UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 EAST LAMAR BLVD
ARLINGTON, TEXAS 76011-4511

April 2, 2013

Louis P. Cortopassi, Site Vice President
Omaha Public Power District
Fort Calhoun Station FC-2-4
P.O. Box 550
Fort Calhoun, NE 68023-0550

Subject: FORT CALHOUN - NRC INTEGRATED INSPECTION REPORT NUMBER 05000285/2013002

Dear Mr. Cortopassi:

On February 16, 2013 the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Fort Calhoun Station. The enclosed inspection report documents the inspection results which were discussed on March 6, 2013, with you and other members of your staff.

The inspection(s) 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 inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

No findings were identified during this inspection.

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 available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's Agencywide Document Access and Management 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/

Michael Hay, Chief
Project Branch F
Division of Reactor Projects

Docket No.: 50-285
License No.: DPR-40

Enclosure:
NRC Inspection Report 05000285/2013002
w/Attachment: Supplemental Information

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Inspection Reports/MidCycle and EOC Letters to the following:
ROPreports

SUNSI Rev Compl.	☑Yes ☐ No	ADAMS	☑Yes ☐ No	Reviewer Initials	RWD
Publicly Avail.	☑Yes ☐ No	Sensitive	☐Yes ☑No	Sens. Type Initials	RWD

SRI:DRP/FCS	RI:DRP/FCS	SPE:DRP/PBF	BC:DRP/PBF		
JKirkland	JWingebach	RDeese	MHay		
/RA via Email/	/RA via Email/	/RA/	/RA/		
3/21/13	3/21/13	3/25/13	4/2/13		

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket:	05000285
License:	DPR-40
Report:	05000285/2012013
Licensee:	Omaha Public Power District
Facility:	Fort Calhoun Station
Location:	9610 Power Lane Blair, NE 68008
Dates:	January 1 through February 16, 2013
Inspectors:	J. Kirkland, Senior Resident Inspector J. Wingebach, Resident Inspector P. Elkmann, Senior Emergency Preparedness Inspector B. Larson, Senior Operations Engineer C. Osterholtz, Senior Operations Engineer N. Hernandez, Operations Engineer A. Klett, Reactor Operations Engineer J. Brand, Reactor Inspector
Approved By:	Michael Hay, Chief Project Branch F Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000285/2013002; 01/01/2013 – 02/16/2013; Fort Calhoun Station Integrated Resident and Regional Report; and Biennial Licensed Operator Requalification

The report covered a six-week period of inspection by resident inspectors, an announced Licensed Operator Requalification, and in-office and on-site inspection by a region-based inspector. No Green non-cited violations of significance were identified. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter 0609, "Significance Determination Process." The cross-cutting aspect is determined using Inspection Manual Chapter 0310, "Components Within the Cross-Cutting Areas." Findings for which the significance determination process does not apply may be Green or be assigned a severity level after Nuclear Regulatory Commission (NRC) management review. 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 Findings and Self-Revealing Findings

None

B. Licensee-Identified Violations

None

REPORT DETAILS

Summary of Plant Status

The station remained in Mode 5 with the fuel in the spent fuel pool for the entire inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R11 Licensed Operator Requalification Program and Licensed Operator Performance (71111.11)

.1 Quarterly Review of Licensed Operator Requalification Program

a. Inspection Scope

On February 12, 2013, the inspectors observed a crew of licensed operators in the plant's simulator during requalification training. The inspectors assessed the following areas:

- Licensed operator performance
- The ability of the licensee to administer the evaluations
- The modeling and performance of the control room simulator
- The quality of post-scenario critiques
- Follow-up actions taken by the licensee for identified discrepancies

These activities constitute completion of one quarterly licensed operator requalification program sample as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

.2 Biennial Inspection

a. Inspection Scope

To assess the performance effectiveness of the licensed operator requalification program, the inspectors conducted personnel interviews, reviewed both the operating tests and written examinations, and observed ongoing operating test activities.

The inspectors interviewed licensee personnel, including management and licensed operators, to determine their understanding of the policies and practices for administering requalification examinations. The inspectors also reviewed operator performance on the written examinations and operating tests. These reviews included observations of portions of the operating tests by the inspectors. The operating tests observed included two in-plant job performance measures and three simulator job performance measures administered by different evaluators and two scenarios that were used in the current biennial requalification cycle. These observations allowed the inspectors to assess the licensee's effectiveness in conducting the operating test to ensure operator mastery of the training program content. The inspectors also reviewed medical records of eight licensed operators for conformance to license conditions and the licensee's system for tracking qualifications and records of license remediation packages for one crew and two individual operators.

The results of these examinations were reviewed to determine the effectiveness of the licensee's appraisal of operator performance and to determine if feedback of performance analyses into the requalification training program was being accomplished. The inspectors reviewed minutes of training review group meetings to assess the responsiveness of the licensed operator requalification program to incorporate the lessons learned from both plant and industry events. Examination results were also assessed to determine if they were consistent with the guidance contained in NUREG 1021, "Operator Licensing Examination Standards for Power Reactors", Revision 9, Supplement 1, and NRC Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process."

In addition to the above, the inspectors reviewed examination security measures, simulator fidelity, and existing logs of simulator deficiencies.

On December 31, 2012, the licensee informed the lead inspector of the results of the written examinations and operating tests for the Licensed Operator Requalification Program. The inspectors compared these results to the Appendix I, "Licensed Operator Requalification Significance Determination Process." All of the individuals that failed the applicable portions of their exams and/or operating tests were remediated, retested, and passed their retake exams prior to returning to shift.

The inspectors completed one inspection sample of the biennial licensed operator requalification program.

b. Findings

No findings were identified. Several observations were noted during the inspection. During conduct of the job performance measures, it was noted that the evaluators were providing inappropriate cueing to the operators. During the assessment of the facility's ability to properly develop and administer requalification operating tests and written examinations, it was noted that there were numerous and significant opportunities for improvement. Specifically, for simulator scenario guides, the detail of operator expected actions and clarification of Crew Critical Tasks need improvement. For job performance measures, task standards, critical steps and cues need significant improvement. During the simulator testing evaluation, issues were identified for steady state testing in that several were not compared to actual plant data. One transient test failed, but no condition report was written to document the failure. In addition, several test results had not been reviewed by the simulator supervisor. During the evaluation of the effectiveness of the facility to ensure conditions on operator licenses are satisfied, it was noted that the current process of not disqualifying a licensed operator until the Medical Review Officer conducts a review may not always be the conservative approach to ensuring operators standing watch in the control room are medically fit. All the observations noted during the inspection were captured in condition reports.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

The inspector reviewed a simulator scenario used to evaluate Control Room operators in continuing licensed operator training and observed an Operations Department crew during a Control Room Simulator drill conducted February 12, 2013. The drill activities included two emergency action level classifications and the associated notifications to offsite authorities. The inspector also observed the licensee's post-drill critique and reviewed Condition Report (CR) CR-2013-03146, which identified a performance weakness.

