inspectors completed three inspection samples.

3. Occupational Radiation Safety Cornerstone

Occupational Exposure Control Effectiveness

The inspector reviewed licensee documents from April 1 through June 30, 2006. The review included corrective action documentation that identified occurrences in locked high radiation areas (as defined in the licensee's TSs), very high radiation areas (as defined in 10 CFR 20.1003), and unplanned personnel exposures (as defined in NEI 99-02). Additional records reviewed included ALARA records and whole-body counts of selected individual exposures. The inspector interviewed licensee personnel that were accountable for collecting and evaluating the PI data. In addition, the inspector toured plant areas to verify that high radiation, locked high radiation, and very high radiation areas were properly controlled. PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Indicator Guideline," Revision 3, were used to verify the basis in reporting for each data element.

The inspector completed one inspection sample.

4. Public Radiation Safety Cornerstone

Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual Radiological Effluent Occurrences

The inspector reviewed licensee documents from April 1 through June 30, 2006. Licensee records reviewed included corrective action documentation that identified occurrences for liquid or gaseous effluent releases that exceeded PI thresholds and those reported to the NRC. The inspector interviewed licensee personnel that were

accountable for collecting and evaluating the PI data. PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Indicator Guideline," Revision 3, were used to verify the basis in reporting for each data element.

The inspector completed one inspection sample.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

.1 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

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

The inspectors completed one inspection sample.

.2 Selected Issue Follow-up Inspection

a. Inspection Scope

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

- CR-RBS02006-03777, Continuing adverse leak rate trend in containment purge valve leak rate resulting in a nonconforming condition

Other CRs reviewed during this assessment included:

CR-RBS-2006-00964
CR-RBS-2006-01269

CR-RBS-2006-01207
CR-RBS-2006-03777

CR-RBS-2006-01215

Other documents reviewed by the inspectors are listed in the attachment.

The inspectors completed one inspection sample.

.3 Maintenance Rule

a. Inspection Scope

The inspectors evaluated the use of the CAP within the Maintenance Rule program. The review was accomplished by the examination of a sample of corrective action documents and WOs. The purpose of the review was to determine that the identification of problems and implementation of corrective actions were acceptable. The CRs reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

.4 Access Control

a. Inspection Scope

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

- Access Control to Radiologically Significant Areas (Section 2OS1)
- ALARA Planning and Controls (Section 2OS2)

b. Findings

No findings of significance were identified.

4OA5 Other Activities

Licensee Strike Contingency Plan (MC 92709)

a. Inspection Scope

Beginning June 26, 2006, the inspectors reviewed the licensee's contingency plans put in place prior to the expiration of the labor contract for operations, maintenance, radiation protection, chemistry, and other support personnel. The inspectors: (1) attended the onsite safety review committee meeting for the review and approval of the site contingency plan, (2) determined the operability and availability of equipment and facilities called for in the contingency plan, (3) determined that the licensee could meet the minimum staffing requirements for operations and emergency response personnel, (4) reviewed (by sampling) qualifications of personnel designated to assume licensed and nonlicensed operator duties, (5) verified that assigned management personnel were aware of their functional responsibilities under the modified staffing plan, (6) reviewed the contingency plans for local law enforcement agencies' support of plant operations, and (7) reviewed (by sampling) the qualifications of personnel available to implement the emergency plan.

b. Findings

No findings of significance were identified.

40A6 Meetings, Including Exit

Exit Meetings

On August 17, 2006, the lead inspector presented the Emergency Preparedness Exercise inspection results to Mr. P. Hinnenkamp, Vice President, Operations, and other members of his staff. On August 29, 2006, the lead inspector presented the results of the emergency plan change review inspection to Mr. J. Leavines, Manager, Emergency Preparedness. The inspector confirmed that proprietary information was not provided or examined during the inspection.

On August 24, 2006, the inspector debriefed the operator requalification program inspection results with Mr. Don Vinci, General Plant Manager, Operations and members of the licensee's staff. A telephone exit was held with Mr. Jay Miller on September 28, 2006. The licensee acknowledged the findings presented in both the briefing and final exit meeting. The inspector confirmed that proprietary information was not provided or examined during the inspection.

On September 27, 2006, the inspector presented the maintenance effectiveness inspection results to Mr. D. Vinci, General Manager, Plant Operations, and other members of licensee management at the conclusion of the onsite inspection. The inspector confirmed that proprietary information was not provided or examined during the inspection.

