



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

March 5, 2014

LICENSEE: Omaha Public Power District (OPPD)
FACILITY: Fort Calhoun Station
SUBJECT: SUMMARY OF FEBRUARY 27, 2014 MEETING WITH OMAHA PUBLIC POWER DISTRICT

On February 27, 2014 a Category 1 meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and Omaha Public Power District (OPPD) in Blair, Nebraska.

The NRC presented the status of oversight activities at Fort Calhoun Station (Enclosure 1). OPPD presented their actions for continued performance improvement following the plant restart in December 2013 (Enclosure 2). The slides from the presentations are available electronically from the NRC's Agency wide Documents Access and Management System (ADAMS) and are enclosed in this notice.

A video of the public meeting will be posted on the website devoted to the special oversight at Fort Calhoun Station, available at:

<http://www.nrc.gov/info-finder/reactor/fcs/special-oversight.html>.

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 ADAMS. ADAMS is accessible from the Public Electronic Reading Room page of the NRC's public web site at: <http://www.nrc.gov/readingrm/adams.html>.

To receive a summary of future meetings and other plant-specific e-mail distributions, you must subscribe to the Operating Reactor Correspondence electronic distribution for this plant via:

<http://www.nrc.gov/public-involve/listserver/plants-by-region.html>

Once subscribed, if you wish to discontinue receiving electronic distribution, you may unsubscribe at any time by visiting the same web address above.

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Docket No.: 50-285

Enclosure 1: NRC Presentation Slides
Enclosure 2: OPPD Presentation Slides

Fort Calhoun Station Public Meeting

Nuclear Regulatory Commission
February 27, 2014
Blair, Nebraska

1

Introductions

- Welcome
- Introduction of NRC personnel

2

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

4

NRC Actions Completed

NRC completed inspection, assessment, and licensing activities associated with the Confirmatory Action Letter Restart Checklist

5

NRC Actions Completed

- NRC determined plant safe for restart and closed Confirmatory Action Letter December 17, 2013
- NRC issued Post-Restart Confirmatory Action Letter December 17, 2013

6

Post-Restart CAL

OPPD committed to the NRC to continue implementing improvement initiatives in key areas and address specific technical items

7

Post-Restart CAL

Post-Restart commitments consist of:

- Key areas for sustained performance improvement
- Long term flood recovery items
- High energy line break corrective actions associated with the Auxiliary Steam System
- Containment internal structure corrective actions to restore design margins

8

NRC Assessment Activities

- Routine inspections
 - Resident Inspectors
 - Regional inspections
- Team inspection (Summer 2014)
 - Assess Corrective Action Process effectiveness
 - Assess Post-Restart Confirmatory Action Letter items

9

In Summary

- Increased NRC oversight activities remain
- NRC continues to implement independent and thorough inspection activities to assess station performance improvement progress

10

OPPD Presentation

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

11

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

12

OPPD's Fort Calhoun Station Driving To Excellence

Public meeting with the U.S. Nuclear Regulatory Commission



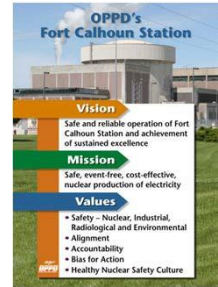
February 27, 2014

1



Topics for Discussion

- Safety Culture
- Problem Identification and Resolution
- Design and Licensing Basis Control and Use
- Site Operational Focus
- Programs – Engineering Focus Areas
 - Flooding Recovery Action Plans
 - Beyond Design Basis Flood Mitigation
 - Fukushima Response Project
 - Tornado-Borne Missiles
 - High-Energy Line Break
 - 10 CFR 50.59
 - Containment Internal Structures
- Nuclear Oversight
- Integration into the Exelon Nuclear Fleet



2



Safety Culture

- Safety Culture Monitoring and Improvements Continue
 - Initial and continuing Safety Culture/SCWE training for leaders and site personnel
 - Continue to utilize the 2Cs meetings (compliments and concerns)
 - Implemented a Site Employee Issues Advisory Committee
 - Continue our monthly Safety Culture Pulse Survey
 - Weekly leadership and station alignment meetings to discuss survey results
 - OPPD can determine both station safety culture trends and department level trends for departments of ten people or larger

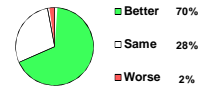


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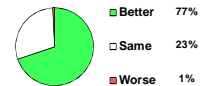


What People Are Saying

“Thinking back over the past six months, is Safety Conscious Work Environment (SCWE) at FCS...”



