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

October 31, 2006

Charles D. Naslund, Senior Vice
President and Chief Nuclear Officer
Union Electric Company
P.O. Box 620
Fulton, MO 65251

SUBJECT: CALLAWAY PLANT - NRC INTEGRATED INSPECTION REPORT 05000483/2006004

Dear Mr. Naslund:

On September 23, 2006, the NRC completed an inspection at your Callaway Plant. The enclosed report documents the inspection findings which were discussed on September 25, 2006, with Ludwig E. Thibault, Director Plant Operations, and other members of your staff.

This inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel.

This report documents four findings that were evaluated under the risk Significance Determination Process as having very low safety significance (Green). The NRC has determined that violations are associated with three of these issues. These violations are being treated as noncited violations (NCVs), consistent with Section VI.A of the Enforcement Policy. The NCVs are described in the subject inspection report. If you contest these violations or the significance of these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Callaway Plant facility.

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

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

Sincerely,

/RA/

Gregory E. Werner, Chief
Project Branch B
Division of Reactor Projects

Docket: 50-483
License: NPF-30

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NRC Inspection Report
05000483/2006004
w/attachment: Supplemental Information

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SUNSI Review Completed: _gew__ ADAMS: ⊠Yes ☐ No Initials: __gew_
⊠ Publicly Available ☐ Non-Publicly Available ☐ Sensitive ⊠ Non-Sensitive

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket:	50-483
License:	NPF-30
Report:	05000483/2006004
Licensee:	Union Electric Company
Facility:	Callaway Plant
Location:	Junction Highway CC and Highway O Fulton, Missouri
Dates:	June 24 through September 23, 2006
Inspectors:	M. S. Peck, Senior Resident Inspector D. E. Dumbacher, Resident Inspector L. C. Carson II, Senior Health Physicist R. E. Lantz, Senior Emergency Preparedness Inspector
Approved By:	G. E. Werner, Chief, Project Branch B

TABLE OF CONTENTS

SUMMARY OF FINDINGS

IR 05000483/2006004; 06/24/2006 - 09/23/2006; Callaway Plant: Event Followup and Other Activities.

This report covered a 3-month inspection by region based emergency preparedness and health physics inspectors and resident inspectors. Three Green noncited violations and a Green finding were identified. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter 0609, "Significance Determination Process." Findings for which the Significance Determination Process does not apply may be Green or 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.

Inspector-Identified and Self-Revealing Findings

Cornerstone: Initiating Events

- Green. A self-revealing noncited violation of Technical Specification 5.4.1.a, "Procedures," was identified following two unplanned 50 gallon per minute volume control tank loss of inventory events. Both events occurred due to an inadequate equipment control procedure. On July 17 and 18, 2006, planned maintenance on the boron thermal regeneration system inlet valve created a flow path from the reactor coolant system letdown line to the equipment drain system from a known leaking demineralizer drain valve. AmerenUE did not have an administrative procedure or other effective means to control letdown line configuration with the leaking demineralizer drain valve. AmerenUE placed this issue in the corrective action program as Callaway Action Request 200605751.

  This finding is greater than minor because this finding is associated with the reactor safety initiating events cornerstone attribute of procedure quality and affected the objective to limit the likelihood of events that upset plant stability. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the inspectors determined that this finding is only of very low significance because the condition did not result in the reactor coolant system Technical Specification leakage limit being exceeded (this leakage is not considered reactor coolant system leakage), did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions would be unavailable, and did not increase the likelihood of a fire or flooding. This finding has a crosscutting aspect in the area of human performance associated with resources because AmerenUE did not ensure a complete and accurate equipment control procedure was available to plant operators (Section 4AO3).

- Green. A self-revealing noncited violation of Technical Specification 5.4.1.a, "Procedures," was identified after an inadequate turbine trip procedure resulted in an unplanned manual reactor trip. On May 12, 2006, the inadequate procedure lead to a steam generator level transient after plant operators failed to stabilize reactor power following a turbine trip. Operators manually tripped the reactor following a high steam generator level feedwater isolation. AmerenUE placed this issue in the corrective action program as Callaway Action Requests 200603734 and 200603736.

This finding is greater than minor because this finding is associated with the reactor safety initiating events cornerstone attributes of procedure quality and affects the objective to limit the likelihood of events that upset plant stability. Using the Manual Chapter 0609, “Significance Determination Process,” Phase 1 Worksheet, the inspectors determined this finding to be of very low safety significance because the condition was not a loss of coolant accident initiator, did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating systems would be unavailable, and did not increase the likelihood of fire or flooding. This finding has a crosscutting aspect in the area of human performance associated with resources because AmerenUE did not ensure complete, accurate, up-to-date design documentation and procedures were available to plant operators (Section 4OA5).

- Green. An NRC identified finding was identified after AmerenUE restarted the reactor on May 12, 2006, without completing an adequate reactor posttrip evaluation. The licensee did not adequately address discrepancies between expected and actual plant response during the transient leading to the reactor trip. The licensee did not identify the cause of the trip or implement immediate corrective actions prior to restart as required by plant administrative procedures. AmerenUE placed this issue in the corrective action program as Callaway Action Request 200605766.

  This finding is greater than minor because it could become a more significant event if left uncorrected. This finding is associated with the initiating events cornerstone. Using the Manual Chapter 0609, “Significance Determination Process,” Phase 1 Worksheet, the inspectors determined this finding is of very low safety significance because the condition was not a loss of coolant accident initiator, did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating systems would be unavailable, and did not increase the likelihood of fire or flooding. This finding has a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program because AmerenUE did not thoroughly evaluate the cause of the reactor trip or implement timely corrective actions prior to the Emergency Duty Officer authorizing reactor restart (Section 4OA5).

Cornerstone: Emergency Preparedness

- Green. The inspectors identified a Green noncited violation of 10 CFR 50.54(q) for a failure to adequately implement the emergency plan. The licensee failed to declare an ALERT when conditions existed that met Emergency Action Level 3J, “Hazards Affecting Plant Safety.” AmerenUE placed this issue in the corrective action program as Callaway Action Request 200607835.