These activities constitute completion of one sample as defined in Inspection Procedure 71114.06-05.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, Occupational Radiation Safety, and Physical Protection

4OA2 Problem Identification and Resolution (71152)

.1 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

As part of the various baseline inspection procedures discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that they were being entered into the licensee's corrective action program at an appropriate threshold, that adequate attention was being given to timely corrective actions, and that adverse trends were identified and addressed. The inspectors reviewed attributes that included the complete and accurate identification of the problem; the timely correction, commensurate with the safety significance; the evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent of condition reviews, and previous occurrences reviews; and the classification, prioritization, focus, and timeliness of corrective actions. Minor issues entered into the licensee's corrective action program because of the inspectors' observations are included in the attached list of documents reviewed.

These routine reviews for the identification and resolution of problems did not constitute any additional inspection samples. Instead, by procedure, they were considered an integral part of the inspections performed during the quarter and documented in Section 1 of this report.

b. Findings

No findings were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's corrective action program. The inspectors accomplished this through review of the station's daily corrective action documents.

The inspectors performed these daily reviews as part of their daily plant status monitoring activities and, as such, did not constitute any separate inspection samples.

b. Findings

No findings were identified.

4OA3 Followup of Events and Notices of Enforcement Discretion (71153)

1 Licensee Event Report 05000285/2012-010-00: Seismic Qualification of Instrument Racks

On August 3, 2012, the licensee submitted Licensee Event Report (LER) 2012-010, Revision 0, describing seismic class 1 components in a seismic class 2 instrument rack. This LER is described in Inspection Report 05000285/2012004 (ML12276A456).

The licensee notified the NRC via letter LIC-12-0164 (ML123210168) that it was withdrawing LER 2012-010, Revision 0 because further investigation revealed that the instrumentation racks which were initially identified as over the analyzed weight were fully qualified as seismic class 1.

The inspectors have yet to verify the classification of the instrument racks, and this licensee event report remains open.

.2 (Closed) Licensee Event Report 05000285/2012-014-00: Containment Beam 22 Loading Conditions Outside of the Allowable Limits

On July 11, 2012, while performing the Extent of Condition for an existing CR it was determined that Beam B-22, a structural member of the containment internal structure at the 1,013 foot elevation, loading conditions were outside the allowable limits for both Working Stress and No Loss of Function load combinations as noted in the USAR Section 5.11. This condition was identified on July 11, 2011, while the unit was shutdown and reported to the NRC Headquarters Operations Center the same day at approximately 4:03 p.m. (CDT) under Event Notification Number 48094.

A cause analysis is being evaluated and will be published in a supplement to this LER.

The LER is closed. Revision 1 of this LER was submitted on Jan 18, 2013.

.3 (Open) Licensee Event Report 05000285/2012-014-01: Containment Beam 22 Loading Conditions Outside of the Allowable Limits

On January 24, 2012, during the modification preparation for pipe supports for component cooling water piping in containment, multiple discrepancies were identified between the design calculations and the design drawings for concrete beams in the steam generator bays, 1,060 foot platform elevation, and the floor slab at the 1,045 foot elevation of containment. On July 11, 2012, while performing the Extent of Condition, it was determined that the loading conditions for Beam B-22, a structural member of the containment internal structure at the 1013 foot elevation, were outside the allowable limits for both Working Stress and No Loss of Function load combinations as noted in the USAR Section 5.11. Additional analysis has been completed which shows that with a live load of 140 psf or less, Beam 22 is able to meet its design function.

The Root Cause Analysis completed December 21, 2012, and determined the condition described in this report was due to inadequate ownership review by Omaha Public Power District of plant construction architect/engineer produced calculations.

.4 (Closed) Licensee Event Report 05000285/2012-017-00: Containment Valve Actuators Design Temperature Ratings Below those Required for Design Basis Accidents

While performing an extent of condition review associated with the adequacy of air operated equipment inside containment to withstand containment main steam line break (MSLB) and loss of coolant accident (LOCA) temperatures, it was discovered that valves HCV-238 (Reactor Coolant System (RCS) Loop 1a Charging Line Stop Valve), HCV-239 (RCS Loop 2a Charging Line Stop Valve), and HCV-240 (Pressurizer RC-4 Auxiliary Spray Inlet Valve) have nitrile based elastomers for the air filter regulator and actuator and may not be able to withstand Containment MSLB and LOCA temperatures. The design temperature limit for the nitrile elastomers used in the valves is 180°F which is acceptable for the normal operating conditions inside Containment of 120°F. However, during the MSLB and LOCA accident the temperature inside Containment is analyzed to reach 370°F. Since these valves have both open and close functions supported by an air accumulator, failure of the nitrile based elastomers could prevent the valves from fulfilling their intended safety function.

A cause analysis is in-process. When completed, this LER will be supplemented.

The LER is closed. Revision 1 of this LER was submitted on January 31, 2013.

.5 <u>(Open) Licensee Event Report 05000285/2012-017-01:</u> Containment Valve Actuators Design Temperature Ratings Below those Required for Design Basis Accidents

While performing an extent of condition review associated with the adequacy of air operated equipment inside containment to withstand containment main steam line break (MSLB) and loss of coolant accident (LOCA) temperatures, it was discovered that the Reactor Coolant System (RCS) Loop 1A Charging Line Stop Valve, the RCS Loop 2A Charging Line Stop Valve, and the Pressurizer RC-4 Auxiliary Spray Inlet Valve have nitrile based elastomers used in the air filter regulator and actuator. The design temperature limit for the nitrile elastomers used in the valves is 180°F which is acceptable for the normal operating conditions inside Containment of 120°F. However, during the MSLB and LOCA accident the temperature inside containment is analyzed to reach 370°F. Since these valves have both open and close functions supported by an air accumulator, failure of the nitrile based elastomers could prevent the valves from fulfilling their intended safety function.

