



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

November 13, 2013

Mr. Christopher Costanzo
Vice President
Nine Mile Point Nuclear Station, LLC
Constellation Energy Nuclear Group, LLC
P.O. Box 63
Lycoming, NY 13093

**SUBJECT: NINE MILE POINT NUCLEAR STATION, LLC - NRC INTEGRATED
INSPECTION REPORT 05000220/2013004 AND 05000410/2013004**

Dear Mr. Costanzo:

On September 30, 2013, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Nine Mile Point Nuclear Station, LLC (NMPNS) Units 1 and 2. The enclosed inspection report documents the inspection results, which were discussed on October 24, 2013, with you and other members of your staff.

The inspection 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 Title 10 of the *Code of Federal Regulations* 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 component of the NRC's Agencywide Documents Access and Management

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Sincerely,

/RA/

Daniel L. Schroeder, Chief
Reactor Projects Branch 1
Division of Reactor Projects

Docket Nos: 50-220 and 50-410
License Nos: DPR-63 and NPF-69

Enclosure: Inspection Report 05000220/2013004 and 05000410/2013004
w/ Attachment: Supplementary Information

cc w/encl: Distribution via ListServ

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos: 50-220 and 50-410

License Nos: DPR-63 and NPF-69

Report Nos: 05000220/2013004 and 05000410/2013004

Licensee: Constellation Energy Nuclear Group, LLC (CENG)

Facility: Nine Mile Point Nuclear Station, LLC (NMPNS)
Units 1 and 2

Location: Oswego, NY

Dates: July 1, 2013, through September 30, 2013

Inspectors: K. Kolaczyk, Senior Resident Inspector
E. Miller, Resident Inspector
J. Ambrosini, Senior Resident Inspector
J. DeBoer, Project Engineer
B. Dionne, Health Physicist
S. Hammann, Senior Health Physicist
P. Kaufman, Senior Reactor Inspector
J. Krafty, Resident Inspector
J. Laughlin, Emergency Preparedness Inspector

Approved by: Daniel L. Schroeder, Chief
Reactor Projects Branch 1
Division of Reactor Projects

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SUMMARY

IR 05000220/2013004, 05000410/2013004; 07/01/2013 - 09/30/2013; Nine Mile Point Nuclear Station (NMPNS), Units 1 and 2; Routine Integrated Inspection Report.

The report covered a 3-month period of inspection by resident inspectors and announced inspections performed by regional inspectors. The inspectors identified no findings during this period. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4.

No findings were identified.

REPORT DETAILS

Summary of Plant Status

Unit 1 began the inspection period at 100 percent power. On July 3, 2013, power was decreased to 90 percent to start recirculation pump 15. Power was returned to 100 percent later that day. On July 8, Unit 1 was shut down due to elevated unidentified leakage in the primary containment. Following identification of the source of the leakage and the completion of repairs to the reactor water cleanup vent valve 33-61, Unit 1 returned to 100 percent power on July 12. On July 13, power was reduced to 75 percent for a rod pattern adjustment and later that day returned to 100 percent power. On September 9, Unit 1 decreased power to 90 percent to perform turbine stop valve testing and remove recirculation pump 13 from service. Reactor power was returned to 100 percent later that day. Unit 1 remained at full power for the remainder for the inspection period.

Unit 2 began the inspection period at 100 percent power. On July 19, 2013, reactor power was decreased to 98 percent due to high condensate pump discharge header temperature. Power was returned to 100 percent later that day. On September 7, Unit 2 reduced power to 85 percent to conduct turbine stop valve testing, returning to full power that same day. On September 21, Unit 2 reduced power to 70 percent to perform a control rod pattern adjustment and scram time testing. Unit 2 returned to full power on September 22 and operated at full power for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01 – 1 sample)

Readiness for Seasonal Extreme Weather Conditions

a. Inspection Scope

The inspectors performed a review of the station's readiness for the onset of seasonal high temperatures. The review focused on Unit 1 batteries 11 and 12 and emergency diesel generators (EDGs) 102 and 103 on July 17, 2013. The inspectors reviewed the Updated Final Safety Analysis Report (UFSAR), technical specifications (TSs), and the corrective action program (CAP) to determine what temperatures or other seasonal weather could challenge these systems, and to ensure CENG personnel had adequately prepared for these challenges. The inspectors reviewed station procedures including CENG's seasonal weather readiness procedure and applicable operating procedures. The inspectors performed walkdowns of the selected systems to ensure station personnel identified issues that could challenge the operability of the systems during hot weather conditions. Documents reviewed for each section of this inspection report are listed in the Attachment.

b. Findings

No findings were identified.