  This finding is greater than minor because this finding is associated with the reactor safety emergency preparedness cornerstone attribute of emergency response organization performance and affects the cornerstone objective of the licensee protecting public health and safety during a radiological emergency. The inspectors used Manual Chapter 0609, “Significance Determination Process,” Appendix B, “Emergency Preparedness Significance Determination Process,” Sheet 1, “Failure to Comply,” because the licensee misunderstood the emergency action level, but otherwise adequately implemented the emergency plan. The inspectors concluded this finding is of very low safety significance because the performance deficiency is related to the inability to implement one emergency action level at the ALERT level, which is a risk significant planning standard problem but not a risk significant planning standard function failure or a risk significant planning standard degraded function. This finding has a crosscutting aspect in the area of human performance associated with decision making because the licensee did not provide training to the emergency response organization that clearly communicated the basis for decisions associated with the language changes made to Emergency Action Level 3J (Section 4OA3).

REPORT DETAILS

Summary of Plant Status

AmerenUE operated the Callaway Plant at full power for the entire inspection period.

1. REACTOR SAFETY
Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

a. Inspection Scope

Readiness for Seasonal Susceptibilities

The inspectors completed a review of the licensee's readiness of seasonal susceptibilities involving high outdoor ambient temperature. The inspectors: (1) reviewed plant procedures, the Final Safety Analysis Report (FSAR), and Technical Specifications to ensure that operator actions defined in adverse weather procedures maintained the readiness of essential systems; (2) evaluated operator staffing levels to ensure the licensee could maintain the readiness of essential systems required by plant procedures; and (3) reviewed the corrective action program to determine if the licensee identified and corrected problems related to adverse weather conditions. On August 8, 2006, in response to high outdoor temperatures, the inspectors verified the alignment of the essential service water pumps and ultimate heat sink.

Documents reviewed by the inspectors included:

- Callaway control room logs for August 7-9, 2006
- Procedure OTO-ZZ-00012, Severe Weather, Revision 5

The inspectors completed one site specific weather related condition sample.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

Partial Walkdowns

a. Inspection Scope

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

- August 8 and 9, 2006, fire protection system components located in the auxiliary building, control building, and the fire protection pumphouse

- August 31, 2006, Train A high head injection system components located in the auxiliary and control buildings

- September 6, 2006, Train A intermediate head injection system components located in the auxiliary and control buildings

Documents reviewed by the inspectors are included in the attachment.

The inspectors completed three samples.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05Q)

a. Inspection Scope

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

- June 25, 2006, Area A-3, boric acid tank rooms
- June 25, 2006, Area A-26, chemical storage area
- July 31, 2006, Area A-2, Train A safety-related pump area
- July 31, 2006, Area A-4, Train B safety-related pump area
- July 31, 2006, Area A-17, south electrical penetration room
- July 31, 2006, Area A-18, north electrical penetration room
- July 31, 2006, Area F-1, fuel building general area
- July 31, 2006, Area F-6, east emergency exhaust equipment room
- July 31, 2006, Area F-6, west emergency exhaust equipment room
- July 31, 2006, Area A-5, south auxiliary building stairway

Documents reviewed by the inspectors included:

- Procedure APA-ZZ-00701, Control of Fire Protection Impairments, Revision 12
- Procedure APA-ZZ-00741, Control of Combustible Materials, Revision 18
- Procedure APA-ZZ-00750, Hazard Barrier Program, Revision 0

The inspectors completed ten samples.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11Q)

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. On September 1, 2006, the inspectors observed simulator training sessions involving a loss of secondary heat sink and a feedwater line break.

Documents reviewed by the inspectors included:

- Procedure E-0, Reactor Trip and Safety Injection, Revision 7
- Scenario Packages DS-02 and DS-38
- Procedure FR H.1, Response to Loss of Secondary Heat Sink, Revision 6
- Procedure EIP-ZZ-00101, Classification of Emergencies, Revision 39
- Procedure E-2, Faulted Steam Generator Isolation, Revision 6

The inspectors completed one sample.

b. Findings

No findings of significance were identified

1R12 Maintenance Effectiveness (71111.12Q)

a. Inspection Scope

The inspectors reviewed the listed maintenance activities to: (1) verify the appropriate handling of structure, system, and component (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.

- Callaway Action Request (CAR) 200604160, functional failure of atmospheric steam dump Valve ABPV002

- CAR 200603178, maintenance preventable functional failure of radiation Monitor GTRE021B

Documents reviewed by the inspectors included:

- Expert Panel Meeting Notes 06-00044
- Procedure EDP-ZZ-01128, Maintenance Rule Program, Revision 6
- Maintenance Rule Periodic Assessment for Cycle 14

The inspectors completed two samples.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

The inspectors reviewed the following activities to verify that the appropriate risk assessments were performed prior to removing equipment for work. The inspectors verified that risk assessments were performed as required by 10 CFR 50.65(a)(4) and were accurate and complete. When emergent work was performed, the inspectors verified that the plant risk was promptly reassessed and managed. The inspectors verified the appropriate use of the licensee's risk assessment tool and risk categories in accordance with Procedure EDP-ZZ-01129, "Callaway Plant Risk Assessment," Revision 9, and Procedure EDP-ZZ-01128, "Maintenance Rule Program," Revision 6.

