



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

March 2, 2005

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

SUBJECT: ANNUAL ASSESSMENT LETTER - CALLAWAY PLANT
(REPORT 05000483/2005001)

Dear Mr. Naslund:

On February 2, 2005, the NRC staff completed its end-of-cycle plant performance assessment of the Callaway Plant. The end-of-cycle review for Callaway Plant involved the participation of the reactor technical divisions in evaluating performance indicators (PIs) for the most recent quarter and inspection results for the period from January 1 through December 31, 2004. 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 so that you will have an opportunity to prepare for these inspections and to inform us of any planned inspections that may conflict with your plant activities.

This performance review and enclosed inspection plan do not include physical protection information. A separate end-of-cycle performance review letter designated and marked as "Exempt from Public Disclosure in Accordance with 10 CFR 2.390" will include the physical protection 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 Licensee Response Column of the NRC's Action Matrix, based on all inspection findings being classified as having very low safety significance (Green) and all PIs indicating performance at a level requiring no additional NRC oversight (Green).

While plant performance for the most recent quarter was within the Licensee Response column of the Action Matrix, there were safety significant PIs identified during the second and third quarters of 2004. The PI for unplanned scrams per 7000 critical hours crossed the Green to White threshold in the second quarter of 2004 as a result of three reactor trips in the first quarter of 2004, and the PI remained White during the third quarter of 2004. A supplemental inspection was conducted between November 1-8, 2004, in accordance with Inspection Procedure 95001, "Inspection for One or Two White Inputs in a Strategic Performance Area." We concluded that you had adequately evaluated the associated conditions and events.

Additionally, the NRC staff has identified a substantive crosscutting issue in the area of Human Performance. This assessment was based on seven findings with human performance aspects specifically related to personnel errors that occurred in the Initiating Events, Mitigating Systems, and Barrier Integrity cornerstones. These findings included instances of plant personnel failing to follow procedures that resulted in a reactor trip, a safety injection, an overspeed trip of the turbine-driven auxiliary feedwater pump following an automatic initiation during a plant transient, and an inadvertent transfer of water from the spent fuel pool to the refueling water storage tank. Additionally, fire watches were not posted as required during welding activities, which resulted in a fire remaining undetected until the fire detection systems actuated. Also, a reflash watch was not posted following initial extinguishing of the fire, which allowed the fire to reignite without being quickly detected. This substantive crosscutting issue regarding human performance is of concern because failures to follow plant procedures resulted in increased challenges to plant equipment from preventable transients and events. Although your staff has taken actions to address human performance problems, these efforts have not been fully effective in preventing additional errors from occurring.

During baseline inspections, the NRC will focus on procedure adherence and corrective actions associated with human performance errors. Samples selected for Problem Identification and Resolution followup will specifically include the review of corrective actions implemented to address human performance issues. NRC will also review your actions with regard to documenting and tracking human performance issues during the semiannual trend review of your corrective action program. The substantive crosscutting issue will be closed when the assessment of performance, as determined by inspection findings, indicates that your actions have been effective in reducing the frequency, number, and impact of human performance issues.

On the basis of the results of an independent survey of the Callaway Plant work environment, your staff implemented a number of actions to address the findings identified during the survey. Our inspection of your corrective action program, documented in NRC Inspection Report 05000483/2004006, dated April 2, 2004, noted that your corrective actions had not been completely effective in addressing some of the concerns raised in the survey. It is our understanding that a followup survey will be conducted in 2005. We will review the results of the followup survey as part of the baseline inspection program in order to determine whether any further action is necessary.

The enclosed inspection plan details the inspections, less those related to physical protection, scheduled through September 30, 2006. In addition to the baseline inspections, we will also be conducting inspections in accordance with Temporary Instruction 2515/160, "Pressurizer Penetration Nozzles and Steam Space Piping Connections in U.S. Pressurized Water Reactors (NRC Bulletin 2004-01)," and Inspection Procedure 50001, "Steam Generator Replacement Inspection." The inspection plan is provided to minimize the resource impact on your staff and to allow for scheduling conflicts and personnel availability to be resolved in advance of inspector arrival onsite. Routine resident inspections are not listed due to their ongoing and continuous nature. The inspections in the last 9 months of the inspection plan are tentative and may be revised at the midcycle review meeting.

