



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION IV
1600 E LAMAR BLVD
ARLINGTON, TX 76011-4511

April 15, 2015

LICENSEE: Omaha Public Power District (OPPD)
FACILITY: Fort Calhoun Station
SUBJECT: MEETING SUMMARY OF APRIL 9, 2015, WITH OMAHA
PUBLIC POWER DISTRICT

On April 9, 2015, a Category 1 meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and Omaha Public Power District (OPPD) at the Thompson Center located at 6705 Dodge Street, Omaha, Nebraska.

The NRC presented the status of oversight activities at Fort Calhoun Station and the basis for the recent NRC decision to transition the station to the normal reactor oversight process. Omaha Public Power District presented details of their actions for continued sustained performance improvements.

The slide presentations are available electronically from the NRC's Agency wide Documents Access and Management System (ADAMS) and are enclosed in this notice.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agency wide Documents Access and Management System (ADAMS). ADAMS is accessible from the Public Electronic Reading Room page of the NRC's public web site at:
<http://www.nrc.gov/reading-rm/adams.html>.

CONTACT: Michael Hay, RIV/DRP
(817) 200-1147

Docket No. 50-285

Enclosure 1:
NRC Presentation Slides

Enclosure 2:
OPPD Presentation Slides

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SIGNATURE	/RA/							
DATE	04/15/15							

OFFICIAL RECORD COPY

Memo to Omaha Public Power District from Michael Hay, dated April 15, 2015

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PUBLIC POWER DISTRICT

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Fort Calhoun Station Public Meeting

Nuclear Regulatory Commission

April 9, 2015

Omaha, Nebraska

Introductions

- Welcome
- Introduction of NRC personnel

Purpose of Meeting

- NRC will present status of regulatory activities associated with the Fort Calhoun Station
- OPPD will present details of Fort Calhoun Station performance improvement initiatives
- Public comments and questions

Opening Remarks

Marc Dapas – Regional Administrator

Opening Remarks

- Criteria for transitioning Fort Calhoun Station to the normal NRC oversight process
 - an effective long-range improvement program
 - sufficiently implementing the corrective action program
 - demonstrated safe plant operation
 - controls in place to address the plant-specific issues that resulted in increased oversight

- NRC issued Post-Restart Confirmatory Action Letter December 17, 2013
 - Key areas for sustained performance improvement
 - Human Performance
 - Safety Culture
 - Corrective Action Process
 - Design Basis Reconstitution

NRC Assessment Activities

- Routine inspections
 - Resident Inspectors
 - Regional inspections
- Team inspection conducted July 2014
 - Assessed Corrective Action Process effectiveness
 - Assessed Post-Restart Confirmatory Action Letter items

NRC Assessment Results

Team Inspection July 2014 Results

- Licensee effectively implemented improvement initiatives in the following key areas:
 - Organizational Effectiveness, Safety Culture, Safety Conscience Work Environment
 - Performance Improvement and Learning Programs
 - Site Operational Focus
 - Procedures
 - Nuclear Oversight

NRC Assessment Results

Team Inspection July 2014 Results

- Inconsistent implementation of corrective action program
- Examples included:
 - Evaluations of degraded and non-conforming conditions
 - Resolution of previously issued NRC findings

NRC Assessment Results

- Follow-up team inspection conducted January 2015
 - Assessed effectiveness of Corrective Action Program improvements
 - Assessed Post-Restart Confirmatory Action Letter items

NRC Assessment Results

Team Inspection January 2015 Results

- NRC noted significant corrective action program improvement since July 2014
- Continued effective implementation of improvement initiatives
 - Approximately 150 of 166 post-restart Confirmatory Action Letter items closed

NRC Assessment Results

Transition Criteria 1 - an effective long-range improvement program

- Post-restart CAL performance improvement initiatives are being effectively implemented (150 of 166 items closed)
- Licensee has established additional long-term actions to sustain performance improvement in the areas of Operational Excellence, Equipment Reliability, and Performance Improvement

NRC Assessment Results

Transition Criteria 2 - sufficiently implementing the corrective action program

- NRC team inspection performed in January 2015 confirmed OPPD is effectively implementing their corrective action program

NRC Assessment Results

Transition Criteria 3 - demonstrated safe plant operation

- Control room operators have consistently demonstrated safe operation of the plant and conservative decision making
 - Shutdowns and power reductions following identification of degraded mitigation equipment
 - Power reduction in response to potential Missouri River flooding conditions
 - Automatic shutdown following transformer failure