- July 3, 2006, planned turbine-driven auxiliary feedwater pump and valve testing

- July 10, 2006, emergent Train B emergency diesel generator outage

- July 18, 2006, emergent Train A centrifugal charging, safety injection, and residual heat removal pumps outage

- September 6, 2006, planned Train B component cooling water testing

Documents reviewed by the inspectors included:

- Procedure APA-ZZ-00312, Probabilistic Risk Assessment, Revision 4

- Procedure EDP-ZZ-01128, Maintenance Rule Program, Revision 7

- Procedure EDP-ZZ-01129, Callaway Plant Risk Assessment, Revision 9

- Nuclear Management and Resource Council 93-01, Industry Guidelines for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants, Revision 3

The inspectors completed four samples.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

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

- June 3, 2006, OD 200604242, Barton pressure transmitters were not consistent with equipment qualification testing
- June 6, 2006, OD 200604009, degraded main feedwater isolation valve
- July 20, 2006, CAR 200605829, degradation of containment heat exchanger cooling function
- August 2, 2006, OD 200605475, degraded reactor coolant system (RCS) leak detection capability
- September 14, 2006, OD 200607616, degraded motor-driven auxiliary feedwater level control Valve ALHV0011
- September 14, 2006, OD 200607188, degraded residual heat removal pump relief valve affect on containment sump valves

Documents reviewed by the inspectors included:

- Calculation EJ-42, MOV Sizing Calculation for EJHV8811A, Revision 1
- Procedure APA-ZZ-00500, Corrective Action Program, Revision 39
- Procedure APA-ZZ-00500, APP1, Operability Determinations, Revision 0

- Procedure PDP-ZZ-00023, Work Screening and Processing, Revision 6

- Regulatory Guide 1.45, Reactor Coolant Pressure Boundary Leakage Detection Systems

The inspectors completed six samples.

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (PMT) (71111.19)

a. Inspection Scope

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

- June 24, 2006, PMT 06113839, replacement of the main turbine load limiter potentiometer

- July 3, 2006, PMT 06118161/900, Train A motor-driven auxiliary feedwater pump main bearing seal corrective maintenance

- August 2, 2006, PMT 05514193/920, pressurizer heater capacity test following preventive maintenance

- August 4, 2006, PMTs 06118838 and 06118836, gaseous radiation Monitors GTRT0032 and GTRT0031 following particulate alert setpoint modification

- August 10, 2006, PMT 06119208/920, electric fire pump following adjustment of the discharge pressure relief valve

- September 4, 2006, PMT 05505684/910 and CAR 200607327, feedwater bypass regulation valves

- September 18, 2006, PMTs E70683/900 and E703510/900, main steam line bypass valve repairs

- September 18, 2006, PMT 06120280/900, unit vent radiation monitor power supply replacement

Documents reviewed by the inspectors are included in the attachment.

The inspectors completed eight samples.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed the FSAR, procedure requirements, and Technical Specifications to ensure that the listed surveillance activities 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 Technical Specification operability; (9) test equipment removal; (10) restoration of plant systems; (11) fulfillment of American Society of Mechanical Engineers code requirements; (12) updating of performance indicator (PI) data; (13) engineering evaluations, root causes, and bases for returning tested SSCs not meeting the test acceptance criteria were correct; (14) reference setting data; and (15) annunciators and alarms setpoints. The inspectors also verified that the licensee identified and implemented any needed corrective actions associated with the surveillance testing.

- July 16, 17, and 18, 2006, Surveillances 01014483, 01014484, and 01014535, containment temperature Technical Specification verification

- August 2, 2006, Surveillance 06525923, Train A emergency diesel generator fast start and one-hour load test

- August 4, 2006, Surveillance 06526422, repositioning of control and shutdown rods to reduce wear

- August 6, 2006, Surveillance 05514590 and CAR 200606369, auxiliary building negative pressure test

- August 15, 2006, Surveillance 06524601, Train A feedwater isolation slave relay test

- August 22, 2006, Surveillance 06525067, Train A safety injection slave relay test

- August 22, 2006, Surveillance 05513183, RCS water balance and leakage determination

- August 23, 2006, Surveillance 04502125, emergency diesel generator heat exchanger inservice test

- August 24, 2006, Surveillance 06524865, boric acid transfer Pump A inservice test

- September 12, 2006, Surveillance 06525701, Train A component cooling water containment isolation Valves EGHV0058, EGHV0059, and EGHV0061 test

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed six routine, one containment isolation valve, one reactor coolant system leakage, and two inservice test samples.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

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

a. Inspection Scope

The inspectors performed an in-office review of Revision 28 to the Callaway Emergency Plan, submitted in June 2006. The revision incorporated previously reviewed Change Notices 05-001 through 05-004 to Revision 27 of the Emergency Plan, replaced management titles to be consistent with a majority of the industry, clarified the quality assurance audit methodology, and made other administrative and clerical changes.

The revision was compared to the previous revision, to the criteria of NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1, and to 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 one sample during the inspection.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

The inspectors: (1) observed the training evolution 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 is in accordance with the guidance of the Nuclear Energy Institute (NEI) 99-02, "Voluntary Submission of Performance Indicator Data," acceptance criteria for the simulator-based drill, "RERP Teams 1 & 3," conducted on September 13, 2006.

Documents reviewed by the inspectors included:.

- Procedure APA-ZZ-00004, Emergency Preparedness Responsibilities, Revision 14
- Procedure EIP-ZZ-00101, Classification of Emergencies, Revision 38
- Procedure EIP-ZZ-C0010, Emergency Operations Facility Operations, Revision 30
- Procedure KSP-ZZ-00004, Emergency Response Facilities, Revision 4
- Procedure KSP-ZZ-00201, Emergency Augmentation Drill/Test, Revision 1

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY
Cornerstone: Occupational Radiation Safety

2OS1 Access Control to Radiologically Significant Areas (71121.01)

a. Inspection Scope

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

- PI events and associated documentation packages reported by the licensee in the occupational radiation safety cornerstone (two samples)

- Conformity of electronic personal dosimeter alarm setpoints with survey indications and plant policy; workers' knowledge of required actions when their electronic personal dosimeter noticeably malfunctions or alarms

- Barrier integrity and performance of engineering controls in airborne radioactivity areas

- Adequacy of the licensee's internal dose assessment for any actual internal exposure greater than 50 millirem committed effective dose equivalent

- Physical and programmatic controls for highly activated or contaminated materials (nonfuel) stored within spent fuel and other storage pools

- Corrective action documents related to access controls (two samples)

- Licensee actions in cases of repetitive deficiencies or significant individual deficiencies

- Radiation work permit briefings and worker instructions

- Adequacy of radiological controls such as, required surveys, radiation protection job coverage, and contamination controls during job performance

- Dosimetry placement in high radiation work areas with significant dose rate gradients

- Changes in licensee procedural controls of high dose rate - high radiation areas and very high radiation areas

- Controls for special areas that have the potential to become very high radiation areas during certain plant operations

- Posting and locking of entrances to all accessible high dose rate - high radiation areas and very high radiation areas

- Radiation worker and radiation protection technician performance with respect to radiation protection work requirements (two samples)

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed 17 samples.

b. Findings

No findings of significance were identified.

