September 1, 2010

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

SUBJECT: MID-CYCLE PERFORMANCE REVIEW AND INSPECTION PLAN – CALLAWAY PLANT

Dear Mr. Heflin:

On August 10, 2010, the NRC staff completed its performance review of Callaway Plant. Our technical staff reviewed performance indicators (PIs) for the most recent quarter and inspection results for the period from July 1, 2009 through June 30, 2010. The purpose of this letter is to inform you of our assessment of your safety performance during this period and our plans for future inspections at your facility.

This performance review and enclosed inspection plan do not include security information. A separate letter designated and marked as "Official Use Only—Security-Related Information" will include the security cornerstone review and resultant inspection plan.

Overall, Callaway Plant operated in a manner that preserved public health and safety and fully met all cornerstone objectives. Plant performance for the most recent quarter was within the Regulatory Response column of the NRC’s Action Matrix based on the Mitigating Systems Performance Index – Emergency AC Power performance indicator being classified as having low to moderate safety significance (White) in the mitigating system cornerstone. This White performance indicator initially crossed the Green-White threshold in the first quarter of 2010 and was discussed in our assessment follow-up letter dated May 5, 2010. A failure of the Train A emergency diesel generator during a planned 24 hour surveillance run on March 30, 2010, combined with a previous run failure on December 24, 2008, resulted in the White performance indicator.

On July 14, 2010, we were notified by your staff of your readiness for the NRC to conduct a supplemental inspection to review the actions taken to address the White performance indicator. Therefore we are conducting a supplemental inspection using Inspection Procedure 95001, "Inspection for One or Two White Inputs In a Strategic Performance Area," at the site this week. This inspection procedure is conducted to provide assurance that the root causes and contributing causes of risk significant performance issues are understood, the extent of condition and cause are identified, and the corrective actions are sufficient to prevent recurrence.
Union Electric Company

The enclosed inspection plan details the inspections, less those related to physical protection scheduled through December 31, 2011. The inspection plan is provided to allow for the resolution of any scheduling conflicts and personnel availability issues well in advance of inspector arrival onsite. Routine resident inspections are not listed due to their ongoing and continuous nature. The inspections in the last nine months of the inspection plan are tentative and may be revised at the end-of-cycle review.

In accordance with 10 CFR 2.390 of the NRC’s “Rules of Practice,” a copy of this letter and its enclosure 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).

If circumstances arise which cause us to change the inspection plan, we will contact you to discuss the change as soon as possible. Please contact Geoffrey Miller at 817-860-8141 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

Tony Vegel, Acting Director
Division of Reactor Projects

Docket Nos. 50-483
License Nos. NPF-30

Enclosure: Callaway Plant Inspection, Activity Plan

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

Stephine Banker
Manager, Protective Services
AmerenUE
P.O. Box 620
Fulton, MO 65251

Tom Voss
AmerenUE
1901 Chouteau Avenue
St. Louis, MO 63103
Union Electric Company

Mr. Scott Sandbothe, Manager
Plant Support
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

Dru Buntin
Director of Government Affairs
Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102-0176

Matthew W. Sunseri, President and
Chief Executive Officer
Wolf Creek Nuclear Operating Corporation
P.O. Box 411
Burlington, KS 66839

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

Presiding Commissioner
Callaway County Court House
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

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

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

Electronic distribution by RIV:
Regional Administrator (Elmo.Collins@ncr.gov)
Deputy Regional Administrator (Chuck.Casto@ncr.gov)
DRP Acting Director (Tony.Vegel@ncr.gov)
DRP Acting Deputy Director (Troy.Pruett@ncr.gov)
DRS Director (Roy.Caniano@ncr.gov)
DRS Acting Deputy Director (Jeff.Clark@ncr.gov)
Senior Resident Inspector (David.Dumbacher@ncr.gov)
Resident Inspector (Jeremy.Groom@ncr.gov)
Branch Chief, DRP/B (Geoffrey.Miller@ncr.gov)
Senior Project Engineer, DRP/B (Rick.Deese@ncr.gov)
Project Engineer, DRP/B (Greg.Tutak@ncr.gov)
Project Engineer, DRP/B (Nestor.Makris@ncr.gov)
Reactor Inspector, DRP/B (Christie.Denissen@ncr.gov)
CWY Administrative Assistant (Dawn.Yancey@ncr.gov)
Public Affairs Officer (Victor.Dricks@ncr.gov)
Public Affairs Officer (Lara.Useiling@ncr.gov)
Project Manager (Mohan.Thadani@ncr.gov)
Branch Chief, DRS/TSB (Michael.Hay@ncr.gov)
RITS Coordinator (Marisa.Herrera@ncr.gov)
Regional Counsel (Karla.Fuller@ncr.gov)
Congressional Affairs Officer (Jenny.Well@ncr.gov)
OEMail Resource
ROPreports Resource
Regional State Liaison Officer (Bill.maier@ncr.gov)
Regional Administrator Secretary (lucy.owen@ncr.gov)
Branch Chief, DRS/Engineering Branch 1 (Thomas.Farnholtz@ncr.gov)
Branch Chief, DRS/Engineering Branch 2 (Neil.Keefe@ncr.gov)
Branch Chief, DRS/Operations Branch (Mark.Haire@ncr.gov)
Branch Chief, DRS/Plant Support Branch 1 (Michael.Shannon@ncr.gov)
Branch Chief, DRS/Plant Support Branch 2 (Greg.Werner@ncr.gov)
Deputy Assistant for Operations, OEDO (James.Andersen@ncr.gov)
Director, DIRS, NRR (Frederick.Brown@ncr.gov)
Deputy Director, DIRS, NRR (Michael.Check@ncr.gov)
Deputy Director, DORL, NRR (Robert.Nelson@ncr.gov)
Director, DORL, NRR (Joseph.Gitter@ncr.gov)
LPL4 Branch Chief, DORL (Michael.Markley@ncr.gov)
OEDO RIV Coordinator (Margie.Kotzal@ncr.gov)
mortensengk@INPO.org