“Thinking back over the past six months, is nuclear safety culture at FCS...”



4



Problem Identification and Resolution

- Corrective Action Program (CAP) changes implemented to improve OPPDs detection and correction of plant issues
 - Streamlined CAP procedures and guidance
 - Established expectations – managers, supervisors and staff trained
 - Accountability reinforced
 - Added staff – CAP Coordinators (CAPCOs)
 - Implemented detailed Exelon Nuclear performance monitoring tools
 - Conducted oral board interviews to assess & reinforce understanding
- Results
 - Station has seen a reduction in the number of open Corrective Actions and Causal Analyses over the last quarter
 - CAP performance indicators are showing improvements due to better alignment of the Senior Leadership Team (SLT)
 - Through performance data trending, the station has identified needed improvements in Causal Analysis quality

5



Problem Identification and Resolution

- Observations
 - Areas that have shown improvement in last quarter
 - Open corrective actions (Oct: 3,229 / Current: 2,124)
 - Open report evaluations (Oct: 617 / Current: 410)
 - Open correction action prevent recurrences (CAPRs) (Oct: 33 / Current: 25)
 - RCA/ACA Rejection Rates (1st Two Quarters: 47% / Last Two Quarter: 24%)
 - Areas where we are still being challenged
 - Number of overdue CAP items
 - RCA / ACA timeliness
 - Actions addressing challenges
 - Common Factors Analysis required for department with five or more overdue CAP items
 - Increased Management Oversight of open Causal Analysis.
 - Developed Engineering recovery plan to reduce analysis volume and increase qualified analysts
- Problem Identification and Resolution Inspection scheduled for the weeks of June 23 and July 14, 2014



6



Design and Licensing Basis Control and Use

- OPPD's post restart commitment states that:
 - After restart, OPPD will complete a significant effort to perform a risk-focused reconstitution of the:
 - Design basis,
 - Licensing basis, and
 - Updated Safety Analysis Report
- As part of this project, OPPD will:
 - Ensure proper classification of equipment,
 - Convert to a safety-related "Q List" approach for equipment classification, and
 - Complete a key calculation review
- A pilot program will be completed during 2014 on a selected system to "check and adjust" the process, scheduling and resource allocation
- Complete the reconstitution project before the end of 4th quarter 2018

7



Design and Licensing Basis Control and Use

- January 2014: Commenced review of key calculation
 - Pre-restart 93 calculations were reviewed with 45 revisions for administrative corrections
 - 78 of 351 key calculations were reviewed with 33 revisions required for administrative corrections
- February 7, 2014 – Issue project request for proposal to vendors (COMPLETE)
- March 28, 2014 – Vendor proposals due
- April 30, 2014 – Award project contract
- May 5, 2014 – Commence pilot project
- August 1, 2014 – Complete project status assessment
- December 31, 2014 – Complete pilot project (NRC commitment)
- February 1, 2015 – Complete project status assessment
- February 28, 2015 – Implement lessons learned from pilot project
- March 1, 2015 – Commence remainder of project
- December 31, 2018 – Complete reconstitution project (NRC commitment)
- Approximately every six months between March 1, 2015 and December 31, 2018 – Complete project status assessments