On October 4, 2006, the inspector presented the occupational radiation safety inspection results to Mr. P. Hinnenkamp, Vice President of Operations, and other members of his staff who acknowledged the findings. The inspector confirmed that proprietary information was not provided or examined during the inspection.

On October 4, 2006, the inspectors presented the integrated baseline inspection results to Mr. P. Hinnenkamp, Vice President, Operations, and other members of his staff. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

T. Baccus, Supervisor, Radiation Protection
L. Ballard, Manager, Quality Programs
D. Burnett, Superintendent, Chemistry
C. Bush, Manager, Outage
J. Clark, Assistant Operations Manager - Training
T. Coleman, Manager, Planning and Scheduling/Outage
M. Davis, Manager, Radiation Protection
C. Forpahl, Manager, Corrective Action Program
T. Gates, Manager, Equipment Reliability
H. Goodman, Director, Engineering
D. Heath, Supervisor, Radiation Protection
G. Hendl, Engineer, Maintenance Rule Coordinator
K. Higginbotham, Assistant Operations Manager - Shift
P. Hinnenkamp, Vice President - Operations
B. Houston, Manager, Plant Maintenance
A. James, Superintendent, Plant Security
N. Johnson, Manager, Engineering Programs & Components
R. King, Director, Nuclear Safety Assurance
J. Leavines, Manager, Emergency Planning
D. Lorfing, Manager, Licensing
J. Maher, Superintendent, Reactor Engineering
W. Mashburn, Manager, Design Engineering
J. Miller, Manager, Training and Development
P. Russell, Manager, System Engineering
C. Stafford, Manager, Operations
D. Vinci, General Manager - Plant Operations

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000458/2006004-01	URI	Corrective actions to prevent repetitive failures of safety-related service water motor-operated valves to close
---------------------	-----	--

Opened and Closed

05000458/2006004-02	FIN	Inadequate procedure for reassembly of the turbine bypass valve hydraulic system filter cartridge
05000458/2006004-03	NCV	Failure to follow radiation work permit requirements
05000458/2006004-04	NCV	Failure to evaluate radiological conditions
05000458/2006004-05	NCV	Failure to evaluate radiological conditions

LIST OF DOCUMENTS REVIEWED

The following documents were selected and reviewed by the inspectors to accomplish the objectives and scope of the inspection and to support any findings:

Section 1R04: Equipment Alignment

SOP-0042, "Standby Service Water System," Revision 25
AOP-0053, "Initiation of Standby Service Water," Revision 8
SOP-0031, "Residual Heat Removal System," Revision 47C
SOP-0053, "Standby Diesel Generator and Auxiliaries," Revision 301
PID-08-09A, "System 309 Diesel Generator," Revision 13
PID-08-09B, "System 309 Diesel Generator," Revision 18
PID-08-09C, "System 309 Diesel Generator," Revision 14
CR-RBS-2005-04244
CR-RBS-2006-00298
CR-RBS-2006-01788
CR-RBS-2006-02186
CR-RBS-2006-03430
CR-RBS-2006-03631

Section 1R11: Licensed Operator Requalification Program

LORT training advisory committee meeting minutes for last year (3 quarters)

Operations training review group minutes for 2006-01 and 2006-02 sessions

Simulator open DR list (31)

Detailed package review of DR 05-0162 for RPV level, pressure, and core flow issues with main turbine trip

Two-year training plan for current requal cycle – Jan. 2005 - Dec. 2006, Rev. 4, July 2006

LaSalle ATWS OE training package RSMS-OPS-613, SAE event

Simulator transient test, "Simultaneous closure of all MSIV's"

Simulator transient test, "Manual reactor scram from 100% power"

Simulator Configuration Control Document EN-TQ-202

ANSI-3.4, Medical Certification and Monitoring

Team training cycle reports for Modules 9 and 10

Two simulator scenarios observed

Five JPMs observed, including 3 in-plant

Scenario RSMS-OPS-816, Revision 1, "MSR High Level/ Turbine Trip/ ATWS"

Scenario RSMS-OPS-800, Revision 1, "Loss of All Feedwater/DBA LOCA"

JPMs

RJPM-OPS-700-11, Revision 2, "Align IAS Diesel Air Compressor Backup to SVV Header"

RJPM-OPS-800-11, Revision 1, "Vent the SCRAM Air Header per EOP-005; Enclosure 11, Venting Air Header"

RJPM-OPS-053-06, Revision 2, "Trip and Isolate Recirculation Pump B due to a Seal Failure"

