



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

August 17, 2009

Mr. Adam C. Heflin, Senior Vice  
President and Chief Nuclear Officer  
AmerenUE  
P. O. Box 620  
Fulton, MO 65251

SUBJECT: CALLAWAY PLANT- NRC RADIATION SAFETY TEAM INSPECTION  
REPORT 000483/2009008

Dear Mr. Heflin:

On June 26, 2009, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Callaway Plant. The enclosed Radiation Safety Team inspection report documents the inspection findings which were discussed with you and other members of your staff. A subsequent telephone exit was conducted on July 13, 2009, with Mr. D. Trokey, Licensing Representative, and other members of your staff to recharacterize several issues based upon additional information we received after the onsite inspection period.

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 team reviewed selected procedures and records, observed activities, and interviewed personnel. Specifically, the team evaluated the inspection areas within the Radiation Protection Strategic Performance Area that are scheduled for review every two years. These areas are:

- Radiation Monitoring Instrumentation
- Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems
- Radioactive Material Processing and Transportation
- Radiological Environmental Monitoring Program and Radioactive Material Control Program

Based on the results of this inspection, no findings of significance were identified.

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 (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

**/RA/**

Gregory E. Werner, Chief  
Plant Support Branch 2  
Division of Reactor Safety

Docket No. 50-483  
License No. NPF-30

Enclosure:  
NRC Inspection Report No. 05000483/2009008  
w/Attachment: Supplemental Information

cc w/enclosure:  
Mr. Luke H. Graessle  
Director, Operations Support  
AmerenUE  
P.O. Box 620  
Fulton, MO 65251

E. Hope Bradley  
Manager, Protective Services  
AmerenUE  
P.O. Box 620  
Fulton, MO 65251

Mr. Scott Sandbothe, Manager  
Regulatory Affairs  
AmerenUE  
P.O. Box 620  
Fulton, MO 65251

R. E. Farnam  
Assistant Manager, Technical  
Training  
AmerenUE  
P.O. Box 620  
Fulton, MO 65251

J. S. Geyer  
Radiation Protection Manager  
AmerenUE  
P.O. Box 620  
Fulton, MO 65251

John O'Neill, Esq.  
Pillsbury Winthrop Shaw Pittman LLP  
2300 N. Street, N.W.  
Washington, DC 20037

Missouri Public Service Commission  
P.O. Box 360  
Jefferson City, MO 65102-0360

Deputy Director for Policy  
Department of Natural Resources  
P.O. Box 176  
Jefferson City, MO 65102-0176

Mr. Rick A. Muench, President and  
Chief Executive officer  
Wolf Creek Nuclear Operating Corporation  
P.O. Box 411  
Burlington, KS 66839

Mr. Lee Fritz, Presiding Commissioner  
Callaway County Courthouse  
10 East Fifth Street  
Fulton, MO 65251

Director, Missouri State Emergency  
Management Agency  
P.O. Box 116  
Jefferson City, MO 65102-0116

Mr. Scott Clardy, Administrator  
Section for Disease Control  
Missouri Department of Health and  
Senior Services  
P.O. Box 570  
Jefferson City, MO 65102-0570

Chief, Technological Hazards Branch  
FEMA Region VII  
9221 Ward Parkway, Suite 300  
Kansas City, MO 64114-3372

Kathleen Logan Smith, Executive Director,  
and Kay Drey, Representative, Board of  
Directors  
Missouri Coalition for the Environment  
6267 Derlmar Boulevard, Suite 2E  
St. Louis, MO 63130

Certrec Corporation  
4200 South Hulen, Suite 422  
Fort Worth, TX 76109

Mr. Keith G. Henke, Planner II  
Division of Community and Public Health  
Office of Emergency Coordination  
Missouri Department of Health and  
Senior Services  
930 Wildwood Drive  
P.O. Box 570  
Jefferson City, MO 65102