2OS2 As Low As is Reasonably Achievable (ALARA) Planning and Controls (71121.02)

a. Inspection Scope

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

- Workers use of the low dose waiting areas
- First-line job supervisors' contribution to ensuring work activities are conducted in a dose efficient manner

Documents reviewed by the inspectors included:

- Procedure HDP-ZZ-01500, Radiological Postings, Revision 19
- Procedure HTP-ZZ-06042, Industrial Radiography, Revision 4
- Radiation Work Permit 602620RESIN, Radwaste ALPS System Activities: ALPS Resin Sluice
- Radiation Work Permit 602621SHIELD, Install Shielding on NUKEM Skid
- Radiation Work Permit 6119144500, Request Troubleshooting

The inspectors completed two of the optional samples.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 PI Verification (71151)

a. Inspection Scope

Reactor Safety Cornerstone

The inspectors sampled licensee submittals for the PIs listed below for the period from April 2005 through June 2006. The definitions and guidance of NEI 99-02, "Regulatory Assessment Indicator Guideline," Revision 4, were used to verify the licensee's basis for reporting each data element in order to verify the accuracy of PI data reported during the assessment period. The inspectors reviewed licensee event reports (LERs), out-of-service logs, operating logs, and the maintenance rule database as part of the assessment. In addition, the inspectors interviewed licensee personnel associated with PI data collection, evaluation, and distribution.

- Unplanned Scrams per 7000 critical hours
- Scrams with loss of normal heat removal
- Unplanned power transients per 7000 critical hours

The inspectors completed three samples.

<u>Occupational Radiation Safety Cornerstone</u>

The inspectors sampled licensee submittals for the PIs listed below for the period from January through June 2006. To verify the accuracy of the PI data reported during that period, PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Indicator Guideline," Revision 4, were used to verify the basis in reporting for each data element.

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

- Occupational Exposure Control Effectiveness PIs

The inspectors completed one sample.

<u>Public Radiation Safety Cornerstone</u>

The inspectors sampled licensee submittals for the PIs listed below for the period from January 2006 through June 2006. To verify the accuracy of the PI data reported during that period, PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Indicator Guideline," Revision 4, were used to verify the basis in reporting for each data element.

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 inspectors interviewed licensee personnel that were accountable for collecting and evaluating the PI data.

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

Documents reviewed by the inspectors included:

- Procedure RRA-ZZ-0001, NRC Performance Indicator Program, Revision 2

The inspectors completed one sample.

b. Findings

Interpretation of Scrams with Loss of Normal Heat Removal PI

Introduction: The inspectors are reviewing the AmerenUE interpretation of scrams with loss of normal heat removal reporting guidance.

Description: The inspectors identified that a loss of normal feedwater contributed to the February 15, 2004, and May 12, 2006 reactor trips. AmerenUE did not include either event when reporting the scrams with loss of normal heat removal PI. Both trips occurred after a steam generator level transient resulted in a feedwater isolation and the loss of both main feed pumps. NEI 99-02, "Regulatory Assessment Indicator Guideline," Revision 4, listed the loss of all main feedwater due to a high steam generator level as an example of a scram with loss of normal heat removal. AmerenUE did not include either of these trips in their PI report because a feedwater isolation occurs following most Callaway reactor trips. Initial correspondence with the NRC's Performance Assessment Branch of Nuclear Reactor Regulation indicated that this issue needs further review. This issue is considered unresolved pending additional NRC review to determine whether the PI reporting threshold was met for the February 15, 2004, and May 12, 2006, reactor trips: Unresolved Item (URI) 05000483/2006004-01, "Interpretation of Scrams with Loss of Normal Heat Removal Performance Indicator."

4OA2 Identification and Resolution of Problems (71152)

a. Inspection Scope

1. Routine Review of Identification and Resolution of Problems

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

2. Selected Issue Followup Inspection

In addition to the routine review, the inspectors selected the listed issues 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.

- June 21, 2006, CAR 200604984, correction of Technical Specification Bases 3.7.5, auxiliary feedwater system to conform with the accident analysis

- June 21, 2006, CAR 200604987, discrepancy with steam generator and auxiliary feedwater system accident analysis assumptions

- July 3, 2006, CAR 200605314, motor-driven auxiliary feedwater pump inoperable due to missing or loose seal bolts

Documents reviewed by the inspectors included:

- First Quarter 2006 Performance Analysis Report
- APA-ZZ-00500, Corrective Action Program, Revision 40

The inspectors completed three samples.

3. Sections 2OS1and 2OS2

The inspectors 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)

Documents reviewed by the inspectors included:

- Callaway Quality Assurance Performance report, 1st Quarter 2006

- Event Review Team Meeting Summary, AUCA 06-036, packing adjusted on Valve EFHV0043 without notifying operations, July 17, 2006

- Simple Surveillance Report SP06-030, maintenance activities to repair damaged wires in DCGM01B, July 17, 2006

- Simple Surveillance Report SP06-032, Quality Assurance review of the operational focus index, July 27, 2006

b. Findings

No findings of significance were identified.