1R04 Equipment Alignment

.1 Partial System Walkdowns (71111.04Q – 4 samples)

a. Inspection Scope

The inspectors performed partial walkdowns of the following systems:

- Unit 2 Division I standby gas treatment system (SGTS) following functional testing on July 18, 2013
- Unit 1 uninterruptible power supply (UPS) system for the reactor protection system bus 11 following the trip of the alternating current (AC) breaker for UPS 162A and B on July 22, 2013
- Unit 1 offsite power systems following testing on EDG 102 on July 25, 2013
- Unit 2 high-pressure core spray (HPCS) system while the reactor core isolation cooling (RCIC) system was out of service (OOS) for planned maintenance on August 6, 2013

The inspectors selected these systems based on their risk significance relative to the reactor safety cornerstones at the time they were inspected. The inspectors reviewed applicable operating procedures, system diagrams, the UFSAR, TSs, work orders (WOs), condition reports (CRs), and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have impacted system performance of their intended safety functions. The inspectors also performed field walkdowns of accessible portions of the systems to verify system components and support equipment were aligned correctly and were operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no deficiencies. The inspectors also reviewed whether CENG staff had properly identified equipment issues and entered them into the CAP for resolution with the appropriate significance characterization.

b. Findings

No findings were identified.

.2 Full System Walkdown (71111.04S – 1 sample)

a. Inspection Scope

On September 17, 2013, the inspectors performed a complete system walkdown of accessible portions of the Unit 1 primary containment isolation valves to verify the existing equipment lineup was correct. The inspectors reviewed operating procedures, drawings, completed surveillances, and the UFSAR to verify the system was aligned to perform its required safety functions. The inspectors performed field walkdowns of accessible portions of the system to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of components and observed operating parameters of equipment to verify that there were no deficiencies. Additionally, the inspectors reviewed a sample of related CRs and WO to ensure CENG personnel appropriately evaluated and resolved any deficiencies.

b. Findings

No findings were identified.

1R05 Fire Protection

.1 Resident Inspector Quarterly Walkdowns (71111.05Q – 7 samples)

a. Inspection Scope

The inspectors conducted tours of the areas listed below to assess the material condition and operational status of fire protection features. The inspectors verified that CENG personnel controlled combustible materials and ignition sources in accordance with administrative procedures. The inspectors verified that fire protection and suppression equipment were available for use, as specified in the area pre-fire plan, and that passive fire barriers were maintained in good material condition. The inspectors also verified that station personnel implemented compensatory measures for OOS, degraded, or inoperable fire protection equipment, as applicable, in accordance with procedures.

- Unit 1 control room (fire area (FA)-11) on July 3, 2013
- Unit 2 control room (FA-26) on July 3, 2013
- Unit 1 EDG 102 (FA-22) on July 9, 2013
- Unit 1 EDG 103 (FA-19) on July 9, 2013
- Unit 2 Division I EDG (FA-28) on July 9, 2013
- Unit 2 Division II EDG (FA-29) on July 9, 2013
- Unit 2 Division III EDG (FA-30) on July 9, 2013

b. Findings

No findings were identified.

.2 Fire Protection – Drill Observation (71111.05A – 1 sample)

a. Inspection Scope

The inspectors observed a fire brigade drill scenario conducted on August 27, 2013, that involved a fire on the first floor of the Unit 2 operations building. The inspectors evaluated the readiness of the plant fire brigade to fight fires. The inspectors verified that CENG personnel identified deficiencies, openly discussed them in a self-critical manner at the debrief, and took appropriate corrective actions as required. The inspectors evaluated specific attributes as follows:

- Proper wearing of turnout gear and self-contained breathing apparatus
- Proper use and layout of fire hoses
- Employment of appropriate fire-fighting techniques
- Sufficient fire-fighting equipment brought to the scene
- Effectiveness of command and control
- Search for victims and propagation of the fire into other plant areas
- Smoke removal operations

- Utilization of pre-planned strategies
- Adherence to the pre-planned drill scenario
- Drill objectives met

The inspectors also evaluated the fire brigade's actions to determine whether these actions were in accordance with CENG's fire-fighting strategies.

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06 – 2 samples)

.1 Internal Flooding Review

a. Inspection Scope

The inspectors reviewed the UFSAR, flooding calculations, and plant procedures to assess susceptibilities involving internal flooding. The inspectors also reviewed the CAP to determine if CENG personnel identified and corrected flooding problems and whether operator actions for coping with flooding were adequate. The inspectors also focused on the Unit 2 reactor building (RB) elevation 175 feet to verify the adequacy of equipment seals located below the flood line, floor and water penetration seals, watertight door seals, common drain lines and sumps, sump pumps, level alarms, control circuits, and temporary or removable flood barriers.

b. Findings

No findings were identified.