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 this inspection plan, we will contact you to discuss the change as soon as possible. Please contact Mr. David N. Graves at (817) 860-8141 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

/RA/

Arthur T. Howell III, Director
Division of Reactor Projects

Docket: 50-483
License: NPF-30

Enclosure:
Callaway Plant Inspection/Activity Plan

cc w/enclosure:
Professional Nuclear Consulting, Inc.
19041 Raines Drive
Derwood, MD 20855

John O'Neill, Esq.
Shaw, Pittman, Potts & Trowbridge
2300 N. Street, N.W.
Washington, DC 20037

Mark A. Reidmeyer, Regional
Regulatory Affairs Supervisor
Regulatory Affairs
AmerenUE
P.O. Box 620
Fulton, MO 65251

Missouri Public Service Commission
Governor's Office Building
200 Madison Street
P.O. Box 360
Jefferson City, MO 65102

Ronald A. Kucera, Deputy Director
for Public Policy
Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102

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

Dan I. Bolef, President
Kay Drey, Representative
Board of Directors Coalition
for the Environment
6267 Delmar Boulevard
University City, MO 63130

Les H. Kanuckel, Manager
Quality Assurance
AmerenUE
P.O. Box 620
Fulton, MO 65251

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

Scott Clardy, Director
Section for Environmental Public Health
P.O. Box 570
Jefferson City, MO 65102-0570

Keith D. Young, Manager
Regulatory Affairs
AmerenUE
P.O. Box 620
Fulton, MO 65251

David E. Shafer
Superintendent, Licensing
Regulatory Affairs
AmerenUE
P.O. Box 66149, MC 470
St. Louis, MO 63166-6149

Certrec Corporation
4200 South Hulen, Suite 630
Fort Worth, TX 76109

Tim Diemler
Emergency Preparedness
Director
Callaway County/Fulton
P.O. Box 817
Fulton, MO 65251

Lee Fritz
Presiding Commissioner
Callaway County Courthouse
10 East 5th Street
Fulton, MO 65251

Gabe Craighead
Eastern District Commissioner
Callaway County Courthouse
10 East 5th Street
Fulton, MO 65251

Donald "Doc" Kritzer
Western District Commissioner
Callaway County Courthouse
10 East 5th Street
Fulton, MO 65251

The Honorable Robert Craghead
Mayor of Fulton
Fulton City Hall
P.O. Box 130
Fulton, MO 65251

William Johnson
Fulton City Administrator
Fulton City Hall
P.O. Box 130
Fulton, MO 65251

Steve Myers
Chief of Police
Fulton City Hall
P.O. Box 130
Fulton, MO 65251

Dennis Crane
Sheriff, Callaway County
P.O. Box 817
Fulton, MO 65251

The Honorable Tom Shackelford
Mayor of Mokane
P.O. Box 41
Mokane, MO 65059

Richard Hudson, Director
Emergency Management
Gasconade County Courthouse
P.O. Box 295
Hermann, MO 65041

Ron Jost
Presiding Commissioner
Gasconade County Courthouse
119 East First Street
Hermann, MO 65041

Max Aubuchon
Northern District Commissioner
Gasconade County Courthouse
119 East First Street
Hermann, MO 65041

Jerry Lairmore
Southern District Commissioner
Gasconade County Courthouse
119 East First Street
Hermann, MO 65041

Glenn Ebker
Sheriff, Gasconade County
Gasconade County Courthouse
119 East First Street
Hermann, MO 65041

Fay Owsley
Gasconade County Public
Administrator
Gasconade County Courthouse
119 East First Street
Hermann, MO 65041

The Honorable Samuel Birk
Mayor of Morrison
Route 1
Morrison, MO 65061

Bob Bishop
Emergency Management Director
Montgomery County Courthouse
211 East Third
Montgomery City, MO 63361

Charles Korman
Presiding Commissioner
Montgomery County Courthouse
211 East Third
Montgomery City, MO 63361

Rich Daniels
First District Commissioner
Montgomery County Courthouse
211 East Third
Montgomery City, MO 63361

John Noltensmeyer
Second District Commissioner
Montgomery County Courthouse
211 East Third
Montgomery City, MO 63361

Robert Davis
Sheriff, Montgomery County
Montgomery County Courthouse
211 East Third
Montgomery City, MO 63361

The Honorable Steve Wehrle
Mayor of Rhineland
P.O. Box 384
Rhineland, MO 65069

Bradley Strobe
Emergency Management
Director
Osage County Courthouse
P.O. Box 1011
Linn, MO 65051

Russell J. Scheulen
Presiding Commissioner
Osage County Courthouse
P.O. Box 826
Linn, MO 65051

Jerry G. Wolfe
First District Commissioner
Osage County Courthouse
P.O. Box 826
Linn, MO 65051

Daryl L. Luecke
Second District Commissioner
Osage County Courthouse
P.O. Box 826
Linn, MO 65051

Union Electric Company

- 6 -

Carl Fowler
Sheriff, Osage County
Osage County Courthouse
P.O. Box 826
Linn, MO 65051