The causal analysis did not determine why the nitrile elastomers were installed during original plant construction. However, it was determined that a procedural deficiency and human error resulted in the wrong type of elastomer material being used in the instrument air filter regulators when the air accumulators were added to the valves to support their safety function.

.6 <u>(Open) Licensee Event Report 05000285/2012-020-00:</u> Raw Water Pump Anchors

On December 2, 2012, while in Mode 5 (De-fueled), Fort Calhoun Station (FCS) determined that raw water pumps (AC-10A/B/C/D) base plate support anchors were not to be in accordance with design requirements due to of inadequate embedment. This resulted in the inoperability of all four pumps and a violation of Technical Specification requirements during past operating cycles.

On January 9, 2013, FCS completed calculation FC08216, Rev 0, Raw Water Pump AC-10A/B/C/D Ultimate Failure. This calculation, without safety/reductions factors, resulted in lower tensile loading requirements during a seismic event and no failure of the anchors. To return the base plate support anchors to design requirements, raw water pumps AC-10A/B/C base plate support anchors have been replaced with maxi bolts. Pump AC-10D repairs are pending.

The cause has been determined to be FCS Engineering personnel failing to validate the actual plant configuration and the use of uncorroborated drawing information in completion of design basis calculations.

4OA4 IMC 0350 Inspection Activities (92702)

Inspectors continued implementing IMC 0350 inspection activities, which include follow-up on the restart checklist items contained in the Confirmatory Action Letter (CAL) issued February 26, 2013 (EA-13-020, ML 13057A287). The purpose of these inspection activities is to assess the licensee's performance and progress in addressing its implementation and effectiveness of FCS's Integrated Performance Improvement Plan (IPIP), significant performance issues, weaknesses in programs and processes, and flood restoration activities.

Inspectors used the criteria described in baseline and supplemental inspection procedures, various programmatic NRC inspection procedures, and IMC 0350 to assess the licensee's performance and progress in implementing its performance improvement initiatives. Inspectors performed on-site and in-office activities, which are described in more detail in the following sections of this report. This report covers inspection activities from January 1 through February 16, 2013. Specific documents reviewed during this inspection are listed in the attachment.

The following inspection scope, assessments, observations, and findings are documented by CAL restart checklist item number.

.1 <u>Causes of Significant Performance Deficiencies and Assessment of Organizational Effectiveness</u>

Section 1 of the restart checklist contains those items necessary to develop a comprehensive understanding of the root causes of safety-significant performance deficiencies identified at FCS. In addition, Section 1 includes the independent safety culture assessment with the associated root causes and findings. The integration of the assessments under Item 1.f identifies the fundamental aspects of organizational performance in the areas of organizational structure and engagement, values, standards, culture, and human behaviors that have resulted in the protracted performance decline and are critical for sustained performance improvement. Section 1 reviews also include an assessment against appropriate NRC Inspection Procedure 95003 key attributes. These assessments are documented in section 4OA4.5.

.c Electrical Bus Modification and Maintenance – Red Finding

Item 1.c is included in the restart checklist for the failure to adequately design, modify, and maintain the electrical power distribution system, resulting in a fire in the safety-related 480 volt electrical switchgear. These deficiencies resulted in a red (high safety significance) finding.

(1) CAL Action Item 1.3.1.3

i. Inspection Scope

The purpose of Action Item 1.3.1.3 was for the licensee to complete Engineering Change (EC) 53257 involving the rebuilding of the 1B4A load center and obtaining Plant Review Committee (PRC) approval to authorize the use of this rebuilt load center.

The inspectors reviewed EC 53257, applicable drawings, and interviewed design, system engineering and fire protection personnel involved with rebuild of the 1B4A load center. The inspectors also performed independent visual inspections of accessible portions of the rebuilt 1B4A load center during the week of January 14, 2013.

The independent walkdowns and documentation review performed by the inspectors identified no adverse conditions regarding the rebuild of the 1B4A load center. However, the inspectors noted the 1B4A load center rebuild project required numerous post-modification tests, several of which have not been completed at the time of this inspection. The inspectors also noted that some cabinets in the switchgear room had bolted seismic supports while other cabinets, including those in the 1B4A load center, used tack welds as seismic supports. The inspectors questioned if the floor tack welds connected to embedded floor plates were qualified for seismic anchorage of safety-related electrical panels. The NRC will continue to follow up on this issue.

Item 1.3.1.3 will remain open until the inspectors verify completion of all required post-modification tests associated with the 1B4A load center rebuild and the inspectors' questions with the load center's seismic supports are resolved.

ii. Findings

No findings were identified; however, the NRC will continue to follow-up on this restart checklist item.

(2) CAL Action Item 1.3.1.4

i. Inspection Scope

The purpose of Action Item 1.3.1.4 was for the licensee to test all cables that terminated in the 1B4A load center and to provide the test results and a listing of cables that must be repaired or replaced.

The inspectors visually inspected some of the cables located above and near load center 1B4A and a sample of cables within load center 1B4A. The inspectors reviewed the licensee's closure package for Item 1.3.1.4, which included work orders, test results, condition reports, and the listing of the six cables that were replaced.

The NRC is still reviewing responses to questions regarding the licensee's cable testing methodology; therefore this item remains open.

ii. Findings

No findings were identified; however, the NRC will continue its follow-up of this item.

(3) CAL Action Item 1.3.1.9

i. Inspection Scope

The purpose of Action Item 1.3.1.9 was for the licensee to witness factory acceptance testing (FAT) of the new Square D circuit breakers that were to be installed in the 1B4A load center. These breakers replaced the existing AK-25 breakers and the two Square D input and bus tie breakers. The purpose of witnessing the FAT was to verify that the Square D replacement breakers would meet the requirements for the rebuilt load center that was damaged during the fire event on June 7, 2011.

An FCS project test engineer witnessed the FAT in August 2011; therefore, the NRC's inspection of this item consisted of reviewing a sample of the test results documentation, interviewing the FCS engineer that witnessed the testing, and interviewing FCS quality control and procurement personnel. The FAT was conducted at the Square D factory in Cincinnati, Ohio. Representatives from Nuclear Logistics, Inc. (NLI) and Square D were also present for the FAT. NLI provided the quality control (QC) and quality assurance activities for the FAT.