.2 Annual Review of Cables Located in Underground Bunkers/Manholes

a. Inspection Scope

The inspectors conducted an inspection of underground bunkers/manholes subject to flooding that contain cables whose failure could affect risk-significant equipment. The inspectors performed walkdowns of risk-significant areas, including Unit 2 manholes MH-1 and MH-3 which contain power cables for the high-pressure coolant spray system pump, to verify that the cables were not submerged in water, that cables and/or splices appeared intact, and to observe the condition of cable support structures. The inspectors reviewed CENG corrective actions initiated following a July 22, 2013, discovery that a dewatering system, which had been installed in 2012 to dewater manholes MH-1 and MH-3, had failed to properly operate, and as a result, several feet of water had accumulated in the cable vaults. The performance deficiency surrounding this issue is discussed in greater detail in NRC Inspection Report 05000410/2013007. For those cables found submerged in water, the inspectors verified that CENG staff had conducted an operability evaluation for the cables and were implementing appropriate corrective actions.

b. Findings

No findings were identified.

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

.1 Quarterly Review of Licensed Operator Requalification Testing and Training (2 samples)

a. Inspection Scope

The inspectors observed:

- Unit 1 licensed operator training simulator scenario which included a control rod drive failure, failure of power board 11, and a leak in the reactor water cleanup system on September 3, 2013
- Unit 2 licensed operator training simulator scenario which included a loss of instrument air, a loss of a control rod drive pump, a stuck open safety relief valve, and a stuck open turbine bypass valve on September 3, 2013

The inspectors evaluated operator performance during the simulated event and verified completion of risk significant operator actions, including the use of abnormal and emergency operating procedures. The inspectors assessed the clarity and effectiveness of communications, implementation of actions in response to alarms and degrading plant conditions, and the oversight and direction provided by the control room supervisor. The inspectors verified the accuracy and timeliness of the emergency classifications made by the shift manager and the TS action statements entered by the shift technical advisor. Additionally, the inspectors assessed the ability of the crew and training staff to identify and document crew performance problems.

b. Findings

No findings were identified.

.2 Quarterly Review of Licensed Operator Performance in the Main Control Room (2 samples)

a. Inspection Scope

The inspectors observed:

- Unit 1 control room operations during a scheduled plant shutdown due to increased drywell leakage on July 8, 2013
- Unit 2 control room operations during planned surveillance activities on the Division III EDG and an emergency preparedness drill on August 20, 2013

The inspectors reviewed CNG-OP-1.01-1000, "Conduct of Operations," Revision 01000, and verified that procedure use, crew communications, and coordination of plant activities among work groups similarly met established expectations and standards.

Additionally, the inspectors observed test performance to verify that procedure use, crew communications, and coordination of activities between work groups similarly met established expectations and standards.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12Q – 4 samples)

a. Inspection Scope

The inspectors reviewed the samples listed below to assess the effectiveness of maintenance activities on structure, system, and component (SSC) performance and reliability. The inspectors reviewed system health reports, CAP documents, maintenance WOs, and maintenance rule basis documents to ensure that CENG personnel were identifying and properly evaluating performance problems within the scope of the maintenance rule. For each sample selected, the inspectors verified that the SSC were properly scoped into the maintenance rule in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 50.65 and verified that the (a)(2) performance criteria established by CENG staff were reasonable. As applicable, for SSCs classified as (a)(1), the inspectors assessed the adequacy of goals and corrective actions to return these SSCs to (a)(2) status. Additionally, the inspectors ensured that CENG staff were identifying and addressing common cause failures that occurred within and across maintenance rule system boundaries.

- Unit 1 AC electric power on August 19, 2013
- Unit 2 control room heating, ventilation, and air conditioning (HVAC) and RB and EDG building ventilation on August 21, 2013
- Unit 2 main station safety-related batteries on September 12, 2013
- Unit 1 instrument air system on September 13, 2013

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 – 6 samples)

a. Inspection Scope

The inspectors reviewed station evaluation and management of plant risk for the maintenance and emergent work activities listed below to verify that CENG personnel performed the appropriate risk assessments prior to removing equipment from service. The inspectors selected these activities based on potential risk significance relative to the reactor safety cornerstones. As applicable for each activity, the inspectors verified that CENG personnel performed risk assessments as required by 10 CFR 50.65(a)(4) and that the assessments were accurate and complete. When CENG personnel performed emergent work, the inspectors verified that operations personnel promptly assessed and managed plant risk. The inspectors reviewed the scope of maintenance work and discussed the results of the assessment with the station's probabilistic risk

analyst to verify plant conditions were consistent with the risk assessment. The inspectors also reviewed the TS requirements and inspected portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