RJPM-OPS-205-03, Revision 2; "Manually Start LPCS-Suppression Pool"

RJPM-OPS-800-37, Revision 0, "Bypass Drywell Cooling Isolation Interlocks"

Section 1R12: Maintenance Effectiveness

Condition Reports

CR-RBS-2002-01878
CR-RBS-2004-00011
CR-RBS-2004-00174
CR-RBS-2004-00389
CR-RBS-2004-04338
CR-RBS-2005-00923
CR-RBS-2005-01238
CR-RBS-2005-02387
CR-RBS-2005-02727
CR-RBS-2005-04242
CR-RBS-2006-01045

CR-RBS-2006-01093
CR-RBS-2006-01898
CR-RBS-2006-02460
CR-RBS-2006-02550
CR-RBS-2006-02575
CR-RBS-2006-02705
CR-RBS-2006-02741
CR-RBS-2006-02798
CR-RBS-2006-02799
CR-RBS-2006-02815

Work Orders

00030232 50359194 06479901

Engineering Requests

ER-RB-2002-0431-000, "Increase of SBCT Basin Minimum Water Level," Revision 0

ER-RB-2003-0587-000, "Increase the Design Margin of E22-PC001 to Reduce the Number of Test Failures and Facilitate Trending," Revision 0

Procedures

R-STM-0118.10, "Nuclear Training Department Service Water Systems Training Manual," dated December 07, 2005

STP-309-6304, "Division 1EDG Forward Bank Air Start System Quarterly Valve Operability Test," Revision 12

ENS-DC-121, "Maintenance Rule," Revision 4

PMP-1205, "SB/SMB Actuators Routine Maintenance," Revision 18

Calculations

PM-194, "Standby Cooling Tower Performance and Evaporation Losses Without Drywell Unit Coolers," Revision 7

Drawings

PID-09-10B, "Engineering P&I Diagram system 118 Service Water Normal," Revision 41

Miscellaneous

High pressure core spray system report card for first quarter 2006

Feedwater level control system report card for first quarter 2006

Diesel generators and auxiliaries system report for first quarter 2006

System performance improvement plan for the diesel generators and auxiliaries, dated March 31, 2006

CR 05-2515, "Common Cause Analysis Report Standby Service Water Initiation Adverse Trend," dated August 16, 2005

RBS-SE-06-00001, "Maintenance Rule Periodic Assessment 2004 for June 2003 to December 2004," dated April 13, 2006

Maintenance Rule Self-Assessment from March 6-10, 2006

Standby service water system performance improvement plan, dated July 6, 2006

Section 1R15: Operability Evaluations

Potential TS Tracking Record 1-PTS-06-0587, Division I EDG rear starting air system degraded

ESK-07GTS03, "Standby Gas Treatment Exhaust Fan 1B," Revision 14

STP-257-0201, "Standby Gas Treatment Filter Train A Monthly Operability Test," Revision 18

STP-403-7301, "Containment Purge System Isolation Valve Leak Rate Test," Revision 2

ER-RB-2006-0209-00, "Address Delay of Step Loading Standby Gas Treatment Fan During ECCS Testing," Revision 0

SEP-APJ-001, "Primary Containment Leakage Rate Testing Program," Revision 0

WO 86709, Standby gas treatment Fan 1B ECCS testing failure

WO 91025, Standby gas treatment Train A heater failure

CR-RBS-2005-00035
CR-RBS-2006-01592
CR-RBS-2006-00964
CR-RBS-2006-01207
CR-RBS-2006-01215

Section 1R19: Postmaintenance Testing

TS 3.7.5, "Main Turbine Bypass System"

USAR Section 10.4.4, "Turbine Bypass System"

STP-309-0201, "Division 1 Diesel Generator Operability Test," Revision 29

STP-309-0206, "Division 1 Diesel Generator 184 Day Operability Test," Revision 1

STP-309-6307, "Division 1 Diesel Generator Rear Bank Air Start System Quarterly Valve Operability Test," Revision 4

SOP-0053, "Standby Diesel Generator and Auxiliaries," Revision 301

WO 51050192, Division 1 diesel generator operability test

WO 00073510, Replace Division 1 diesel generator governor drive coupling

WO 00089273, Replace Division 1 diesel generator starting air system Valve EGA-SOVX11A

CR-RBS-2006-00298

CR-RBS-2006-02186

CR-RBS-2006-02632

CR-RBS-2006-02633

Section 1EP1: Exercise Evaluation

Emergency Implementing Procedures:

EIP 2-001, "Classification of Emergencies," Revision 13
EIP 2-002, "Classification Actions," Revision 26
EIP 2-006, "Notifications," Revision 32
EIP 2-007, "Protective Action Recommendation Guidelines," Revision 21
EIP 2-016, "Operations Support Center," Revision 23
EIP 2-018, "Technical Support Center," Revision 18
EIP 2-020, "Emergency Operations Facility," Revision 28
EIP 2-023, "Joint Information Center," Revision 13
EIP 2-024, "Offsite Dose Calculation," Revision 22

Emergency Plan Procedures:

EPP 2-201, "RBS Emergency Planning Organization and Responsibilities," Revision 19
EPP 2-002, "Emergency Response Organization," Revision 11
EPP 2-501, "Emergency facility and Equipment Readiness," Revision 13
EPP 2-001, "Classification of Emergencies," Revision 13

Exercise Evaluation Reports:

June 12, 2002, ERO Team B
June 9, 2004, ERO Team D
April 19, 2005, ERO Team B
June 21, 2005, ERO Team A
February 23, 2006, ERO Team D
October 18, 2005, ERO Team D
March 15, 2006, ERO Team B

Summary List of Drill/Exercise Evaluation related CRs, July 1, 2004, through August 14, 2006

Emergency Plan, Revision 30

Section 2OS1: Access Controls to Radiologically Significant Areas

Audits and Self-Assessments

QA-14-2005-RBS-1, QS-2005-RBS-005, QS-2005-RBS-008, QS-2006-RBS-003

Calibrations and Performance Checks

Current Calibration Records for Instruments: CHP-CR-150, CHP-DR-121, CHP-TEL026, and HP-DS-071

Counter Performance Records for Instruments: 11079, HP-DS-071, and RHP-SC-009

Gamma Spectroscopy Detector Confirmation Checks:

1_051102003_ADC4_EFFIC_CONFRIM.CNF, 1_051102004_ADC2_EFFIC_CONFRIM.CNF,
1_051102005_ADC1_EFFIC_CONFRIM.CNF, 1_051102008_ADC3_EFFIC_CONFRIM.CNF

System #96-9762 dated January 30, 2006

System #96-9762 dated March 17, 2006

Condition Reports

CR-RBS-2006-0326, CR-RBS-2006-0327, CR-RBS-2006-1633, CR-RBS-2006-2190,
CR-RBS-2006-2365, CR-RBS-2006-2932, and CR-RBS-2006-3013

Gamma Spectroscopy Sample Results

030317064, 030318011, 030325011, 060124012, 060125001, 060126025, 060126026,
060126028, 060426042, 991028002, 991118002, and 991119013,

Procedures

COP-0305, Operation of the Countroom Analysis System, Revision 2
CSP-0010, Counting Room Instrument Surveillance, Revision 6
EN-RP-104, Personnel Contamination Events, Revision 1
EN-RP-106, Radiological Survey Documentation, Revision 1
EN-RP-108, Radiation Protection Posting, Revision 2
EN-RW-104, Scaling Factors, Revision 2
ENS-PL-182, Radiation Protection Expectations and Standards, Revision 1
ENS-RP-103, Access Control, Revision 2
ENS-RP-203, Dose Assessment, Revision 4
ENS-RP-208, Whole Body Counting/In-Vitro Bioassay, Revision 1
ENS-RP-30, Radiation Protection Instrument Control, Revision 0
ENS-RP-302, Operation of Radiation Protection Instrumentation, Revision 2
ENS-RP-304, Operation of Counting Equipment, Revision 2
RHP-0106, Calibration of the Canberra FASTSCAN and ACCUSCAN II Whole Body Counters, Revision 3
RPP-0005, Management of Radiological Postings, Revision 26
RPP-0006, Performance of Radiological Surveys, Revision 19
RSP-0217, Auxiliary Access Control Functions, Revision 25

Radiation Work Permits

2006-1033, 2006-1052, 2006-1101, 2006-1402, 2006-1460

Surveys

RBS-0001-0452, RBS-0001-0483, RBS-0002-0360, RBS-9910-0260, RBS-9910-0261, RBS-9910-0373, RBS-9911-0363, RBS-9911-0376, RBS-9911-0392
RF-26-Apr-06, RF-27Apr-06
RWP 2000-1502-01 on 02/19/00 at 11:30
RWP 2006-2052-01 on 01/26/06 at 15:00, 01/26/06 at 17:50, 01/26/06 at 22:00, and 01/30/06 at 11:20