## Electronic distribution by RIV:

Regional Administrator (Elmo.Collins@nrc.gov)  
 Deputy Regional Administrator (Chuck.Casto@nrc.gov)  
 DRP Director (Dwight.Chamberlain@nrc.gov)  
 DRP Deputy Director (Anton.Vegel@nrc.gov)  
 DRS Director (Roy.Caniano@nrc.gov)  
 DRS Deputy Director (Troy.Pruett@nrc.gov)  
 Senior Resident Inspector (David.Dumbacher@nrc.gov)  
 Resident Inspector (Jeremy.Groom@nrc.gov)  
 Branch Chief, DRP/B (Vincent.Gaddy@nrc.gov)  
 Senior Project Engineer, DRP/B (Rick.Deese@nrc.gov)  
 CWY Site Secretary (Dawn.Yancey@nrc.gov)  
 Public Affairs Officer (Victor.Dricks@nrc.gov)  
 Team Leader, DRP/TSS (Chuck.Paulk@nrc.gov)  
 RITS Coordinator (Marisa.Herrera@nrc.gov)  
 Regional Counsel (Karla.Fuller@nrc.gov)  
 Congressional Affairs Officer (Jenny.Weil@nrc.gov)  
 OEmail Resource  
 DRS STA (Dale.Powers@nrc.gov)  
 OEDO RIV Coordinator (Leigh.Trocine@nrc.gov)  
 ROPreports

File located: R: \_REACTORS\CW\CW2009-008RP-DLS

ML

SUNSI Rev Compl.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	ADAMS	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Reviewer Initials	DLS
Publicly Avail	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Sensitive	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Sens. Type Initials	DLS
RIV:DRS/PSB2	RI:DRS/PSB	RI:DRS/PSB2	RI:DRS/	C:DRP/B	
DLStearns	LTRicketson	DCGraves	LCCarsonII	VGGaddy	
/RA/	/RA/	/RA/	/RA/	/RA/	
8/4/09	8/6/09	8/7/09	8/12/09	8/11/09	
D:DRS/PSB2					
GEWerner					
/RA/					
8/14/09					

OFFICIAL RECORD COPY

T=Telephone

E=E-mail

F=Fax

**U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV**

Docket: 05000483

License: NPF-30

Report: 05000483/2009008

Licensee: AmerenUE

Facility: Callaway Plant

Location: Junction of Highway CC and Highway O  
Fulton, MO

Dates: June 22 - 26, 2009

Inspectors: D. Stearns, Health Physicist, Team Leader  
L. Carson II, Senior Health Physicist  
D. Graves, Health Physicist  
L. Ricketson, P.E., Senior Health Physicist

Accompanied By: N. Greene, Health Physicist

Approved By: Gregory E. Werner, Chief  
Plant Support Branch  
Division of Reactor Safety

## SUMMARY OF FINDINGS

IR 05000483/2009008; 06/22/2009 - 06/26/2009; AmerenUE; Callaway Plant; Radiation Safety Team Inspection

The report covered a five-day period of inspection on site by a team of five region-based health physics inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealing Findings

No findings of significance were identified.

B. Licensee-Identified Violations

None

## REPORT DETAILS

### 2. RADIATION SAFETY

#### **Cornerstones: Occupational Radiation Safety [OS] and Public Radiation Safety [PS]**

#### 2OS3 Radiation Monitoring Instrumentation and Protective Equipment (71121.03)

##### a. Inspection Scope

This area was inspected to determine the accuracy and operability of radiation monitoring instruments that are used for the protection of occupational workers and the adequacy of the program to provide self-contained breathing apparatus (SCBA) to workers. The team used the requirements in 10 CFR Part 20 and the licensee's procedures required by technical specifications as criteria for determining compliance. The team interviewed licensee personnel and reviewed:

- Calibration of area radiation monitors associated with transient high and very high radiation areas and post-accident monitors used for remote emergency assessment
- Calibration of portable radiation detection instrumentation, electronic alarming dosimetry, and continuous air monitors used for job coverage
- Calibration of whole body counting equipment and radiation detection instruments utilized for personnel and material release from the radiologically controlled area
- Audits and self-assessments; licensee event reports or special reports if any were required since the previous inspection
- Corrective action program reports since the last inspection
- Licensee action in cases of repetitive deficiencies or significant individual deficiencies
- Calibration expiration and source response check currency on radiation detection instruments staged for use
- The licensee's capability for refilling and transporting SCBA air bottles to and from the control room and operations support center during emergency conditions, status of SCBA staged and ready for use in the plant and associated surveillance records, and personnel qualification and training



- Qualification documentation for onsite personnel designated to perform maintenance on the vendor-designated vital components, and the vital component maintenance records for SCBA units

Specific documents reviewed during this inspection are listed in the attachment.