8



Site Operational Focus

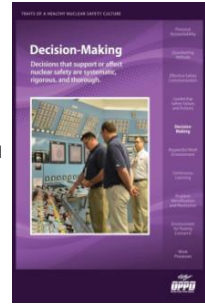
- Site Operational Focus combines the awareness of plant and equipment performance, knowledge of the plant design and licensing basis, with qualified personnel and procedures supporting sustained operations
- Elements of Operational Focus include:
 - Shift Managers leads the station's "Plan of the Day" providing oversight and setting the priorities for the station
 - Daily activities are assessed for impact to the station based on risk
 - Risk assessment includes ensuring activities are resource-loaded (compatible work bundled, parts procured and personnel support)



9

Site Operational Focus

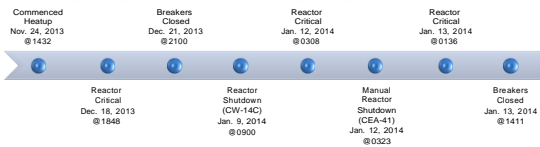
- Elements of Operational Focus include: (continued)
 - Actual and potential issues screened using formal systematic decision-making process
 - CAP used to support trending, investigations and causal analysis
 - Operator rounds and monitoring plans to trend performance
 - Plant Health Committee reviews equipment status against expected performance
 - Exelon Fleet provides a suite of Performance Indicators
 - Fleet resources available for support needed



10

Site Operational Focus

- Fort Calhoun has resumed safe operations



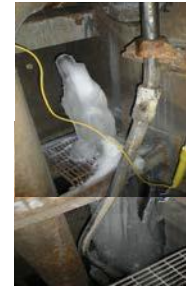
- Heat-up performed to support testing and equipment verifications
- Reactor startup only after conditions confirmed and commitments met
- Unit returned to service
- Forced outage to repair river sluice gate
- Control rod issue identified during unit startup; unit shut down to support repairs
- Reactor restarted after repairs made and returned to service



11

Site Operational Focus

- Traveling screen sluice gate shaft was found damaged by Operations personnel.
- The shaft was bent by moving the gate with heavy ice buildup, caused by a leak above from a backwash pipe
- Root Cause from CAP analysis
 - Motor torque settings allowed the stem to be bent
- Corrective Actions
 - The stem has been replaced
 - Motor torque settings were verified and reset
 - The pipe leak is being repaired



12

Site Operational Focus

- Organizational Changes:
 - Enhanced operator rounds to monitor for ice on gates beneath catwalk over the river
 - Inspect other motor actuator torque settings

GATES at INTAKE STRUCTURE




File photo of Gates

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13

Flooding Recovery Action Plans

- Flooding Recovery Post-Restart Action Plan status
 - There are five Flooding Recovery Post-Restart Action commitments outlined in section 2 of the Confirmatory Action Letter (CAL)
 - Three Flooding Recovery Post-Restart Action commitments have been submitted to the NRC resident inspectors
 - Two Flooding Recovery Post-Restart Action commitments are on-going


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14


Beyond Design Basis Flood Mitigation

- Interim action currently in place
- New portable system
- Mitigates effects of floods above 1,014' elevation
- Designed and tested for beyond design basis conditions
- NRC approved license amendment for minimum river level


Portable Skids for Water and Power Distribution



Portable Diesel Generators



Portable Submersible Pumps



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15

Fukushima Response Project

- Project scope
 - Flooding reevaluation and seismic evaluation
 - Flooding and seismic walkdowns
 - Results submitted to the NRC
 - Actions ongoing
 - Mitigating strategies for beyond design basis external events
 - Strategy developed and submitted to NRC
 - Portable equipment pre-staged at FCS
 - Procedures (Admin/Operations/PM/Testing)
 - Staffing
 - Communications (internal and external)
 - Spent Fuel Pool Instrumentation (SFPI)
 - SFPI modifications submitted to the NRC

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16

Tornado-Borne Missiles

- Protection of key equipment from potential tornado-borne missiles
- Used 250 tons of steel
- Completed 37 modifications