Miscellaneous

10 CRF Part 61 Dry Active Waste Stream, Reactor Water Clean Up System, and Spent Fuel Pool Clean Up System Results
Gamma Spectroscopy Liquid Effluent Nuclide Library
Gamma Spectroscopy Particulate Nuclide Library
Gamma Spectroscopy River Bend Calibration Certificate
Personnel Contamination Log Entries for 01/26/06
River Bend Fuel Performance Summary, Revision 05/06
Six personnel whole-body counting results

Section 20S2: ALARA Planning and Controls

Audits and Self-Assessments

QA-14-2005-RBS-1, QS-2005-RBS-002, QS-2005-RBS-008, QS-2005-RBS-009, QS-2006-RBS-003

Condition Reports

CR-RBS-2006-0326, CR-RBS-2006-0327, CR-RBS-2006-0754, CR-RBS-2006-0835,
CR-RBS-2006-1194, CR-RBS-2006-1555, CR-RBS-2006-1559, CR-RBS-2006-1746,
CR-RBS-2006-1792, CR-RBS-2006-2017

Procedures

EN-RP-104, Personnel Contamination Events, Revision 1
EN-RP-105, Radiation Work Permits, Revision 0
EN-RP-110, ALARA Program, Revision 0
ENS-PL-182, Radiation Protection Expectations and Standards, Revision 1
ENS-RP-203, Dose Assessment, Revision 4
ENS-RP-205, Prenatal Monitoring, Revision 2
ENS-RP-501, Respiratory Protection Program, Revision 2
RPP-0006, Performance of Radiological Surveys, Revision 19
RSP-0217, Auxiliary Access Control Functions, Revision 25

Radiation Work Permit Packages

2006-1051, 2006-1052, 2006-1100, 2006-1436, 2006-1726, 2006-1732, 2006-1800,
2006-1901, 2006-1912, 2006-1932, 2006-1933, 2006-1936, 2006-1943

Miscellaneous

Current Total Effective Dose Equivalent Exposures for thirty individuals
Declared Pregnant Worker Records for five individuals
Gamma Spectroscopy Result 060427020
River Bend Fuel Performance Summary, Revision 05/06
River Bend Primary System Radiation Level Assessment After Fuel Cycle 13, Report #4146
River Bend Station Refuel 13 Post Outage Report

Section 40A1: Performance Indicator Verification

Emergency Plan Procedures:

EPP 2-102, "Training, Drills, and Exercises," Revision 25
EPP 2-401, "Inadvertent siren Sounding," Revision 7
EPP 2-502, "Emergency Communication Equipment Testing," Revision 21
EPP 2-701, "Prompt Notification System Maintenance and Testing," Revision 18

ENS TQ-110, "Emergency Response Organization Training," Revision 5

Condition Reports

CR-RBS-2005-4271, CR-RBS-2006-1633, CR-RBS-2006-2291

Procedures

EN-LI-114 Performance Indicator Process, Revision 1

Miscellaneous

Attachment 9.2 of EN-LI-114 for 2006 Second Quarter

Section 4OA2: Problem Identification and Resolution

ADM-0050, "Primary Containment Leakage Rate Testing Program," Revision 8

SEP-APJ-001, "Primary containment Leakage Rate Testing (Appendix J) Program,"
Revision 0G

STP-403-7301, "Containment Purge System Isolation Valve Leak Rate Test," Revisions 0, 1, 2,
and 3

RBS-ER-00-0589, "Post RF-09 LLRT Testing Interval Determination," dated January 25, 2001

TS Amendment 81, dated July 20, 1995

TS Bases Revision 126, dated March 31, 2006

LIST OF ACRONYMS

ALARA	as low as is reasonably achievable
AOP	abnormal operating procedure
CAP	corrective action program
CFR	<i>Code of Federal Regulations</i>
cpm	counts per minute
CR	condition report
CR-RBS	River Bend Station condition report
dpm	disintegrations per minute
EDG	emergency diesel generator
MC	inspection manual chapter
MDA	minimum detectable activity
MOV	motor-operated valve
NCV	noncited violation
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
PCS	power conversion system
PI	performance indicators
RWP	radiation work permit
SOP	system operating procedures
SSC	structures, systems, or components
STP	surveillance test procedure
TBV	turbine bypass valve
TS	Technical Specifications
USAR	Updated Safety Analysis Report
WO	work order