4OA3 Event Followup (71153)

.1 Inadequate Equipment Control Procedure Resulted in Loss of Volume Control Tank (VCT) Inventory

a. Inspection Scope

The inspectors reviewed the circumstances and the operator response to the VCT level transient that occurred on July 17 and 18, 2006.

b. Findings

Introduction: A self-revealing Green noncited (NCV) of Technical Specification 5.4.1.a, "Procedures," was identified after two unplanned 50 gallon per minute (gpm) loss of VCT inventory events occurred due to an inadequate equipment control procedure.

Description: On two occasions, an inadequate equipment and status control procedure resulted in leakage past a known leaking boron thermal regeneration system demineralizer drain valve. Each event resulted in a 50 gpm loss of inventory from the VCT. On July 17, 2006, planned maintenance on the boron thermal regeneration system inlet valve created a flow path from the RCS letdown line to the demineralizer drain valve. Plant operators quickly recognized the VCT level decrease and terminated the leak. On July 18, 2006, after maintenance was completed on the inlet valve, the outlet from the demineralizer tank was restored to the normal open position, as required by the system operating procedure, and again created the flow path from the RCS letdown line. For the past year, the licensee had used caution cards to keep both the inlet and outlet demineralizer valves closed to isolate the demineralizer because of the leaking drain valve. Because of changes required by the Occupational Safety and Health Administration, the licensee discontinued using caution cards to administratively control deficient equipment; however, AmerenUE was still in the process of developing a program when this issue occurred. Neither Procedure ODP-ZZ-00310, "WPA and Caution Tagging," Revision 24, nor any other administrative control method was effective in protecting the VCT water inventory.

Analysis: Failure of the tagging and status control procedure to prevent loss of VCT inventory is a performance deficiency. This finding is greater than minor because this finding is associated with the reactor safety initiating events cornerstone attribute of procedure quality and affects the objective to limit the likelihood of events that upset plant stability. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the inspectors determined that this finding is only of very low significance because the condition did not result in the RCS Technical Specification leakage limit being exceeded (this leakage is not considered RCS leakage), did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions would be unavailable, and did not increase the likelihood of a fire or internal/external flood. This finding has a crosscutting aspect in the area of human performance associated with resources because AmerenUE did not ensure a complete and accurate equipment control procedure was available to plant operators.

Enforcement: Technical Specification 5.4.1.a, “Procedures,” requires that written procedures be established, implemented, and maintained covering the activities specified in Appendix A, “Typical Procedures for Pressurized Water Reactors,” of Regulatory Guide 1.33, “Quality Assurance Program Requirements,” February 1978. Appendix A, Item 1c, requires procedures for equipment control. Contrary to the above, Procedure ODP-ZZ-00310 did not have a defined manner to control deficient equipment. On July 17 and 18, 2006, the operations department work control group did not effectively implement equipment control of the leaking boron thermal regeneration system demineralizer drain valve. Because this finding is of very low safety significance and was entered into the licensee's corrective action program (CAR 200605751), this violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy: NCV 05000483/2006004-02, “Inadequate Equipment Control Procedure Resulted in Loss of Volume Control Tank Inventory.”

.2 Program Failure to Ensure EAL Entered when Meeting the Defined Limit for Hazardous Atmosphere

a. Inspection Scope

The inspectors reviewed the circumstances and licensee response to the hazardous atmosphere created by painting in the lower auxiliary feedwater area that occurred on September 8, 2006.

b. Findings

Introduction: The inspectors identified a Green NCV of 10 CFR 50.54(q) for a failure to adequately implement the emergency plan. The licensee failed to declare an ALERT when conditions existed that met EAL 3J, “Hazards Affecting Plant Safety.”

Description: On September 8, 2006, following painting in the area below the auxiliary feedwater pumps, the short-term exposure limit for methanol airborne concentrations as defined in Callaway Plant Procedure CDP-ZZ-01100, “Atmospheric Hazard Control Program,” Revision 0, was exceeded. Procedure CDP-ZZ-01100 defines a hazardous atmosphere as one in which any short-term exposure limit is exceeded. The shift manager was informed of the event approximately 1.5 hours after the short-term exposure limit was exceeded, which was approximately one hour after the methanol airborne concentrations had decreased below the short-term exposure limit. Subsequently, AmerenUE personnel reviewed the Callaway Plant EALs and concluded that the event did not meet the criteria for EAL 3J related to release of flammable or toxic gases in a safety-related area.

The inspectors determined that plant conditions did meet the criteria in EAL 3J for declaration of an ALERT. During Revision 24 to the EALs, AmerenUE added language in EAL 3J to include “which jeopardizes operations of systems required to maintain safe operation or to establish or maintain cold shutdown.” This change was made by the licensee without NRC prior approval via 10 CFR 50.54(q) and, as such, should not have created an intent change to the EAL. Previously, the EAL included, “Report or detection of toxic or flammable gases, not properly contained, within or adjacent to any of the following Safe Shutdown Areas, that have created a Hazardous Atmosphere per CDP-ZZ-01100." Following the addition of the words in Revision 24, the licensee implemented an intent change that lead to the failure to declare an ALERT on September 8, 2006. Plant training required both a hazardous environment and an impact to safe operation of the plant to meet the EAL. The addition of the Revision 24 language resulted in the licensee adding a criteria which was not intended in the prior NRC-approved version of the EAL. The inspectors concluded that the licensee should have declared an ALERT based on exceeding the short-term exposure limit for a hazardous environment as defined in Procedure CDP-ZZ-01100.

Analysis: Failure to make a proper emergency classification due to a misunderstanding of an EAL is a performance deficiency. This finding is greater than minor because this finding is associated with the reactor safety emergency preparedness cornerstone attribute of emergency response organization performance, and affects the cornerstone objective of the licensee protecting public health and safety during a radiological emergency. The inspectors used Manual Chapter 0609, "Significance Determination Process," Appendix B, "Emergency Preparedness Significance Determination Process," Sheet 1, "Failure to Comply," because the licensee misunderstood the EAL, but otherwise adequately implemented the emergency plan. The inspectors concluded this finding is of very low safety significance because the performance deficiency is related to the inability to implement one EAL at the ALERT level, which is a risk significant planning standard problem but not a risk significant planning standard function failure or a risk significant planning standard degraded function. This finding has a crosscutting aspect in the area of human performance associated with decision making because the licensee did not provide training to the emergency response organization that clearly communicated the basis for decisions associated with the language changes made to EAL 3J.