Either because the conditions did not exist or an event had not occurred, no opportunities were available to review the following items:

- Licensee event reports or special reports

These activities constitute completion of nine of the required nine samples as defined in Inspection Procedure 71121.03-05.

b. Findings

No findings of significance were identified.

2PS1 Radioactive Gaseous And Liquid Effluent Treatment And Monitoring Systems (71122.01)

a. Inspection Scope

This area was inspected to (1) ensure that the gaseous and liquid effluent processing systems are maintained so that radiological discharges are properly mitigated, monitored, and evaluated with respect to public exposure; (2) ensure that abnormal radioactive gaseous or liquid discharges and conditions, when effluent radiation monitors are out of service, are controlled in accordance with the applicable regulatory requirements and licensee procedures; (3) verify that the licensee's quality control program ensures that the radioactive effluent sampling and analysis requirements are satisfied so that discharges of radioactive materials are adequately quantified and evaluated; and (4) verify the adequacy of public dose projections resulting from radioactive effluent discharges. The team used the requirements in 10 CFR Part 20; 10 CFR Part 50, Appendices A and I; 40 CFR Part 190; the Offsite Dose Calculation Manual (ODCM), and licensee procedures required by the technical specifications as criteria for determining compliance.

The team conducted in-office inspection and reviewed:

- Appropriate program documents, procedures, and evaluations related to the radiological effluent controls program listed in the attachment to this report
- The implementation of the Radiological Effluent Controls Program requirements as described in Radiological Effluent Technical Specifications
- Changes, if any, to the liquid or gaseous radioactive waste system design, procedures, or operation as described in the Updated Final Safety Analysis Report

- Changes, if any, to the Offsite Dose Calculation Manual made by the licensee since the last inspection
- The annual effluent release reports since the previous inspection
- The correlation between the effluent doses and the environmental monitoring results

The team conducted an onsite inspection which included interviewing cognizant licensee personnel, performing walkdowns of facilities and equipment, and observing licensee activities to review:

- The gaseous and liquid discharge system configuration
- Selected point of discharge effluent radiation monitoring systems and flow measurement devices
- The observation of selected portions of the routine processing and discharge of radioactive gaseous and liquid effluent (sample collection and analysis) including a selection of radioactive gaseous and liquid waste effluent discharge permits
- Effluent discharges made with inoperable (declared out of service) effluent radiation monitors including the projected doses to members of the public
- Surveillance test results on non-safety related ventilation and gaseous discharge systems (HEPA and charcoal filtration) including the methodology to determine the stack and vent flow rates
- The identification of nonradioactive systems that have become contaminated, if applicable
- Effluent monitoring instrument (installed and counting room) maintenance, quality control, and calibration
- The methods used to determine the isotopes in the plant source term
- A selection of monthly, quarterly, and annual dose calculations
- Records of abnormal gaseous or liquid discharges, if any, including the evaluation and analysis of events involving spills or discharges, dose assessments to members of the public, required (or voluntary) offsite notifications, and assessments and reporting of abnormal discharges in the Annual Radiological Effluent Release Report
- Effluent sampling records

The team reviewed the licensee's program of problem identification and resolution including:

- Placement of problems identified through audits, self-assessments, and monitoring results into the corrective action program and adequacy of immediate and long term corrective actions
- Problem identification and resolution follow-up activities
- Identification of repetitive deficiencies or significant individual deficiencies in problem identification and resolution identified by the licensee's self-assessment activities

Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of three of the required three samples as defined in Inspection Procedure 71122.01-05.

b. Findings

No findings of significance were identified.

2PS2 Radioactive Material Processing and Transportation (71122.02)

a. Inspection Scope

This area was inspected to verify that the licensee's radioactive material processing and transportation program complies with the requirements of 10 CFR Parts 20, 61, and 71 and Department of Transportation regulations contained in 49 CFR Parts 171-180. The team interviewed licensee personnel and reviewed:

- The radioactive waste system description, recent radiological effluent release reports, and the scope of the licensee's audit program
- Liquid and solid radioactive waste processing systems configurations, the status and control of any radioactive waste process equipment that is not operational or is abandoned in place, changes made to the radioactive waste processing systems since the last inspection, and current processes for transferring radioactive waste resin and sludge discharges
- Radio-chemical sample analysis results for radioactive waste streams and use of scaling factors and calculations to account for difficult-to-measure radionuclides
- Shipping records for non-excepted package shipments

- Licensee event reports, special reports, audits, state agency reports, self-assessments and corrective action reports performed since the last inspection, if any

Specific documents reviewed during this inspection are listed in the attachment.