NRC Assessment Results

- Transition Criteria 4 - controls in place to address the plant-specific issues that resulted in increased oversight
- NRC determined OPPD thoroughly evaluated and adequately corrected all significant safety and security issues prior to restart in December of 2013
 - Involved approximately 460 specific inspection activities
 - Significant post-restart NRC inspection activities verified effectiveness of licensee actions
 - No significant safety or security issues were identified

NRC Overall Assessment

- NRC concluded all transition criteria satisfied by OPPD
 - Termination of increased NRC oversight
 - Transition of station to routine Reactor Oversight Process (ROP) effective April 1, 2015
 - Station placed in the Licensee Response Column (Column I) based on no significant safety or security issues currently in effect

NRC Oversight Effort

- NRC staff effort at Fort Calhoun Station since entry in IMC 0350 (Dec. 2011)
 - Approximately 61,000 hours total
 - 45,000 inspection hours
 - 16,000 hours associated with licensing and assessment activities

In Summary

- Licensee has returned to a normal level of NRC oversight
 - NRC is implementing normal baseline inspection activities
- NRC will continue to conduct confirmatory action letter follow-up inspections for remainder of open items
 - Containment internal structure
 - Design basis reconstitution

In Summary

- Continued licensee focus on effective implementation of long-term improvement plan

OPPD Presentation

Lou Cortopassi

Site Vice-President / Chief Nuclear Officer
Omaha Public Power District

Contacting the NRC

- Report an emergency
 - (301) 816-5100 (call collect)
- Report a safety concern
 - (800) 695-7403
 - Allegation@nrc.gov
- General information or questions
 - www.nrc.gov





Operational
Excellence



Equipment
Reliability



Performance
Improvement

OPPD's Fort Calhoun Station

Driving to Sustained Excellence

Public meeting with the U.S. Nuclear Regulatory Commission



April 9, 2015

OPPD's Fort Calhoun Station

Vision

Safe and reliable operation of Fort Calhoun Station and achievement of sustained excellence

Mission

Safe, event-free, cost-effective, nuclear production of electricity

Values

- Safety – Nuclear, Industrial, Radiological and Environmental
- Alignment
- Accountability
- Bias for Action
- Healthy Nuclear Safety Culture

OPPD Vision

A fully engaged organization that achieves competitive rates, while maintaining financial stability and high satisfaction.

OPPD Mission

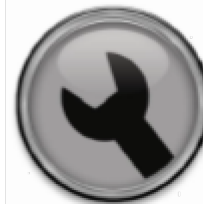
Provide affordable, reliable and environmentally sensitive energy services to our customers.

Fort Calhoun Station *Nuclear Professional Priorities*



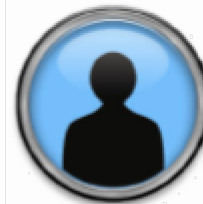
Operational Excellence

- Configuration Control
- Risk Management
- Event-free Outage



Equipment Reliability

- Work Management
- System Health
- Backlog Reduction



Performance Improvement

- Corrective Action Program
- Fundamentals
- Workforce Development

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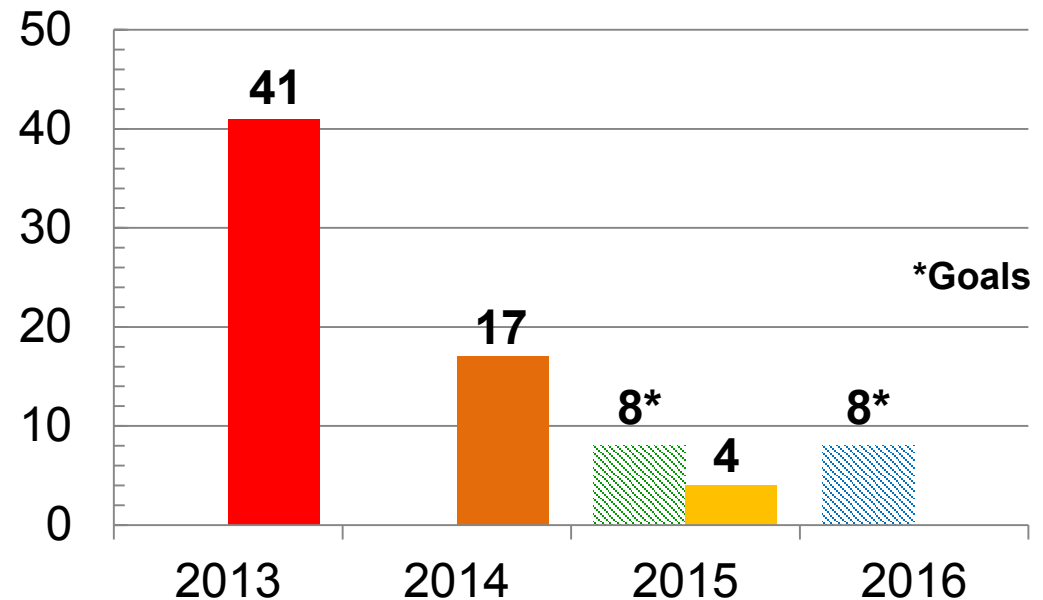
Demonstrated Safe Plant Operation and Overall Improving Performance