Enforcement: Title 10 CFR 50.54(q), requires the licensee to follow their emergency plan and EALs described in 10 CFR 50.47(b)(4). EAL 3J as written and approved requires an ALERT if a hazardous atmosphere (as defined in licensee procedures) exists in an area adjacent to or containing equipment needed to reach and/or maintain cold shutdown. Contrary to this, the licensee failed to declare an Alert in accordance with EAL 3J when a hazardous environment existed adjacent to a safe shutdown area. Because this finding is of very low safety significance and was entered into the licensee's corrective action program (CAR 200607835), this violation is being treated as an NCV, consistent with Section VI.A of the NRC Enforcement Policy: NCV 05000483/2006004-03, "Program Failure to Ensure Emergency Action Level Entered when Meeting the Defined Limit for Hazardous Atmosphere."

.3 (Closed) LER 05000483/2006-003-00: Unexpected Inoperability of the Emergency Exhaust System due to Pressure Boundary Inoperability

This issue was dispositioned as a licensee-identified violation in Section 4OA7 of NRC Integrated Inspection Report 05000483/2006002. The inspectors reviewed the LER and no additional findings of significance were identified. This LER is closed.

.4 (Closed) LER 05000483/2006-002-00: Unexpected Inoperability of a Control Room Air Conditioning Unit due to a Failed Discharge Reed Valve

This issue was dispositioned as NCV 05000483/2006002-01 in Section 1R15 of NRC Integrated Inspection Report 05000483/2006002. The inspectors reviewed the LER and no additional findings of significance were identified. This LER is closed.

.5 (Closed) LER 05000483/2006-005-00: Train A Loss of Off-Site Vital Power During Relay Testing in Switchyard

This issue was dispositioned as FIN 05000483/2006003-05, in Section 1R14 of NRC Integrated Inspection Report 2006003-05. The inspectors reviewed the LER and no additional findings of significance were identified. This LER is closed.

The inspectors completed five samples.

4OA5 Other Activities

.1 (Closed) URI 05000483/2006003-04: Review Adequacy of Procedure and Operator Response to a Turbine Trip

a. Inspection Scope

The inspectors reviewed the adequacy of procedures and operator response following a May 12, 2006, turbine and reactor trip. The inspectors discussed the trip with operations, engineering, and licensee management personnel to gain an understanding of the event and assess followup actions. The inspectors reviewed operator actions taken in accordance with licensee procedures and reviewed unit and system indications to verify that actions and system responses were as expected. The inspectors discussed the trip with the licensee's root cause analysis team and assessed their actions to gather, review, and assess information leading up to and following the reactor trip. The inspectors later reviewed the initial investigation report and root cause determination to assess the detail of review and adequacy of the root cause and proposed corrective actions prior to unit restart.

b. Findings

Introduction: A self-revealing Green NCV of Technical Specification 5.4.1.a, "Procedures," was identified after an inadequate turbine trip procedure lead to an unplanned reactor trip. The inadequate procedure resulted in a steam generator level transient after plant operators failed to stabilize reactor power following a turbine trip.

Description: On May 12, 2006, plant operators manually tripped the reactor during a steam generator level transient. The transient began from 48 percent reactor power after the operators manually tripped the main turbine after observing high main turbine vibration. Plant operators entered Procedure OTO-AC-00001, "Turbine Trip Below P-9," Revision 9. Reactor power was driven to about 10 percent over the next 4 minutes by automatic rod control. The rapid load reduction and loss of feedwater heating resulted in high steam generator water levels. As a result, a high steam generator level feedwater isolation occurred. Operators manually tripped the reactor following the feedwater isolation.

The inspectors concluded that Procedure OTO-AC-00001 was inadequate to mitigate the event. The plant was designed to sustain a turbine trip without a reactor trip at less than 50 percent power (Permissive P-9). The mitigation strategy credited a 10 percent power reduction with control rods to bring the plant within the 40 percent steam bypass capability. Reactor operators were expected to stabilize reactor power above 20 percent and transition feedwater control to the bypass valves prior to conducting a controlled shutdown. Procedure OTO-AC-00001 did not require reactor power to be stabilized until step 8 of the procedure, well after reactor power was below 20 percent.

URI 05000483/2006003-04 also described operator performance issues associated with the transient. Procedure OTO-AC-00001, step 8, required the operators to check whether reactor power was stabilized and step 10 directed plant operators to transfer feedwater control to the bypass valves before reaching 20 percent power. Operators failed to stabilize reactor power above 20 percent prior to transferring feedwater control to the bypass valves. In addition, step 10 and Attachment A required steam generator level to be trending to between 45 and 55 percent prior to opening each feedwater bypass valve. Opening the bypass valve was intended to provide additional steam generator feed flow to drive level slightly higher, resulting in automatic closure of the main feedwater regulation valves. The inspectors identified that steam generator level was greater than 80 percent, and trending higher, at the time the operator opened the first feedwater bypass valve. The main feedwater regulation valves were already closed due to the high steam generator level. A high steam generator level feedwater isolation (91 percent level) occurred about a minute after the operator opened the first bypass valve. However, the licensee concluded that, because reactor power was below the operating range of the main feed water regulation valves, the high steam generator level may have occurred regardless of the operator actions to open the bypass valves. The inspectors agreed with this conclusion. These findings constitute violations of minor significance and are similar to Example 4.b in Manual Chapter 0612, Appendix E. These minor violations are not subject to enforcement action in accordance with Section IV of the NRC's Enforcement Policy.