Either because the conditions did not exist or an event had not occurred, no opportunities were available to review the following items:

- Shipment packaging, surveying, labeling, marking, placarding, vehicle checking, driver instructing, and disposal manifesting

These activities constitute completion of six of the required six samples as defined in Inspection Procedure 71122.02-04.

b. Findings

No findings of significance were identified.

2PS3 Radiological Environmental Monitoring Program And Radioactive Material Control Program (71122.03)

a. Inspection Scope

This area was inspected to ensure that the radiological environmental monitoring program verifies the impact of radioactive effluent releases to the environment and sufficiently validates the integrity of the radioactive gaseous and liquid effluent release program and that the licensee's surveys and controls are adequate to prevent the inadvertent release of licensed materials into the public domain. The team used the requirements in 10 CFR Part 20, Appendix I of 10 CFR Part 50, the Offsite Dose Calculation Manual, and the licensee's procedures required by technical specifications as criteria for determining compliance. The team interviewed licensee personnel and reviewed:

- Annual environmental monitoring reports and licensee event reports
- Selected air sampling and thermoluminescence dosimeter monitoring stations
- Collection and preparation of environmental samples
- Operability, calibration, and maintenance of meteorological instruments
- Each event documented in the Annual Environmental Monitoring Report which involved a missed sample, inoperable sampler, lost thermoluminescence dosimeter, or anomalous measurement

- Significant changes made by the licensee to the Offsite Dose Calculation Manual as the result of changes to the land census or sampler station modifications since the last inspection
- Calibration and maintenance records for air samplers, composite water samplers, and environmental sample radiation measurement instrumentation, quality control program, interlaboratory comparison program results, and vendor audits
- Locations where the licensee monitors potentially contaminated material leaving the radiological controlled area [or controlled access area] and the methods used for control, survey, and release from these areas
- Type of radiation monitoring instrumentation used to monitor items released, survey and release criteria of potentially contaminated material, radiation detection sensitivities, procedural guidance, and material release records
- Audits, self-assessments, corrective action documents and licensee event reports or special reports, if any were required, since the previous inspection

Specific documents reviewed during this inspection are listed in the attachment.

Either because the conditions did not exist or an event had not occurred, no opportunities were available to review the following items:

- Licensee event reports or special reports

These activities constitute completion of ten of the required ten samples as defined in Inspection Procedure 71122.03-04.

b. Findings

No findings of significance were identified.

#### 4. **OTHER ACTIVITIES**

##### 4OA2 Problem Identification and Resolution

###### Annual Sample Review

a. Inspection Scope

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

- Radiation Monitoring Instrumentation (Section 2OS3)

- Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems (Section 2PS1)
- Radioactive Material Processing and Transportation (Section 2PS2)
- Radiological Environmental Monitoring Program and Radioactive Material Control Program (Section 2PS3)

b. Findings and Observations

No findings of significance were identified. However, during the inspection of the Radiological Environmental Monitoring Program, the team noted that the licensee had not resolved a continuing problem with the S-02 Portland River composite sampler. The S-02 Portland River composite sampler serves to assure representative sampling downstream of the plant discharge. The licensee's corrective action and trending program from 2005 through 2008 identified longstanding operability and reliability concerns with the sampler. This issue was also documented in a 1996 NRC Inspection report which stated that reliability of the sampler had been a concern since 1989. The team determined the licensee's Radiological Environmental Monitoring Program staff, maintenance department, and system engineers had made considerable efforts to maintain Sampler S-02 operable in accordance with the Offsite Dose Calculation Manual. The team noted that licensee management had not corrected this longstanding condition. Design Change Package 2003021 was developed to increase the reliability of the sampler. The licensee's Unit Reliability Team evaluated this design change to have a low priority and therefore, implementation of the design change has been delayed to 2014.