The FAT result documentation was completed by the technician performing the breaker tests and NLI QC personnel. The tests were performed in accordance with procedure SVP-150, "Standard Verification Plan for NLI/Square-D Masterpact Circuit Breakers […]," Revision 0. The FCS project test engineer that witnessed the testing informed the NRC that NLI QC personnel were present for some of the testing. The engineer stated that he was not familiar with NLI's QC program requirements or expectations for witnessing the FAT when he was at the testing facility. The NRC inspector believed this presented a weakness in the quality of FCS's oversight of the NLI and Square D testing of the breakers. The NRC inspector presented this observation to FCS management on January 18, 2013. The NRC inspector did not identify deficiencies in the sample of test result documentation that it reviewed.

During the 2009 modification that installed the NLI/Square D replacement breakers, the FAT failed to identify the wiring error in the breaker's zone selective interlocking (ZSI) feature, which contributed to losing the 1B3A bus during the fire event. The licensee performed work orders that verified correct placement and continuity of the other ZSI jumpers in the station.

This activity constitutes completion of Action Item 1.3.1.9 as described in the Restart Checklist Basis Document for CAL 4-12-002.

ii. Findings

No findings were identified.

(4) CAL Action Item 1.3.1.11

i. Inspection Scope

The purpose of Action Item 1.3.1.11 was for the licensee to install a new 4160-to-480 volt transformer (T1B4A). The purpose of the transformer is to power the 1B4A bus when required. The old transformer was removed in accordance with Maintenance Work Order (MWO) 418205-01, and the new transformer was installed in accordance with MWO 418205-02. OPPD personnel completed all of the work. The connection to the 480 volt secondary connections was performed by Nuclear Logistics Inc. (NLI) personnel in accordance with Traveler 093-15397 (i.e., the work authorization).

The inspectors reviewed CR 2011-8951, applicable MWOs, the NLI work authorization, and applicable drawings, and interviewed design, system engineering, and fire protection personnel involved with the transformer replacement and the 1B4A load center rebuild project. The inspectors verified that a final closeout inspection, required functional tests, and post-maintenance tests of the transformer were completed by the licensee. The inspectors also performed independent visual inspections of accessible portions of the new transformer during the week of January 14, 2013.

The inspector did not identify any adverse conditions regarding the new transformer during its independent walkdowns and documentation review.

This activity constitutes completion of Action Item 1.3.1.11 as described in CAL 4-12-002.

ii. Findings

No findings were identified.

(5) CAL Action Item 1.3.1.22

i. Inspection Scope

The purposes of Action Item 1.3.1.22 were for the licensee to restore all temporary modifications installed as a result of the fire or construction activities to repair Load Center 1B4A and the extent of condition (i.e., Action Items 1.3.1.25, 1.3.1.26, and 1.3.1.27) to normal conditions and to ensure that operational requirements and design basis are met with normal equipment control and power feeds.

The inspectors reviewed the licensee's closure package for this action item and a sample of the temporary modification engineering change (EC) packages, and the inspectors did a visual inspection of accessible portions of the load center cabinets. The licensee provided the NRC inspectors with a listing of open temporary modifications as of July 19, 2012, and confirmed that none of those modifications were related to repairing Load Center 1B4A. The licensee informed the inspectors that no more temporary modifications are planned for any work associated with repairing 1B4A or the extent of condition.

When reviewing a sample of the EC packages, the inspectors noted a difference between two packages (i.e., EC 53288 and EC 54320) in the timing of when the plant was physically restored and when the procedures and drawings used by operations personnel were subsequently updated. In one package, the time difference was two days; in other, the time difference was approximately six weeks. The inspectors reviewed the Standing Order (SO) procedure SO-0-25, "Temporary Modifications," and noticed that the procedure did not contain a timing requirement for when the operators' procedures and drawings had to be updated after the plant was physically restored from a temporary modification. The inspector questioned if the lack of a timing requirement could allow for operators to reference outdated procedures and drawings that no longer represented the current configuration of the plant. The inspectors discussed this observation with licensee management on February 1, 2013.

The inspector did not identify any concerns specific to the temporary modifications associated with the load center repair work. This activity constitutes completion of Action Item 1.3.1.22 as described in the Restart Checklist Basis Document for CAL 4-12-002.

ii. Findings

No findings were identified.

.2 <u>Flood Restoration and Adequacy of Structures, Systems, and Components</u>

Section 2 of the Restart Checklist contains those items necessary to ensure that important structures, systems and components affected by the flood and safety significant structures, systems and components at FCS are in appropriate condition to support safe restart and continued safe plant operation. Section 2 reviews will also include an assessment of how the licensee appropriately addressed the NRC Inspection Procedure 95003 key attributes as described in Section 6.

.a Flood Recovery Plan Actions Associated With Facility and System Restoration

Item 2.a is the NRC's independent evaluation of FCS's Flood Recovery Plan. An overall flood recovery plan is important to ensure the station takes a comprehensive approach to restoring the facility structures, systems, and components to pre-flood conditions.

The areas to be inspected are identified in the CAL. Inspection items are considered complete when the licensee has submitted a closure package that has been satisfactorily reviewed by the inspectors

(1) <u>CAL Action Item 3.4.2.1</u>

i. <u>Inspection Scope</u>

The purpose of Action Item 3.4.2.1 was to establish a High Impact Team with Charter. This item was required to be completed following plant startup.

Action item 3.4.2.1 was created for the licensee to develop a response to recent failures of power supplies in the Reactor Protective System (RPS).

The licensee utilizes a High Impact Team (HIT) if an emergent issue that cannot be effectively managed by the resources provided through normal work management or maintenance practices. A HIT will consist of a management sponsor, a HIT leader, and a team composed of personnel from varying organizations selected by the leader to best resolve the issue.

A HIT was established on July 15, 2011 by the licensee to respond to recent failures in the RPS. The HIT leader created a charter which was approved by the management sponsor. The inspectors reviewed the charter for applicability to the issue of failing power supplies only. The disposition of the charter, i.e., the final product of the charter, will be evaluated in action item 3.4.2.2.

The intent of this action item was to focus specifically on power supplies in the RPS, and any safety related power supplies in other systems. As a result of the investigation of power supplies, service life issues became a bigger issue. This issue is being tracked in the FCS Restart Checklist, Section 3.d.2. As such, the inspectors concluded that the HIT charter regarding only power supplies was adequate.