Analysis: The performance deficiency associated with this finding involved an inadequate procedure. This finding is greater than minor because it is associated with the reactor safety initiating events cornerstone attributes of procedure quality and affected the objective to limit the likelihood of events that upset plant stability. Using the Manual Chapter 0609, “Significance Determination Process,” Phase 1 Worksheet, the inspectors determined this finding to be of very low safety significance because the condition was not a loss of coolant accident initiator, did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating systems would be unavailable, and did not increase the likelihood of fire or flooding. This finding has a crosscutting aspect in the area of human performance associated with resources because AmerenUE did not ensure complete, accurate, up-to-date design documentation and procedures were available to plant operators.

Enforcement: Technical Specification 5.4.1.a, "Procedures," requires that written procedures be established, implemented, and maintained covering the activities specified in Appendix A, "Typical Procedures for Pressurized Water Reactors," of Regulatory Guide 1.33, "Quality Assurance Program Requirements," February 1978. Appendix A, Item 6.q, requires procedures for turbine and generator trips. Procedure OTO-AC-00001 was required to mitigate a turbine trip below P-9. Contrary to the above, on May 12, 2006, Procedure OTO-AC-00001 was not adequately established to allow plant operators to successfully mitigate a turbine trip below P-9. Because of the very low safety significance and AmerenUE's action to place this issue in their corrective action program (CARs 200603734 and 200603736), this violation is being treated as an NCV in accordance with Section VI.A.1 of the Enforcement Policy: NCV 05000483/2006004-04, "Review Adequacy of Procedure and Operator Response to a Turbine Trip."

.2 (Closed) URI 05000483/2006003-07: Review of Less Than Adequate Reactor Posttrip Evaluation

a. Inspection Scope

The inspectors reviewed the adequacy of AmerenUE's initial review of the May 12, 2006, reactor trip. The inspectors discussed the trip with operations, engineering, and licensee management personnel to gain an understanding of the event and assess followup actions, and reviewed Administrative Procedure APA-ZZ-00542, "Event Review," Revision 8. The inspectors discussed the trip with the licensee's root cause analysis team and assessed the team's actions to gather, review, and assess information leading up to and following the trip.

b. Findings

Introduction. The inspectors identified a Green finding after AmerenUE restarted the reactor without completing an adequate reactor posttrip evaluation. They failed to thoroughly review the trip data and compare it to the plant design and therefore incorrectly identified the cause of the trip.

Description: On May 12, 2006, AmerenUE restarted the reactor without adequately identifying the cause of the steam generator level transient that lead to the manual reactor trip (a detailed description of the event is provided in Section 4OA5.1 of this report). Administrative Procedure APA-ZZ-00542, "Event Review," defined reactor trips as either Condition I or Condition II. Procedure APA-ZZ-00542 defined a Condition II trip as "when the cause of the trip is positively known and will be corrected before restart." AmerenUE designated the May 12, 2006, event as a Condition II trip and authorized reactor restart on May 12, 2006.

The inspectors identified that the May 12, 2006, plant transient response was inconsistent with the design basis. The failure of the plant operator to stabilize reactor power following the turbine trip led to the steam generator level transient. The AmerenUE pre-restart evaluation failed to adequately identify the inconsistencies between the expected and actual plant response. As a result, the licensee did not identify the sequence problem with Procedure OTO-AC-00001 or implement corrective actions prior to reactor restart.

Analysis: The performance deficiency associated with this finding involved the failure of AmerenUE to adequately identify and correct the cause of the reactor trip prior to restart. This finding is greater than minor because it could become a more significant event if left uncorrected. This finding is associated with the initiating events cornerstone. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the inspectors determined this finding is of very low safety significance because the condition was not a loss of coolant accident initiator, did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating systems would be unavailable, and did not increase the likelihood of fire or flooding. This finding has a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program because AmerenUE did not thoroughly evaluate the cause of the reactor trip or implement timely corrective actions prior to the Emergency Duty Officer authorizing reactor restart.

Enforcement: No violation of regulatory requirements occurred. The licensee entered this finding into their corrective action program (CAR 200603734):
FIN 05000483/2006004-05, "Review of Less Than Adequate Post Reactor Trip Evaluation."

4OA6 Management Meetings

Exit Meeting Summary

On August 31, 2006, the health physics inspector presented the inspection results to Mr. A. Heflin, Vice President, Nuclear, and other members of the staff, who acknowledged the findings.

On September 19, 2006, the emergency preparedness inspector presented the results of the emergency plan change inspection to Mr. K. Brukerhoff, Supervisor, Emergency Preparedness, who acknowledged the findings.

On September 25, 2006, the resident inspectors presented their inspection results to Ludwig E. Thibault, Director Plant Operations, and other members of his staff who acknowledged the findings.

The inspectors verified that no proprietary information was provided during the inspection.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

B. Barton, Assistant Manager, Operations
K. Brukerhoff, Supervisor, Emergency Preparedness
R. Farnam, Manager, Radiation Protection
K. Gilliam, Senior Health Physicist, Radiation Protection
L. Graessle, Superintendent, Protective Services
C. Graham, Consulting Health Physicist, Radiation Protection
A. Heflin, Site Vice President
T. Herrmann, Vice President, Engineering
B. Huhmann, Supervising Engineer, Nuclear Engineering Systems, Mechanical
G. Hurla, Supervisor, Radiation Protection
K. Mills, Supervising Engineer, Regional Regulatory Affairs/Safety Analysis
D. Neterer, Manager, Operations
S. Petzel, Engineer, Regulatory Affairs
V. Rider, ALARA Specialist
L. Thibault, Director, Plant Operations

LIST OF ITEMS OPENED AND CLOSED

Open

05000483/2006004-01	URI	Interpretation of Scrams with Loss of Normal Heat Removal Performance Indicator (Section 4OA1)