Safety and Human Performance Overview

Industrial Safety Performance

	2013	2014	2015
Untreated Injuries	11	7	1
First Aid Injuries	15	2	0
OSHA-Recordable	4	1	0
Lost-Time / Restricted	4	0	0

Department-Level Performance



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52 Weeks of Safety / Human Performance

	1 1/3/2015	2 1/10/2015	3 1/17/2015	4 1/24/2015	5 1/31/2015	6 2/7/2015	
7 2/14/2015	8 2/21/2015	9 2/28/2015	10 3/7/2015	11 3/14/2015	12 3/21/2015	13 3/28/2015	14 4/4/2015
15 4/11/2015	16 4/18/2015	17 4/25/2015	18 5/2/2015	19 5/9/2015	20 5/16/2015	21 5/23/2015	22 5/30/2015
23 6/6/2015	24 6/13/2015	25 6/20/2015	26 6/27/2015	27 7/4/2015	28 7/11/2015	29 7/18/2015	30 7/25/2015
31 8/1/2015	32 8/8/2015	33 8/15/2015	34 8/22/2015	35 8/29/2015	36 9/5/2015	37 9/12/2015	38 9/19/2015
39 9/26/2015	40 10/3/2015	41 10/10/2015	42 10/17/2015	43 10/24/2015	44 10/31/2015	45 11/7/2015	46 11/14/2015
	47 11/21/2015	48 11/28/2015	49 12/5/2015	50 12/12/2015	51 12/19/2015	52 12/26/2015	

No Injury or
HU Event

Near Miss / Report Only

Minor Injury / Dept
Clock ResetOSHA Recordable /
Config Control EventTISAR /
Site Clock Reset



Corrective Action Program Improvement

- **Identification**

- The Station Engagement Ratio improved and has been **White** or **Green** for the past 12 months
- The Self-Identification Indicator has gone from 66% (**Yellow**) in Feb. 2014 to 79% (**White**) in Jan. 2015

- **Analysis**

- The average time to complete a Root Cause Analysis (RCA) has gone from 66 days (**Red**) in Feb. 2014 to 21 days (**Green**) in Jan. 2015
- This indicator has been **Green** for more than six months, indicating the station has applied the necessary resources and oversight to the analyses of the most significant CAP issues
- Investigation rejection rate (RCA/ACA) 3-month average has gone from 40% (**Red**) in Oct. 2014 to 7% (**Green**) March 2015

- **Closure**

- The number of station open corrective actions has gone from 2,022 in Feb. 2014 to 921 in Jan. 2015
- Monthly Closure Quality Rejection Rate Performance Indicator (PI) has gone from 7% (**Red**) in Oct. 2014 to 4% (**Green**) in Jan. 2015 (New PI in Oct. 2014)



Demonstrated Safe Plant Operation and Overall Improving Performance

Immediate Operability Determinations

- Performance on Immediate Operability Determinations (IODs) has improved, but has not yet met expectations for excellence
- Continuing actions to improve performance
 - Templates developed and being used to enhance the quality of information from the Condition Report (CR) originator and CR screener
 - Accountability measures established for CR originators and CR screeners
 - Operating crews are performing case studies on the quality and amount of information coming in from the field
 - Departments trend Engineering Assurance Group and Operability Determination Quality Review Board feedback on IODs to provide feedback and drive performance improvement
 - OPPD Awards program has been used to reinforce good performance and performance gaps are evaluated to determine if systemic action or supervisory intervention is needed
- Four percent (4%) improvement (**Green**) in four-week IOD rolling average quality score since Nov. 2014



Demonstrated Safe Plant Operation and Overall Improving Performance

Conservative Decision Making / Risk Management

- Safety focused conservative decision making
 - June 21, 2014, Missouri River projected level increase
 - Closely coordinated with U.S. Army Corps of Engineers
 - Implemented flood readiness measures
 - Decreased reactor power in anticipation of safe and timely shutdown
 - River level crested below projections
 - Dec. 17, 2014, reactor trip recovery
 - Plant equipment responded as designed
 - Operator response promptly stabilized the unit
 - Fleet procedures used in support of unit restart
 - Diesel generator starting air system upgrade
 - Demonstrated operational focus to improve equipment reliability
 - Example of continued investment in the plant
 - Maintenance Backlog Reduction