The charter directed the HIT to identify all power supplies in the RPS, and all safety related power supplies in other systems.

This activity constitutes completion of Action Item 3.4.2.1 as described in CAL 4-12-002.

ii. <u>Findings</u>

No findings were identified.

(2) CAL Action Item 3.2.2.1

ii. Inspection Scope

The purpose of Action Item 3.2.2.1 was to test or replace 13.8KV medium voltage cable for emergency power feed and met tower feed. This item was required to be completed prior reactor startup. However, after the issuance of the FCS Flood Recovery Plan, it was identified that this action would need to be completed prior to exceeding 210 degrees fahrenheit in the Reactor Coolant System. The licensee subsequently created Item 3.2.1.4 which is an identical action, to be completed prior to exceeding 210 degrees fahrenheit in the Reactor Coolant System.

Portions of this action item are duplicates of several other action items. The inspectors reviewed the testing and replacement of the 13.8 KV emergency power feed in Inspection Report 2012-003 (ML12226A630), specifically action items 1.4.1.7 and 1.4.1.10.

The inspectors previously completed a system health review of the Meteorological Monitoring System, which included the work done on the met tower. This review is documented in inspection report 2012-012 (ML). The inspectors also reviewed the work order and closure package associated with the cable replacement for the met tower (Action Item 1.4.3.22), and concluded the cable replacement was adequate.

This activity constitutes completion of Action Item 3.2.2.1 as described in CAL 4-12-002.

ii. Findings

No findings were identified.

(3) CAL Action Items 3.2.2.3 and 3.2.2.4

iii. Inspection Scope

The purpose of Action Items 3.2.2.3 and 3.2.2.4 was for cable replacement and testing if cables tested as part of Action Item 3.2.2.1 needed replacing. These items were required to be completed prior to reactor startup.

The licensee provided the inspectors with closure packages for these two items, and both packages noted, “Completed actions 3.2.2.01 and 3.2.2.02 identified no defective cables.”

The basis for closing these closure packages was inadequate. As discussed in Action Item 3.2.2.1 (above), cables were replaced in conjunction with action items 1.4.1.7 for the emergency power feed and 1.4.3.22 for the met tower.

However, the inspectors concluded these action items were complete based on the inspection that was completed in closing action item 3.2.2.1

This activity constitutes completion of Action Items 3.2.2.3 and 3.2.2.4 as described in CAL 4-12-002.

ii. Findings

No findings were identified.

.3 Adequacy of Significant Programs and Processes

Section 3 of the Restart Checklist addresses major programs and processes in place at FCS. Section 3 reviews will also include an assessment of how the licensee appropriately addressed the NRC Inspection Procedure 95003 key attributes as described in Section 6.

.b Equipment Design Qualifications

This item of the Restart Checklist verifies that plant components are maintained within their licensing and design basis. Additionally, this item provides monitoring of the capability of the selected components and operator actions to perform their functions. As plants age, modifications may alter or disable important design features making the design bases difficult to determine or obsolete. The plant risk assessment model assumes the capability of safety systems and components to perform their intended safety function successfully.

(1) Inspection Scope

ii. High Energy Line Break Program and Equipment Qualifications

Industry experience with extended power up-rates (a method some plants use to produce more power from the same reactor) highlighted potential problems associated with high energy line break effects. In preparations for a postponed extended power up-rate, FCS reviewed high energy line break calculations. FCS found that it was lacking adequate documentation and calculations for high energy line break effects in some areas. The NRC will assess and inspect the high energy line break analyses and documents to ensure the plant is within their license and design basis for high energy line break effects. The NRC will also inspect the licensee's qualifications and documentation to certify equipment for harsh environments. These equipment qualifications are required by regulations (e.g., 10 CFR 50.49).

NRC inspectors reviewed the licensee's progress toward reconstitution of its High Energy Line Break program and Equipment Environmental Qualification (EEQ) program. The inspectors reviewed procedures, calculations, vendor documents and corrective action documents. Inspectors also interviewed station personnel that performed the reviews. Inspectors reviewed testing documents for containment penetration feed-throughs having Teflon insulation and sealing materials under the licensee's EEQ program.

(2) Assessment

The licensee's closure package for the review of its HELB and EQ programs was in progress as of the end of the inspection period. The licensee stated that the closure package will be ready for NRC inspection in April 2013. This date is subject to change.

The licensee is reconstituting its EQ program because a 2007 self-assessment revealed deficiencies in system health reports and that the design basis was not well-tracked. As of the end of the inspection period, the licensee was about 75% through reassessing its harsh environment files and EQ binders to demonstrate qualification. The licensee stated that its closure package will contain the updated EQ binders, equipment walk-down lists, and WOs for modifications to minimize harsh environments or relocate equipment or to qualify components for harsh environments.

The following issues identified by the licensee's review of its HELB and EQ programs were reviewed during this inspection period:

- CR 2012-05509, dated June 15, 2012, which questions the adequacy of air operated valves (AOVs) inside containment to withstand containment main steam line break (MSLB) and loss of coolant accident (LOCA) temperatures.

- CR 2012-12739, dated July 6, 2012, which documents unacceptable EEQ documentation for States NT electrical terminal blocks. Examples of missing information include; the maximum leakage current is not provided, use of RTV sealant and its qualification has not been demonstrated, and the envelope peak temperature for the component to maintain qualification is not provided. These issues of inadequate harsh file documentation brings into question compliance with 10 CFR 50.49.

- CR 2013-00566, dated January 10, 2013, which documents Foxboro transmitters EQ qualified life is different from the manufacturer's qualified life. Specifically, numerous transmitters were identified to have reached their end of qualified life (exceeded the manufacturers maximum qualified life of 20 years). Several other transmitters were identified that would reach their end of qualified life by the next outage.

The inspectors reviewed the listed condition reports and interviewed station system engineering and design engineering personnel and contractors directly involved with the evaluation and associated corrective actions for these deficiencies. In addition, the inspectors did field walkdowns and independent inspections of numerous terminal blocks, transmitters, and AOVs. Applicable electrical junction boxes housing the terminal blocks were opened by station electricians to facilitate the NRC visual inspections.