The Honorable Vernon McKague
Mayor of Chamois
Star Route
Chamois, MO 65024

Federal Emergency Management Agency
Mr. Dick Hainje, Regional Director
Region VII
2323 Grand Blvd., Suite 900
Kansas City, MO 64108-2670

Institute of Nuclear Power Operations (INPO)
Records Center
700 Galleria Parkway SE, Suite 100
Atlanta, GA 30339

Electronic distribution by RIV:

Regional Administrator (**BSM1**)

DRP Director (**ATH**)

DRS Director (**DDC**)

DRS Deputy Director (**MRS**)

Senior Resident Inspector (**MSP**)

Branch Chief, DRP/B (**DNG**)

Senior Project Engineer, DRP/B (**RAK1**)

Team Leader, DRP/TSS (**RLN1**)

RITS Coordinator (**KEG**)

RidsNrrDipmlipb

V. Dricks, PAO (**VLD**)

W. Maier, RSLO (**WAM**)

C. Gordon (**CJG**)

DRS Branch Chiefs (**LJS, MPS1, ATG, JAC**)

S. Richards, Chief, NRR/DIPM/IIPB (**SAR**)

M. Case, Deputy Dir. for Inspection and Programs (**MJC**)

B. Sheron, Associate Dir. for Project Licensing and Technical Analysis (**BWS**)

B. Wetzel, Acting Chief, ROPMS, OEDO (**BAW**)

H. Berkow, Director, LPD4, NRR/DLPM (**HNB**)

R. Gramm, Chief, PDIV-2, NRR/DLPM (**RAG**)

J. Donohew, Project Manager (**JND**)

SISP Review Completed: _____ ADAMS: G Yes G No Initials: _____
 G Publicly Available G Non-Publicly Available G Sensitive G Non-Sensitive

S:\DRP\DRPDIR\EOC 04\Assessment Letters\CWY.wpd

RIV:C:DRP/B	D:DRS	D:DRP		
DNGraves;df	DDChamberlain	ATHowell III		
/RA/	/RA/	/RA/		
2/28/05	2/25/05	2/28/05		

OFFICIAL RECORD COPY

T=Telephone

E=E-mail

F=Fax

Callaway
Inspection / Activity Plan
03/04/2005 - 09/30/2006

Unit Number	Inspection Activity	Title	No. of Staff on Site	Planned Dates Start	Planned Dates End	Inspection Type
	PEB-12B - MAINTENANCE EFFECTIVENESS REVIEW		1			
1	IP 711112B	Maintenance Effectiveness		03/07/2005	03/11/2005	Baseline Inspections
	PEB-07B - HX PERFORMANCE		1			
1	IP 7111107B	Heat Sink Performance		04/25/2005	04/29/2005	Baseline Inspections
	ALARA2 - ALARA PLANNING AND CONTROLS		1			
1	IP 7112102	ALARA Planning and Controls		04/25/2005	04/29/2005	Baseline Inspections
	OB-EP EX - EMERGENCY PREPAREDNESS EXERCISE		4			
1	IP 7111401	Exercise Evaluation		05/02/2005	05/06/2005	Baseline Inspections
1	IP 7111404	Emergency Action Level and Emergency Plan Changes		05/02/2005	05/06/2005	Baseline Inspections
1	IP 71151	Performance Indicator Verification		05/02/2005	05/06/2005	Baseline Inspections
	RP TEAM - RADIATION SAFETY TEAM INSPECTION		3			
1	IP 7112103	Radiation Monitoring Instrumentation and Protective Equipment		05/16/2005	05/20/2005	Baseline Inspections
1	IP 7112201	Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems		05/16/2005	05/20/2005	Baseline Inspections
1	IP 7112202	Radioactive Material Processing and Transportation		05/16/2005	05/20/2005	Baseline Inspections
1	IP 7112203	Radiological Environmental Monitoring Program		05/16/2005	05/20/2005	Baseline Inspections
	OB-INIT - INITIAL EXAM		4			
1	X02286	CALLAWAY (05/05) - INITIAL EXAM		08/01/2005	08/05/2005	Not Applicable
1	X02286	CALLAWAY (05/05) - INITIAL EXAM		08/22/2005	08/26/2005	Not Applicable
	S/G REP1 - STEAM GENERATOR REPLACEMENT		7			
1	IP 50001	Steam Generator Replacement Inspection		07/03/2005	10/01/2005	Other Routine
1	IP 7111113	Maintenance Risk Assessments & Emergent Work Evaluation		07/03/2005	10/01/2005	Baseline Inspections
1	IP 7111119	Post Maintenance Testing		07/03/2005	10/01/2005	Baseline Inspections
1	IP 7111120	Refueling and Other Outage Activities		07/03/2005	10/01/2005	Baseline Inspections
1	IP 7111122	Surveillance Testing		07/03/2005	10/01/2005	Baseline Inspections
1	IP 7111123	Temporary Plant Modifications		07/03/2005	10/01/2005	Baseline Inspections
	OB-RQ - REQUAL INSPECTION		3			
1	IP 7111111B	Licensed Operator Requalification Program		08/01/2005	08/05/2005	Baseline Inspections
	EB02/17B - 50.59 & PERM PLANT MODS		2			
1	IP 7111102	Evaluation of Changes, Tests, or Experiments		08/22/2005	08/26/2005	Baseline Inspections
1	IP 7111117B	Permanent Plant Modifications		08/22/2005	08/26/2005	Baseline Inspections
	TI -160 - PRESSURIZER NOZZLE WELD INSPECTION		4			
1	IP 2515/160	Pzr Pene Nozzles & Stm Space Piping Connections in U.S. PWRs [NRC Bulletin 2004-01]		09/20/2005	09/30/2005	Safety Issues
	EB08P - ISI - INCL VHP VOL (TI 150) AS REQ		1			
1	IP 7111108P	Inservice Inspection Activities - PWR		10/03/2005	10/07/2005	Baseline Inspections
1	IP 7111108P	Inservice Inspection Activities - PWR		10/17/2005	10/21/2005	Baseline Inspections