4OA5 Other Activities

.1 (Closed) Temporary Instruction 2515/173, "Review of the Implementation of the Industry Groundwater Protection Voluntary Initiative"

a. Inspection Scope

An NRC assessment was performed of the licensee's groundwater protection program to determine whether the licensee implemented the voluntary Industry Groundwater Protection Initiative dated August 2007 (Nuclear Energy Institute 07-07, ADAMS Accession Number ML072610036). Inspectors interviewed personnel, performed walkdowns of selected areas, and reviewed the following items:

- Records of the site characterization of geology and hydrology
- Evaluations of systems, structures, and or components that contain or could contain licensed material and evaluations of work practices that involve licensed material for which there is a credible mechanism for the licensed material to reach the groundwater

- Implementation of an onsite groundwater monitoring program to monitor for potential licensed radioactive leakage into groundwater
- Procedures for the decision making process for potential remediation of leaks and spills, including consideration of the long term decommissioning impacts
- Records of leaks and spills recorded, if any, in the licensee's decommissioning files in accordance with 10 CFR 50.75(g)
- Licensee briefings of local and state officials on the licensee's groundwater protection initiative
- Protocols for notification to the local and state officials and to the NRC regarding detection of leaks and spills
- Protocols and/or procedures for 30-day reports if an onsite groundwater sample exceeds the criteria in the radiological environmental monitoring program
- Groundwater monitoring results as reported in the annual effluent and/or environmental monitoring report
- Licensee and industry assessments of implementation of the groundwater protection initiative

b. Findings

No findings of significance were identified. Implementation of the Groundwater Protection Initiative is voluntary. Under the final initiative, each site was to have developed and implemented an effective, technically sound Groundwater Protection Program by August 2008. The licensee completed its Groundwater Protection Initiative self-assessment in November 2008 and issued the report on December 22, 2008. The self-assessment identified the licensee had weaknesses in the following areas: (1) its hydrological study, (2) identification of potential enhancements to leak or spill detection mechanisms, (3) groundwater well maintenance and sampling program, and (4) procedures for the decision making process for potential remediation of leaks and spills. The NRC team confirmed the findings of the self-assessment were entered into the corrective action program. At the time of the inspection, the licensee had corrected all actions identified in the self-assessment. The Nuclear Energy Institute assessment is currently on-going.

4OA6 Management Meetings

Exit Meeting Summary

On June 26, 2009, the team presented the inspection results to Mr. A. Heflin, Senior Vice President and Chief Nuclear Officer, and other members of the licensee staff who acknowledged the findings. On July 13, 2009, a re-exit was performed by telephone

with Mr. D. Trokey, Licensing Representative, and other members of the plant staff due to additional information received after the onsite inspection period. The team confirmed that proprietary information was not provided or examined during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION



**SUPPLEMENTAL INFORMATION**  
**KEY POINTS OF CONTACT**

Licensee personnel

S. Abraham, Systems Engineer, Groundwater Protection  
J. Barbour, Systems Engineer  
P. Bott, Systems Engineer/Meteorological Monitoring  
C. Emerson, Countroom/Dosimetry Engineer  
L. Franks, Associate Engineer, Engineering  
J. Geyer, Manager, Radiation Protection  
C. Graham II, Consulting Health Physicist, Radiation Protection  
J. Houston, Senior Health Physicist, Shipping  
J. Nurrenbern, Consulting Engineer/Shipper  
D. Thompson, Senior Health Physicist, Instruments  
D. Trokey, Regional Regulatory Affairs Specialist  
R. Wishau, Senior Health Physicist

NRC

D. Dumbacher, Senior Resident Inspector  
J. Groom, Resident Inspector

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

Opened

None

Opened and Closed

None

Closed

None

Discussed

None

## LIST OF DOCUMENTS REVIEWED

### **Section 20S3: Radiation Monitoring Instrumentation and Protective Equipment**

#### **PROCEDURES**

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
APA-ZZ-00220	Records Management	19
HDP-ZZ-01301	Whole Body Counting Quality Control Program	8
HDP-ZZ-04000	Radiation Protection Instrumentation Program	22
HTP-ZZ-04102	Eberline RO-2 Survey Meter Calibration	1
HTP-ZZ-4131	Operation of the Shepherd Model 89 Calibrator	1
HTP-ZZ-04240	Calibration of the Air Systems International Model CO-91 Carbon Monoxide Monitor	2
HTP-ZZ-04528	Whole Body Counter Calibration Using the ND6000 WBC Chair	6
HTP-ZZ-04542	Whole Body Counter Calibration Using the Canberra Fastscan	1
HTP-ZZ-08501	Testing of Breathing Air	1
HTP-ZZ-08503	Operation of Model C4-22E, 20 CFM Breathing Air Compressor and Breathing Air Cascade System	4