During the review of CR 2012-05509, regarding the temperature rating of safety-related AOV elastomers, the inspectors noted the licensee had issued LER 2012-017, Revision 0, which documents three safety related valves (HCV-238, 239, and 240) found to have nitrile elastomers qualified for 180 °F, which is much lower than the postulated HELB and LOCA temperatures (230 °F to 382 °F). In addition, the inspector was informed by the licensee that approximately 20 AOVs had been identified with similar lower temperature rating nitrile elastomers both inside and outside containment. A failure of the actuator diaphragm or other nitrile components associated with safety-related AOVs could prevent the valves from performing their safety function.

The inspectors identified that FCS missed two separate opportunities dating back to 2009 to identify this degraded condition. Specifically, on November 5, 2009, CR 2009-5356 reported that AFW HCV-1108A failed its instrument air drop test because of a leak from its filter regulator (F/R). A degraded “O” ring in the F/R caused the air leak. A laboratory analysis completed on April 29, 2010, concluded the “O” ring for the filter regulator lost its elasticity most likely caused by higher than expected temperature effects. The F/R was located approximately 5 feet from the SG (RC-2B), which exposed HCV-1108A to approximately 130 °F.

Additionally, on November 16, 2009, CR 2009-5780 questioned the temperature rating for air regulators for AFW control valves HCV-1107A and 1108A in containment. This CR also recognized that during the root cause investigation for CR 2009-5356, which was associated with the failure of the accumulator drop test for HCV-1108A, the specifications/application of the regulators Nitrile elastomers were in question. The CAs included an engineering change (EC- 47862), to relocate the valves regulator and solenoids away from the steam generators to a lower temperature area. The inspectors determined the subject evaluations were deficient in that they failed to identify the nonqualified nitrile elastomers and failed to include an adequate extent of condition review. As a result, multiple safety-related AOVs in several safety related system were allowed to continue to operate with this degraded condition. The NRC will continue to evaluate FCS assessment and extent of condition review regarding this issue.

The inspectors noted FCS had initiated actions to replace the elastomers for HCV-238, 239, and 240. However, for the remaining 17 valves, the licensee had performed evaluations to justify not replacing the nonqualified elastomers. Specifically, the inspectors reviewed EA12-024, Rev. 0, dated January 11, 2013. The purpose of this EA was to determine the design temperature requirement for elastomers inside the auxiliary feedwater system (AFW) valves HCV-1107A and 1108A. The inspectors noted this EA recognized nitrile elastomers inside the valve bodies, actuators, and filter regulators had been used. The nitrile elastomers have a maximum design rating of 180 °F. During a LOCA or MSLB design basis accident, the temperature that these valves would experience is above 180 °F (between 230

°F to 382 °F). However, the EA incorrectly concluded that a failure of the elastomers during a LOCA or MSLB would not adversely affect the safety-related functionality of the AFW system. The EA incorrectly states that the elastomers inside HCV-1107A and HCV-1108A are only required to meet the temperature inside containment under “mild” operating conditions which is 140 °F. The inspectors did not agree with this conclusion and believe operability of these valves would have been impacted because of the much higher DBA LOCA or MSLB temperatures in which these valves are required to operate (i.e., 230 °F to 382 °F).

The inspectors also reviewed FCS’s extent of condition review for other nonqualified elastomers, which was documented in ACA-CR2012-08621, “Extent of Condition Research,” which is a white paper prepared by ENERCON for FCS, dated January 10, 2013. This document evaluated approximately 15 of the 17 other safety related AOVs that could potentially be exposed to the same adverse temperature conditions as HCV-238, 239, and 240 identified in LER 2012-017. The inspectors determined this evaluation was also deficient in that it concluded no elastomers replacement were required for any of the affected AOVs. The inspectors were concerned because some of these valves included the AFW system outside containment valves HCV-1107B and 1108B (associated with HCV-1107A and 1108A), and the steam supply valves to the safety-related AFW turbine driven pump FW-10.

The inspector noted the deficient evaluations identified above may be caused by an improper application of the single failure criteria. The licensee issued CRs 2013-01396 and 2013-02611 to address the inspector’s concerns.

As of the end of this inspection period, the licensee’s walkdowns, inspections, extent of condition reviews and corrective actions associated with the overall EEQ reconstituting program have not been fully implemented. Therefore, Item 3.b.2 will remain open pending NRC review at a later date.

(3) Findings

No findings or violations of NRC requirements were identified; however, the NRC will continue its assessment of this CAL item.

.c Design Changes and Modifications

Modifications to risk-significant structures, systems, and components can adversely affect their availability, reliability, or functional capability. Modifications to one system may also affect the design bases and functioning of interfacing systems. Similar modifications to several systems could introduce potential for common cause failures that affect plant risk. A temporary modification may result in a departure from the design basis and system success criteria. Modifications performed during increased risk configurations could place the plant in an unsafe condition.

This item assesses the effectiveness of the licensee’s implementation of changes to facility structures, systems, and components, risk significant normal and emergency operating procedures, test programs, evaluations required by 10 CFR 50.59, and the updated final safety analysis report. The NRC will inspect to provide assurance that changes have been appropriately implemented.

(1) Inspection Scope

i. Vendor Modification Control

NRC inspections indicated that several vendor modification packages did not ensure critical characteristics were identified and properly addressed. To address this issue, Fort Calhoun Station will review work performed by vendors. The NRC will evaluate the effectiveness of the vendor program to ensure adequate oversight of vendor work.

ii. 10 CFR 50.59 Screening and Safety Evaluations

NRC inspections indicated that several changes to the facility were not properly screened or evaluated per the requirements 10 CFR 50.59. Plant and procedure modifications will be reviewed to determine if modifications required a 10 CFR 50.59 review. The assessment of Design Changes/Modifications will take into account the key attributes of Inspection Procedure 95003 (Sections 02.03 and 03.03). The NRC will evaluate the effectiveness of the licensee's 10 CFR 50.59 process to ensure proper treatment changes to the facility.

(2) Assessment

The licensee's closure packages for vendor modifications and 10 CFR 50.59 documentation reviews were not complete during this inspection period.

(3) Findings

No findings were identified; however, the NRC will continue to follow-up on these restart checklist items.