Backlog Reduction

Work Management / Maintenance

Goal: Increase operational focus of backlog management using a five-pronged approach

- Corrective Critical (CCs) has remained zero for the last five months through scheduled work and effective Fix-it-Now support
- 268 Deficient Critical (DCs) scheduled and completed in past five months
- Improved Plant Health Committee(PHC) work order (WO) tracking has yielded greater stability and adherence for completing PHC coded WOs
- 98 PHC WOs have been completed in the past five months
- Fire impairments worked down from 42 to six since Aug. 2014

Job Type Changes Since Last NRC Update	Nov	Mar	Delta
Corrective Critical (CC)	0	0	0
Corrective Non-Critical (CN)	87	44	-43
Deficient Critical (DC)	307	39	-268
Deficient Non-Critical (DN)	604	561	-43

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Integrated System Health Safety Assessment – Comparison

System	Nov. 2014	Feb. 2015	Date to White
Auxiliary Feedwater			N/A
Emergency Diesel Generator			N/A
Electrical Equipment – High Voltage			2Q15
High-Pressure Safety Injection			N/A
Electrical Equipment – Low Voltage			N/A
Raw Water			4Q15
Feedwater			N/A
Turbine Plant Cooling Water			N/A
Instrument Air			N/A
Reactor Coolant System			N/A
Containment Cooling Water			2Q15
Reactor Protective System			N/A

System Health

Green = Excellent

Yellow = Marginal

White = Acceptable

Red = Unacceptable



Backlog Reduction – Engineering

- Objectives
 - Reduce backlogs to industry norm levels
 - Correct deficiencies affecting plant design and licensing bases
- Focus Areas
 - CAP Backlogs
 - Operability Evaluations
 - Engineering Change Packages
 - End of Service Life Evaluations
 - High Energy Line Break Reconstitution
 - Fuse Configuration Control
 - Preventive Maintenance Change Requests / Classifications / Bases
 - Obsolescence and Critical Spares
 - Circuit Card Replacement and Trending



Outage Scope to Enhance Safety Margins and Equipment Reliability

- Pressurizer heater upgrade / replacement
- Fukushima modifications for electrical power and emergency fill
- Equipment qualification modification for Auxiliary Building corridors
- Containment spray pump modifications to address runout conditions
- End of service life replacements
 - 4160 volt AC breakers (22)
 - 480 volt AC breakers (8)
 - 30 additional items
 - 241 relays
 - 2 valves
- Valve work
 - 64 air operated valves
 - 16 check valves
 - 33 motor operated valves
 - 52 relief valves
- Reactor coolant pump seal replacement and upper bearing replacement
- 22 incore instrument replacements
- Reactor vessel head stand and containment internal structure interference removal



Containment Internal Structure and Design & Licensing Basis Projects Update

- Refueling Outage 27 Scope
 - Reactor Vessel Head Stand (RVHS)
 - Any deficiencies corrected to restore full design margin as described in the Fort Calhoun licensing basis
 - Demolish the four existing concrete pedestals
 - Install a steel structure redistributing the RVHS loads to existing adjacent walls and concrete columns
 - Containment Internal Structure (CIS)
 - Resolution of piping and cabling interferences associated with CIS column installation
- Scope deferral from refueling outage 27 to refueling outage 28
 - Containment Internal Structure
 - Operability Evaluation will remain in effect
 - First-of-a-kind evolution
 - Returning Beam 22A, Beam 22B and B-46B to Full Design Margin
 - Reactor Coolant Pump Power Cable reroutes
 - Interference removal associated with column installation



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Containment Internal Structure and Design & Licensing Basis Projects Update

- Design and Licensing Basis Control and Use
 - Completed pilot project (reconstitution of USAR Section 9.8 on Raw Water System)
 - Project team and Independent Oversight Committee (IOC) identified changes to improve the reconstitution effort
 - Process and procedure changes have been implemented
 - Reconstitution process, including changes and progress, were reviewed by the Component Design Bases Inspection (CDBI) team
 - Production phase in progress
 - Reconstitution has started on 16 USAR Sections
 - 132 USAR Sections are being reconstituted



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Nuclear Oversight Independent Assessment



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Performance
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Established an Effective Long-Range Improvement Program

- Aligned the organization on
 - Safety-focused Vision, Mission, Values
 - Integrated Improvement Plan
 - 2015 Nuclear Professional Priorities
- OPPD corporate governance and oversight
- Additional Exelon oversight of recovery progress and effectiveness
- FCS fully transitioning to the Exelon process for performance improvement



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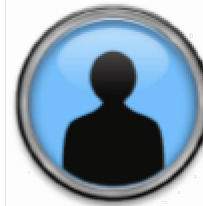
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