R:\Reactors\EOC and Midcycle\Midcycle Assessment Letters\2010

<table>
<thead>
<tr>
<th>SUNSI Rev Compl.</th>
<th>Publicly Avail</th>
<th>ADAMS</th>
<th>ADAMS Sensitive</th>
<th>Reviewer Initials</th>
<th>RWD</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ Yes ☐ No</td>
<td>☑ Yes ☐ No</td>
<td>☑ Yes ☐ No</td>
<td>☑ Yes ☐ No</td>
<td>☑ Yes ☐ No</td>
<td>☑ Yes ☐ No</td>
</tr>
<tr>
<td>RIV/SPE/DRP/B</td>
<td>C:DRP/B</td>
<td>D:DRS</td>
<td>D:DRP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R/W Deese</td>
<td>GBMiller</td>
<td>RJCaniano</td>
<td>AVegel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/RA/</td>
<td>/RA/</td>
<td>/RA/</td>
<td>/RA/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8/19/10</td>
<td>8/19/10</td>
<td>8/10</td>
<td>8/10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

OFFICIAL RECORD COPY

T=Telephone    E=E-mail    F=Fax
<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/21/2010</td>
<td>Occupational Exposure Control Program</td>
</tr>
<tr>
<td>10/21/2010</td>
<td>Occupational Exposure Control Program, Personal Use of Protective Equipment</td>
</tr>
<tr>
<td>10/21/2010</td>
<td>Radiation Protection Plan, Personal Use of Protective Equipment</td>
</tr>
<tr>
<td>10/21/2010</td>
<td>Radiation Protection Plan, Personal Use of Protective Equipment, Personal Use of Protective Equipment</td>
</tr>
<tr>
<td>10/21/2010</td>
<td>Radiation Protection Plan, Personal Use of Protective Equipment, Personal Use of Protective Equipment</td>
</tr>
<tr>
<td>10/21/2010</td>
<td>Radiation Protection Plan, Personal Use of Protective Equipment, Personal Use of Protective Equipment</td>
</tr>
<tr>
<td>10/21/2010</td>
<td>Radiation Protection Plan, Personal Use of Protective Equipment, Personal Use of Protective Equipment</td>
</tr>
<tr>
<td>10/21/2010</td>
<td>Radiation Protection Plan, Personal Use of Protective Equipment, Personal Use of Protective Equipment</td>
</tr>
<tr>
<td>10/21/2010</td>
<td>Radiation Protection Plan, Personal Use of Protective Equipment, Personal Use of Protective Equipment</td>
</tr>
</tbody>
</table>

**EP-1 - BIENNIAL PROGRAM INSPECTION**

- EP-1-1: Biennial Program Inspection, Initial Exam - Callaway (1/19/10)
- EP-1-2: Biennial Program Inspection, Initial Exam - Callaway (1/19/10)
- EP-1-3: Biennial Program Inspection, Initial Exam - Callaway (1/19/10)
- EP-1-4: Biennial Program Inspection, Initial Exam - Callaway (1/19/10)
- EP-1-5: Biennial Program Inspection, Initial Exam - Callaway (1/19/10)
- EP-1-6: Biennial Program Inspection, Initial Exam - Callaway (1/19/10)

**EP-2 - BIENNIAL PROGRAM INSPECTION**

- EP-2-1: Biennial Program Inspection, Initial Exam - Callaway (1/19/10)
- EP-2-2: Biennial Program Inspection, Initial Exam - Callaway (1/19/10)
- EP-2-3: Biennial Program Inspection, Initial Exam - Callaway (1/19/10)

**EP-3 - BIENNIAL PROGRAM INSPECTION**

- EP-3-1: Biennial Program Inspection, Initial Exam - Callaway (1/19/10)
- EP-3-2: Biennial Program Inspection, Initial Exam - Callaway (1/19/10)
- EP-3-3: Biennial Program Inspection, Initial Exam - Callaway (1/19/10)
- EP-3-4: Biennial Program Inspection, Initial Exam - Callaway (1/19/10)
- EP-3-5: Biennial Program Inspection, Initial Exam - Callaway (1/19/10)
- EP-3-6: Biennial Program Inspection, Initial Exam - Callaway (1/19/10)