.5 <u>Assessment of NRC Inspection Procedure 95003 Key Attributes</u>

Section 5 of the Restart Checklist is provided to assess the key attributes of NRC Inspection Procedure 95003. Performing Inspection Procedure 95003 will provide the NRC with supplemental information regarding licensee performance, as necessary to determine the breadth and depth of safety, organizational, and programmatic issues. While the procedure does allow for focus to be applied to areas where performance issues have been previously identified, the procedure does require that some sample reviews be performed for all key attributes of the affected strategic performance areas. The key attributes are listed as separate subsections below. It is intended that the activities in these subsections be conducted in conjunction with reviews and inspections for Sections 1 – 4, rather than a stand-alone review. The NRC will perform a detailed review of the auxiliary feedwater system as part of the Inspection Procedure 95003 assessment.

.f Emergency response

(1) Observe continuing emergency preparedness training

a. Inspection Scope

The inspector reviewed a simulator scenario and two lesson plans for continuing emergency preparedness training, observed a crew of licensed operators during continuing training in the Control Room Simulator, and observed two sessions of emergency response organization training. The inspector compared the training content and observed student performance with the licensee's emergency plan and emergency plan implementing procedures, and with the planning standards of 10 CFR 50.54(b) to determine whether the licensee could acceptably implement its emergency plan. The specific documents reviewed are described in the attachment to this report.

These activities constitute completion of one sample of Inspection Element 95003-1.04, independent evaluation of the adequacy of the site emergency preparedness program.

b. Findings

No findings were identified.

(2) Review corrective actions for NCVs documented in IR 05000285/2010-003

a. Inspection Scope

The inspector performed an onsite review of licensee corrective actions for NCVs 05000285/2010-003-02, 05000285/2010-003-03, and 05000285/2010-003-04 during inspections conducted March 26-30, 2012, and November 26-30, 2012. These NCVs were failures to conduct an adequate audit of offsite emergency preparedness interfaces, to conduct adequate environmental monitoring drills, and to have adequate guidance to preclude unnecessary protective action recommendations to offsite authorities. The inspector reviewed the following:

- Procedure NOS-DG-024, "Nuclear Oversight," Revision 0, and Audit Report 12-QUA-014, "Quality Assurance Audit Report Number 4, Emergency Planning," dated March 23, 2012, to determine the effectiveness of corrective actions for NCV 05000285/2010-003-02;

- Surveillance EPT-14, "Environmental Monitoring Drill," dated November 15, 2010; December 27, 2011; and November 13, 2012, to determine the effectiveness of corrective actions for NCV 05000285/2010-003-03; and,

- Procedure EPIP-EOF-7, "Protective Action Guidelines," Revisions 22 through 24, to determine the effectiveness of corrective actions for NCV 05000285/2010-003-04. The inspector also observed a biennial exercise conducted March 27, 2012, and emergency response organization training on the protective action recommendation process conducted February 13, 2013, to verify that changes to Procedure EPIP-EOF-7 had been incorporated into the continuing training program.

This activity constitutes completion of the FCS Restart Checklist Items related to these NCV's.

b. Findings

No findings were identified.

(3) Flood Recovery Action Plan Item 5.1.2.1

a. Inspection Scope

The purpose of this Flood Recovery Action Item was to obtain the capability to provide alternate power to offsite emergency warning sirens that lost normal AC power sources during the June through September 2011 flood. The inspector performed an in-office review of the closure documentation for Flood Recovery Action Item 5.1.2.1. The inspector the following documents:

- Recovery Action Closure Verification Checklist for obtaining ten solar power charging sets for offsite emergency warning sirens, dated January 17, 2013;

- Federal Signal Corporation invoice for ten PVS220W-48 DC Solar Power kits, shipped from University Park, Illinios, to the North Omaha Power Station, 7475 Pershing Drive, Omaha, Nebraska, on August 15, 2011; and,

- Packing Slip for receipt of ten PVS220W-48 DC Solar Power kits, shipped at the North Omaha Power Station, 7475 Pershing Drive, Omaha, Nebraska, printed August 11, 2011.

This activity constitutes completion of Flood Recovery Plan Item 5.1.2.1 as described in CAL 4-11-003.

b. Findings

No findings were identified.

(4) Flood Recovery Action Plan Item 5.1.2.2

a. Inspection Scope

The purpose of conducting a fly-over of flooded areas in the emergency planning zone was to determine the extent of damage to offsite emergency preparedness capabilities, including offsite emergency warning sirens and designated evacuation routes. The fly-over was conducted on August 22, 2011. The inspector conducted an in-office review of the closure documentation for Flood Recovery Plan Item 5.1.2.2, including,

- The Recovery Action Closure Verification Checklist for performing a fly-over of flooded areas to determine the status of offsite emergency warning sirens, dated January 17, 2013; and,

- Pictures of sirens 1, 69, 76, and 260, taken on August 22, 2011.

This activity constitutes completion of Flood Recovery Plan Item 5.1.2.2, as described in CAL 4-11-003.

b. Findings

No findings were identified.

(5) Flood Recovery Action Plan Item 5.1.2.6

a. Inspection Scope

The purpose of installing solar charging sets on ten offsite emergency warning sirens located in flooded areas was to restore the emergency function of those sirens before normal AC power had been returned to its approved configuration. The restoration of emergency warning capability was intended to occur prior to allowing public to re-enter or re-occupy flooded areas, and reflected uncertainity about restoration of normal AC power in those areas. The inspector performed an in-office review of the closure documentation for Flood Recovery Action Item 5.1.2.6, including the following:

- The Recovery Action Closure Verification Checklist for installing ten solar power charging sets, dated January 17, 2013;

- A letter from Mr. Joshua Bousam, Manager of Emergency Planning, to Ms. Laurel Ryan, FCS Specialist, FEMA Region VII, dated January 10, 2013. The letter requested FEMA clarify that the installation of solar power charging sets for some offsite emergency warning sirens were not required to be included in the Alert and Notification System Design Report; and,

- A letter from Mr. Ronald McCade, Chief, Technological Services Branch, FEMA Region VII, to Mr. Joshua Bousam, Manager of Emergency Planning, Fort Calhoun Station, dated January 14, 2013. The letter conveyed FEMA

Region VII's determination that the decision by FCS not to implement a solar power backup power system for some offsite emergency warning sirens did not impact the current Alert and Notification System Design Report.

This activity constitutes completion of Flood Recovery Plan Item 5.1.2.6, as described in CAL 4-11-003.

b. Findings

No findings were identified.