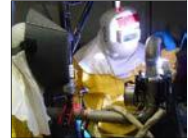
17



High-Energy Line Break

- High-Energy Line Break (HELB)
 - Established a clear licensing basis
 - Reassessed all high-energy systems
 - Revised over 30 design documents
 - Completed over 30 hardware changes
- Post-Restart Action commitments outlined in section 3 of the CAL

Piping Changes



Redundancy to Mitigate HELBs



Improved Piping Supports



HELB Flood Barriers



18



10 CFR 50.59

- Summary of actions taken regarding 10 CFR 50.59:
 - Reduced population of individuals qualified to perform Section 50.59 Screens and Evaluations
 - Provided vendor training for the reduced population of qualified individuals. This training was specifically developed for FCS by utilizing examples of station products. A custom exam was also created. The training has two purposes:
 1. Develop subject matter experts and alternates for Section 50.59, which will be able to give the initial and requalification training.
 2. Increase the level of knowledge of individuals that will be mentoring our less-experienced engineers in Section 50.59 screens and evaluations
 - Implemented the Engineering Assurance Group (EAG). All Screens and Evaluations are required to be reviewed by EAG prior to issuance
 - Completed focused briefings on specific deficiencies seen through EAG reviews
 - Implementing Exelon's Quality Review Team, which will review Section 50.59 products as part of the review scope

19



Containment Internal Structures

- OPPD committed to:
 - Evaluate the structural design margin for the containment internal structure, and reactor cavity and compartments, and resolve any deficiencies in accordance with FCS's CAP
 - Regarding Beams 22A and Beam 22B under Safety Injection Tanks 6B/D, resolve any deficiencies in accordance with the CAP
- Significant effort and resources utilized to analyze the containment internal structure and develop resolution strategies.
- Resolution Strategy
 - Reactor Vessel Head stand
 - Replace current existing pedestal supports with deep beams that span the floor to take the load to adjacent walls and columns

20



Nuclear Oversight Independent Assessment

- Plant Startup
- Post-Restart

21



The Exelon Nuclear Management Model

- Transition in five phases
 - Framework development
 - Organization, Procedures, Performance Indicators, Information Technology
 - Analysis
 - Gap analysis of 27 functional areas
 - Design
 - Recommendations to address key gaps
 - Implementation planning
 - Schedule development to include change management
 - Implementation – Majority of activities due for completion in 2015
 - completed over 2000 activities as of today
 - Approved by OPPD and Exelon executives

22



The Exelon Nuclear Management Model

- Check and adjust approach using weekly status meetings and workload look-aheads to maintain schedule adherence
 - Review progress
 - Defined process for any schedule changes
- Monthly Executive Status Meetings
- Fleet – Corporate Functional Area Manager Peer Support
- Independent oversight
 - NSRB – Station visits with report outs to the OPPD board

23



What it Took – So Far

- 8,000,000 person-hours
- 69,000 task completions
- 20-year operating agreement with Exelon
- More than 450 restart checklist items closed
- Industry-leading measurement of safety culture



24



What it Took – The Details

- Tasks complete: 69,032
- Person-hours worked: 8,027,621
 - Work orders planned: 26,956
 - Work order tasks completed: 50,197
 - Engineering changes completed: 187
 - NRC yellow sheets addressed: 1,885
 - Modifications installed: 90
 - Modification tasks: 11,614
 - Parts issued: 50,317
 - Radiography exams (RT shots): 474
 - Clearances used: 7,906
 - Clearance tags hung and removed: 34,547
 - Dose to complete the work: 180.113 REM



25



What it Took – The Details

- CAP items assigned: 51,726
- Root Cause Analyses (RCAs) assigned: 77
- Apparent Cause Analyses (ACAs) assigned: 287
- Simple Causes assigned: 16,742
- D-level Condition Reports (CR's) assigned: 34,384



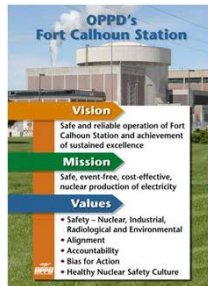
26



Closing Remarks

Tonight, we updated you on

- Safety Culture
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27