Opened and Closed

05000483/2006004-02	NCV	Inadequate Equipment Control Procedure Resulted in Loss of Volume Control Tank Inventory (Section 4OA3)
05000483/2006004-03	NCV	Program Failure to Ensure Emergency Action Level Entered when Meeting the Defined Limit for Hazardous Atmosphere (Section 4OA3)
05000483/2006004-04	NCV	Review Adequacy of Procedure and Operator Response to a Turbine Trip (Section 4OA5)
0500483/2006004-05	FIN	Review of Less Than Adequate Post Reactor Trip Evaluation (Section 4OA5)

Closed

05000483/2006-003-00	LER	Unexpected Inoperability of the Emergency Exhaust System due to Pressure Boundary Inoperability (Section 4OA3)
05000483/2006-002-00	LER	Unexpected Inoperability of a Control Room Air Conditioning Unit due to a Failed Discharge Reed Valve (Section 4OA3)
05000483/2006-005-00	LER	Train A Loss of Off-Site Vital Power During Relay Testing in Switchyard (Section 4OA3)
05000483/2006003-04	URI	Review Adequacy of Procedure and Operator Response to a Turbine Trip (4OA5)
05000483/2006003-07	URI	Adequacy of Post Reactor Trip Evaluation (Section 4OA5)

DOCUMENTS REVIEWED

Section 1R04: Equipment Alignment

Procedures

OSP-KC00001, Fire Pump Starting Test and Fire Water Storage Tank Inspection, Revision 15
OTN-BG-00001 ADD04, Operation of CVCS Letdown, Revision 1
OTN-EM-00001, Safety Injection System, Revision 22

Miscellaneous

Job 06119208/920, Postmaintenance Test on the Electric Fire Pump

M-22EMO2, Piping and Instrumentation Diagram, High Pressure Coolant Injection System, Revision 19

M-22BG01, Piping and Instrumentation Diagram, Chemical and Volume Control System, Revision 28

M-22KC02, Piping and Instrumentation Diagram, Fire Protection, Revision 19

FSAR Section 9.5.1, Fire Protection System

Section 1R19: Postmaintenance Testing

Procedures

APA-ZZ-000134, Conduct of Operations - Maintenance and Outage/Work Management, Revision 10

APA-ZZ-00330, Preventive Maintenance Program, Revision 23

APA-ZZ-00500 APP5, Maintenance Rule, Revision 0

ISF-GT-00R31, Functional Test Surveillance Procedure, Revision 19

ISF-GT-00R32, Functional Test Surveillance Procedure, Revision 16

OSP-SA-00005A, Train A SLIS Slave Relay Test, Revision 14

OSP-SH-00001, PAM Channel Check, Revision 22

PDP-ZZ-00011, Postmaintenance Testing, Revision 6

Section 1R22: Surveillance Testing

Procedures

ETP-KJ-00003, Diesel Generator Heat Exchanger Test, Revision 4
OSP-BG-P002A, Boric Acid Transfer Pump A Inservice Test, Revision 14
OSP-BB-00002, Pressurizer Heater Capacity Test, Revision 6
OSP-EG-V002A, CCW A Train Containment Isolation Valve Test, Revision 7
OSP-GG-0005A, A Train Fuel Building Negative Pressure test, Revision 4
OSP-GG-0005B, B Train Fuel Building Negative Pressure test, Revision 4
OSP-GL-0001B, Auxiliary Building, Train B, Negative Pressure Test, Revision 1
OSP-GL-000001, Auxiliary Building Negative Pressure Test, Revision 3
OSP-NE-0001A, Standby Diesel Generator A Periodic Test, Revision 22
OSP-SA-0008A, Train A FWIS Slave Relay Test, Revision 11
OSP-SA-0012A, Train A SIS Slave Relay Test, Revision 13
OSP-ZZ-00001, Attachment 1, Modes 1-4 for 12-Hour Shift, Revision 50
OTS-SF-00001, Control Rod Repositioning, Revision 3

Miscellaneous

CAR 200606369
Curve Book, Table 2-14
Job 06119251 to repair the auxiliary building supply air Damper GLD0047 handswitch

Section 2OS1: Access to Radiologically Significant Areas

Callaway Action Requests

200602878, 200602880, 200603675, 200603800, 200604165, 200604213, 200604363, 200606265, 200606538, 200607138, 200607212, 200607239

Procedures

APA-ZZ-00405, Special Nuclear Material Control and Accounting Procedure, Revision 19

HDP-ZZ-01300, Radiation Work Permits, Revision 6

HDP-ZZ-01300, Internal Dosimetry Program, Revision 23

HDP-ZZ-01500, Radiological Postings, Revision 19

HDP-ZZ-01302, Response to Positive Whole Body Counts, Revision 4

HTP-ZZ-02005, Control of Radioactive Material Inside RCA, Revision 26

HDP-ZZ-04529, Whole Body Counting Using the Canberra Fastscan, Revision 5

HTP-ZZ-06001, High Radiation/Very High Radiation Area Access, Revision 23

HTP-ZZ-06028, Radiological Controls for Pools that Contain or Store Spent Fuel, Revision 4

Radiation Work Permits

602620RESIN, Radwaste ALPS System Activities: ALPS Resin Sluice
602621RECIRC, NUKEM Recirculation Skid Disconnection
602621DEMIN, Removal of NUKEM Demins, Sample Sinks, and Associated Piping
602621SCS, Prepare and Remove the NUKEM Solids Collection System
602621SHIELD, Install Shielding on NUKEM Skid
602621TRANSFER, Bag the NUKEM Demin Booster Pump and CIP Tank

LIST OF ACRONYMS

ALARA	as low as is reasonably achievable
CAR	Callaway Action Request
CFR	*Code of Federal Regulations*
EAL	emergency action level
FIN	finding
FSAR	Final Safety Analysis Report
LER	licensee event report
NCV	noncited violation
NEI	Nuclear Energy Institute
PI	performance indicator
PMT	postmaintenance test
OD	operability determination
RCS	reactor coolant system
SSC	structure, system, and component
URI	unresolved item
VCT	volume control tank