This report does not include INPO and OUTAGE activities.
This report shows only on-site and announced inspection procedures.

Callaway
Inspection / Activity Plan
03/04/2005 - 09/30/2006

Unit Number	Inspection Activity	Title	No. of Staff on Site	Planned Dates Start	Planned Dates End	Inspection Type
S/G REP2 - STEAM GENERATOR REPLACEMENT			7			
1	IP 50001	Steam Generator Replacement Inspection		10/02/2005	12/31/2005	Other Routine
1	IP 7111113	Maintenance Risk Assessments & Emergent Work Evaluation		10/02/2005	12/31/2005	Baseline Inspections
1	IP 7111119	Post Maintenance Testing		10/02/2005	12/31/2005	Baseline Inspections
1	IP 7111120	Refueling and Other Outage Activities		10/02/2005	12/31/2005	Baseline Inspections
1	IP 7111122	Surveillance Testing		10/02/2005	12/31/2005	Baseline Inspections
1	IP 7111123	Temporary Plant Modifications		10/02/2005	12/31/2005	Baseline Inspections
ACRSA - ACCESS CONTROL TO RAD SIGNIFICANT AREAS			1			
1	IP 7112101	Access Control to Radiologically Significant Areas		10/17/2005	10/21/2005	Baseline Inspections
ALARA3 - ALARA PLANNING AND CONTROLS			1			
1	IP 7112102	ALARA Planning and Controls		12/05/2005	12/09/2005	Baseline Inspections
ALARA1 - ALARA PLANNING AND CONTROLS			1			
1	IP 7112102	ALARA Planning and Controls		03/20/2006	03/24/2006	Baseline Inspections
OB-EP1 - EMERG PREP PROGRAM			1			
1	IP 7111402	Alert and Notification System Testing		05/15/2006	05/19/2006	Baseline Inspections
1	IP 7111403	Emergency Response Organization Augmentation Testing		05/15/2006	05/19/2006	Baseline Inspections
1	IP 7111404	Emergency Action Level and Emergency Plan Changes		05/15/2006	05/19/2006	Baseline Inspections
1	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies		05/15/2006	05/19/2006	Baseline Inspections
1	IP 71151	Performance Indicator Verification		05/15/2006	05/19/2006	Baseline Inspections
PEB - CAL PIR INSPECTION			3			
1	IP 71152B	Identification and Resolution of Problems		07/17/2006	07/21/2006	Baseline Inspections
1	IP 71152B	Identification and Resolution of Problems		07/31/2006	08/04/2006	Baseline Inspections
EB21 - ENG-SSD&PC			5			
1	IP 7111102	Evaluation of Changes, Tests, or Experiments		07/31/2006	08/04/2006	Baseline Inspections
1	IP 7111121	Safety System Design and Performance Capability		07/31/2006	08/04/2006	Baseline Inspections
1	IP 7111121	Safety System Design and Performance Capability		08/14/2006	08/18/2006	Baseline Inspections
ACRSA - ACCESS CONTROL TO RAD SIGNIFICANT AREAS			1			
1	IP 7112101	Access Control to Radiologically Significant Areas		08/21/2006	08/25/2006	Baseline Inspections
PEB-05T - TRIENNIAL FIRE PROTECTION			4			
1	IP 7111105T	Fire Protection		09/11/2006	09/15/2006	Baseline Inspections
1	IP 7111105T	Fire Protection		09/25/2006	09/29/2006	Baseline Inspections