(6) Flood Recovery Action Plan Item 5.3.2.6

a. Inspection Scope

The purpose of performing emergency response facility inventories, walk-throughs, and assessments is to ensure the ongoing capability of each facility to support its emergency plan function(s). The inspector performed an in-office review of closure documentation for Flood Recovery Action Item 5.3.2.6, including:

- The Recovery Action Closure Verification Checklist for performing emergency response facility inventories, walk-throughs, and assessments, dated July 13, 2012;
- Surveillance EPT-24, "Equipment Inventory, Technical Support Center," dated July 27, 2011;
- Surveillance EPT-25, "Equipment Inventory, Control Room," dated September 30, 2011;
- Surveillance EPT-26, "Equipment Inventory, Security Building, Offsite Vans, Emergency Operations Facility," dated September 2, 2011;
- Surveillance EPT-30, "Equipment Inventory, Auxiliary Building Roof," dated August 29, 2011;
- Surveillance EPT-54, "Equipment Inventory, Operations Support Center," dated August 19, 2011;
- Surveillance EPT-55, "Equipment Inventory, New Warehouse, Alternate Shutdown Panel, Maintenance Shop, and RP Counting Room," dated September 30, 2011; and,
- Surveillance EPT-26, "Equipment Inventory, Security Building, Offsite Vans, Emergency Operations Facility," dated May 24, 2012.

The inspector also verified that subsequent routine emergency response facility equipment inventories and walk-throughs had been conducted as scheduled during onsite inspections conducted October 19-20, 2011, March 26-30, 2012, and November 26-30, 2012.

This activity constitutes completion of Flood Recovery Plan Item 5.3.2.6, as described in CAL 4-11-003.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

Exit Meeting Summary

The inspectors debriefed Mr. L. Cortopassi, Site Vice President, and other members of the licensee's staff of the partial results of the licensed operator requalification program inspection on November 30, 2012. On January 11, 2013, a telephonic exit was conducted with Mr. Randy Cade, Manager Operations Training. The licensee representative acknowledged the issues presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

On February 13, 2013, the inspector presented results of the onsite inspection of emergency preparedness drills and training, and the in-office inspection of three Flood Recovery Action Items, to Mr. L. Cortopassi, Site Vice President, and other members of the licensee’s staff. The licensee acknowledged the issues presented. The inspector asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

On March 6, 2013, the inspectors presented the inspection results to Mr. L. Cortopassi, Site Vice President, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspector asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

R. Cade, Manager Operations Training
J. Bousum, Emergency Planning Manager
S. Shea, Supervisor Operations Training (Requal)
C. Cameron, Supervisor Regulatory Compliance
L. Cortopassi, Site Vice President
E. Matzke, Senior Licensing Engineer
E. Plautz, Supervisor, Emergency Planning
M. Prospero, Division Manager, Plant Operations
T. Simpkin, Manager, Site Regulatory Assurance

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000285/2012-014-01	LER	Containment Beam 22 Loading Conditions Outside of the Allowable Limits
05000285/2012-017-01	LER	Containment Valve Actuators Design Temperature Ratings Below those Required for Design Basis Accidents
05000285/2012-020-00	LER	Raw Water Pump Anchors

Closed

05000285/2012-014-00	LER	Containment Beam 22 Loading Conditions Outside of the Allowable Limits
05000285/2012-017-00	LER	Containment Valve Actuators Design Temperature Ratings Below those Required for Design Basis Accidents

Discussed

05000285/2012-010-00	LER	Seismic Qualification of Instrument Racks

LIST OF DOCUMENTS REVIEWED

Section 1R11: Licensed Operator Requalification Program

PROCEDURES

NUMBER	TITLE	REVISION / DATE
TAP-08	Examination Control and Administration	57
TAP-43	Operations Requalification Examinations	11
TAP-47	Revision of Training Programs	36

MISCELLANEOUS DOCUMENTS

NUMBER	TITLE	REVISION / DATE
Written Exams	2012 Examinations, Weeks 1-5 (RO and SRO)	Rotation 6
JPMs	S-0347AF, Unload DG-1 (Alternate Path)	0
	S-0404, DCS Bypass of FT-1101	0
	S-0413, Secure Steam Generator Blowdown	0
Scenarios	SEG 84202A-1	9
	SEG 84210C	2

Section 4OA4: IMC 0350 Inspection Activities

CONDITION REPORTS (CR)

2009-5356	2009-5453	2009-5509	2009-5780	2011-8953
2012-01601	2012-05431	2012-05509	2012-08621	2013-01396
2013-02611	2012-13030	2012-15703	2012-19781	2013-03130
2013-03146				

WORK ORDERS (WO)

425377

PROCEDURES

NUMBER	TITLE	REVISION
SO-0-25	Temporary Modification Control	80
	Fort Calhoun Station Radiological Emergency Response Plan	November 13, 2012

PROCEDURES

NUMBER	TITLE	REVISION
OSC-1	Emergency Classification	46
OSC-2	Command and Control Position Actions, Notifications	56
EOF-7	Protective Action Guidelines	24

DRAWINGS

NUMBER	TITLE	REVISION
12234	Simplified One Line Diagram, Plant Electrical System PI&D	41
27563	Simplified One Line Diagram, Plant Electrical System USAR-FIG 8.1-1	14

MISCELLANEOUS DOCUMENTS

NUMBER	TITLE	REVISION / DATE
	Electrical Diagnostic Testing of Medium Voltage Cables, Fort Calhoun Nuclear Generating Station (OPPD), Kinetrics North America Inc, Report No.: K-503604-RA-0001-R00	2/7/12
	Technical Procedure High Voltage Testing of Solid Extruded Polymetric Cables, Kinetrics North America Inc, Report No.: K-503604-PSWI-0001-R00	10/14/11
WO 0042103201	Clean/Inspect Inverter “D” per EM-PM-EX-0800	September 22, 2011
TM EC 53288	DC Bus 1 and 2 Lifted Leads due to 1B4A Fire	April 4, 2012
TM EC 54320	Provide Temporary Power to MCC-3C4C-2	December 16, 2011
	Closure Package for FRP 1.3.1.22, associated with CR 2011-8951	August 12, 2012
	Closure Package for FRP 1.3.1.9, associated with CR 2011-8951	August 12, 2012
	Closure Package for FRP 1.3.1.4, associated with CR 2011-8951	August 12, 2012