#### **AUDITS, SELF-ASSESSMENTS, AND SURVEILLANCES**

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
AP09-003	Quality Assurance Audit of Radiation Protection	March 9, 2009
SA07-PE-SO2	Process Radiation Monitoring Self-Assessment	January 27, 2007

#### **CALLAWAY ACTION REQUEST**

200706426	200706617	200706937	200707028	200707455
200707482	200707814	200707886	200711522	200802899
200808279	200810982	200904669	200904670	200904671
200904680				

### CALIBRATION RECORDS

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
ND6000	Whole body counter	February 14, 2008
ND6000	Whole body counter	May 15, 2009
Fastscan	Whole body counter	February 14, 2008
Fastscan	Whole body counter	May 15, 2009
NRM-4020-HP	ASP-1 Neutron detection instrument	January 5, 2007 and April 24, 2008
NRM-4021-HP	ASP-1 Neutron detection instrument	August 14, 2007 and April 24, 2008
PCM-1B-4015-HP	Personnel contamination monitor	August 18, 2006 and August 30, 2007
PCM-1B-4017-HP	Personnel contamination monitor	August 26, 2009
CAM-4012-HP	Continuous air monitor	August 29, 2009
CAM-4022-HP	Continuous air monitor	August 5, 2009
GT-00R59	Containment high range monitor	October 11, 2008
GT-00R60	Containment high range monitor	October 11, 2008

### **Section 2PS1: Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems**

#### PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
APA-ZZ-01003	Callaway Plant Off-Site Dose Calculation Manual	18
APA-ZZ-01011	Process Control Program (PCP)	9
HSP-ZZ-00003	Dose Assessment from Liquid Effluents	11
HSP-ZZ-00006	Dose Assessment from Noble Gases	11
HTP-ZZ-06020	Count Room Analytic and Quality Control Calculations and Methods	17
HDP-ZZ-04700	Count Room Quality Control Program	15

### AUDITS, SELF-ASSESSMENTS, AND SURVEILLANCES

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
AP08-007	Quality Assurance Audit of Effluent and Environmental Monitoring	July 31, 2008
SA07-PE-S02	Process Radiation Monitoring Self-Assessment	July 27, 2007

### CALLAWAY ACTION REQUEST

200706806	200706861	200706937	200707028	200707814
200800824	200802899	200804107	200804209	200806462
200808279	200809448	200810387	200901557	200902121
200903713	200904291			

### RELEASE PERMITS

RP09-2007-L0083;1	RP10-2008-L0037;1	RP09-2009-L009	RP10-2009-L0010
RP15-2007-G0032;12	RP13-2007-G0006;30	RP12-2008-G0001;1	RP13-2008-G0002;1
UR03-2008-G0003;23	RP12-2009-G001;8	RP13-2009-G0002;10	

### CALIBRATION RECORDS

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
GT-RE-21A	Unit Vent Effluent Radiation Monitor	March 31, 2008
GT-RE-21B	Unit Vent Effluent Radiation Monitor (Wide Range Gas)	February 21, 2008
GH-RE-10	Radwaste Building Vent Monitor	May 20, 2008
HB-RE-18	Liquid Radwaste Discharge Monitor	February 13, 2008

### **Section 2PS2: Radioactive Material Processing and Transportation**

#### PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
APA-ZZ-01011	Process Control Program (PCP)	9
HTP-HC-09002	10CFR61 Sampling Program	2
RTN-HC-01100	Shipment of Radioactive Materials	24
RTS-HC-01160	Shipment of Radioactive Wastes	22
RTS-ZZ-CH040	Handling of Transport Cask Model 14-215	1

## PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
HDP-ZZ-0300	Radiological Survey Program	32

## AUDITS, SELF-ASSESSMENTS, AND SURVEILLANCES

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
AP08-014	Quality Assurance Audit of Radioactive Waste	December 11, 2008
SA07-RW-S02	Simple Self-Assessment Report, Radioactive Liquid Waste Management	November 29, 2007
SA08-RW-C01	Benchmark Report, Radwaste Operations	February 20, 2008
SA09-RP-S02	Simple Self-Assessment, Radioactive Waste Long Range Plan	April 3, 2009

## Callaway Action Request

200705820	200705823	200707025	200707350	200707387
200708541	200708770	200708932	200709235	200709415
200709631	200709640	200709858	200711019	200711406
200801135	200801333	200801335	200802079	200802879
200803498	200803793	200804395	200805873	200809121
200900326	200901722			

## RADIOACTIVE MATERIAL SHIPMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
08-0009	Waste A LSA-II	March 7, 2008
08-0012	Waste Type B	March 27, 2008
08-0049	Waste A LSA-I	November 13, 2008
08-0052	A-SCO-II	December 11, 2008
09-0006	Waste A LSA-I	February 17, 2009

## WASTE STREAM REPORTS

<u>TITLE</u>	<u>DATE</u>
ALPS Anion, Liquid Waste Processing	October 17, 2007
DAW, Plant Operations	June 7, 2008
RCS Filter	June 9, 2008

## **Section 2PS3: Radiological Environmental Monitoring Program and Radioactive Material Control Program**

### PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
HTP-ZZ-07001	Collection and Shipping of Environmental Samples	53
HTP-ZZ-07101	Radiological Environmental Monitoring Program	13
HTP-ZZ-07101	REMP Sample Locations	14
HTP-ZZ-07107	REMP Sample Locations and Analysis Schedule	0
HTP-ZZ-04143	Operation of Collins Model 42 River Water Composite Sampler	20
HTP-ZZ-04123	Calibration of the F&J LV-2T Environmental Air Sampling Skid	3
HTP-ZZ-02023	Unconditional Release of Material from Radiological Controls	11
HTP-ZZ-03000	Radioactive Material Shipment Surveys	4
HTP-ZZ-02004	Control of Radioactive Sources	28
APA-ZZ-01000	Control of Radioactive Material	6
EDP-ZZ-01136	Ground Water Protection Program	1

### AUDITS, SELF-ASSESSMENTS, AND SURVEILLANCES

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
AP08-001	Quality Assurance Audit of Radiation Protection	February 28, 2008
SP08-003	Quality Assurance Surveillance Report	March 3, 2008
AP08-007	Quality Assurance Audit of Effluent and Environmental Monitoring	July 31, 2008
AP09-003	Quality Assurance Audit of Radiation Protection	March 3, 2009
SP09-013	Simple Surveillance Report	May 12, 2009
SP08-003	Quality Assurance Surveillance Report	March 3, 2008

### AUDITS, SELF-ASSESSMENTS, AND SURVEILLANCES

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
SR 2008-039	Audit Report for Environmental Incorporated., Midwest Laboratory	October 10, 2008

### CALLAWAY ACTION REQUEST

200710921	200711591	200803195	200807879	200708753
200705770	200706619	200800240	200800353	200800586
200801233	200801736	200803688	200803945	200804139
200807612	200809572	200903137	200903741	200706738
200707387	200707942	200800632	200802003	200803744
200803793	200900181	200807458	200902068	200705852
200900126	200900426	200708541	200709415	200711019
200801135	200803498			

### MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
2007 Annual Radiological Environmental Report		April 30, 2008
2008 Annual Radiological Environmental Report		April 20, 2009
Modification Package 04-1020; 10 CFR 50.59 Applicability and Screening for Onsite Meteorological Tower		October 2007

### **Section 40A5 Temporary Instruction 2515/173**

#### PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
APA-ZZ-00153	Unit Reliability Team	2
EDP-ZZ-01136	Ground Water Protection Program	1

### CALLAWAY ACTION REQUEST

200812093	200812146	200812148	200903671
-----------	-----------	-----------	-----------

MISCELLANEOUS DOCUMENTS

<u>TITLE</u>	<u>REVISION/DATE</u>
Callaway Nuclear Energy Institute 07-07 Self – Assessment	December 2008
Groundwater Hydrologic Rizzo Report 06-3624	October 2008
RP-DTI-Environmental-SPILLRESP Response to Spills or Leaks of Radioactive Material	Revision 6