- Unit 2 Division I standby liquid control system during Division II surveillance testing on July 31, 2013
- Unit 1 containment spray 122 during planned maintenance on containment spray loop 121 on August 8, 2013
- Unit 1 high-pressure coolant injection system 11 during planned maintenance on the high-pressure coolant injection system 12 on August 13, 2013
- Unit 2 Division II control room ventilation system during planned maintenance on the Division I control room ventilation system on August 27, 2013
- Unit 1 EDG 102 and core spray 121 during the core spray 122 surveillance test on September 12, 2013
- Unit 1 EDG 103 during EDG 102 surveillance testing on September 25, 2013

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15 – 8 samples)

a. Inspection Scope

The inspectors reviewed operability determinations for the following degraded or non-conforming conditions:

- Unit 2 RCIC/HPCS initiation logic discrepancy on July 1, 2013
- Unit 2 control rod 30-51 failed to settle at position 46 on July 2, 2013
- Unit 2 Division II EDG volt amperes reactive and amperes over procedural limit on July 30, 2013
- Unit 2 RCIC trip throttle valve did not reset from the control room on August 9, 2013
- Unit 1 RB instrument air compensatory action for postulated fires in the turbine and control buildings on August 12, 2013
- Unit 2 improper design of scram discharge volume vent and drain valves 2RDS*AOV130 and 2RDS*AOV132 on August 26, 2013
- Unit 1 elevated technical support center temperatures on September 10, 2013
- Unit 1 control rod drive flange leakage on September 18, 2013

The inspectors selected these issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the operability determinations to assess whether TS operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the TSs and UFSAR to CENG staff's evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the

measures in place would function as intended and were properly controlled by CENG personnel. The inspectors determined, where appropriate, compliance with bounding limitations associated with these evaluations.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)

.1 Temporary Modifications (2 samples)

a. Inspection Scope

The inspectors reviewed the temporary modifications listed below to determine whether the modifications affected the safety functions of systems that are important to safety. The inspectors reviewed 10 CFR 50.59 documentation and post-modification testing results, and conducted field walkdowns of the modifications to verify that the temporary modifications did not degrade the design bases, licensing bases, and performance capability of the affected systems.

- Engineering Change Package (ECP) 13-000436 – Long-time and instantaneous over-current settings for 600V breaker BKR-(16B/010A)52 for the emergency service water (ESW) pump 11 motor at Unit 1.
- ECP 13-000766 – Remove over-speed trip device from diesel fire pump at Unit 2.

b. Findings

No findings were identified.

.2 Permanent Modification (1 sample)

a. Inspection Scope

The inspectors evaluated a modification to remove the Unit 1 hottest spot indicator relay from the 4160V-600V transformers for safety-related power boards 16B and 17A implemented by ECP 12-000536, "Removal of the Hottest Spot Indicating-Relay from Transformers XF-(16B)4160-600V and XF-(17A)4160-600V Associated With Power Boards (PB)-16B and PB-17A." The inspectors verified that the design bases, licensing bases, and performance capability of the affected system was not degraded by the modification. In addition, the inspectors reviewed modification documents associated with the upgrade and design change including the post-maintenance testing and the 10 CFR 50.59 screening form. The inspectors also reviewed proposed revisions to the control room alarm response procedure to ensure the changes were appropriate.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 – 4 samples)a. Inspection Scope

The inspectors reviewed the post-maintenance tests for the maintenance activities listed below to verify that procedures and test activities ensured system operability and functional capability. The inspectors reviewed the test procedure to verify that the procedure adequately tested the safety functions that may have been affected by the maintenance activity, that the acceptance criteria in the procedure were consistent with the information in the applicable licensing basis and/or design basis documents, and that the procedure had been properly reviewed and approved. The inspectors also witnessed the test or reviewed test data to verify that the test results adequately demonstrated restoration of the affected safety functions.

- Unit 2 Division II SGTS following preventive maintenance on August 1, 2013
- Unit 1 ESW pump 11 following failure to start on August 2, 2013
- Unit 2 RB truck bay inner door seal on August 21, 2013
- Unit 1 liquid poison pump 12 following installation of a new flow meter on September 24, 2013

b. Findings

No findings were identified.

1R20 Refueling and Other Outage Activities (71111.20 – 1 sample)a. Inspection Scope

The inspectors reviewed the station's work schedule and outage risk plan for the Unit 1 planned outage which was conducted July 8 through July 11, 2013. The inspectors reviewed CENG staff's development and implementation of outage plans and schedules to verify that risk, industry experience, previous site-specific problems, and defense-in-depth were considered. During the outage, the inspectors observed portions of the shutdown and cooldown processes and monitored controls associated with the following outage activities:

- Power reduction activities
- Drywell closeout activities
- Configuration management, including maintenance of defense-in-depth, commensurate with the outage plan for the key safety functions and compliance with the applicable TSs when taking equipment OOS
- Implementation of clearance activities and confirmation that tags were properly hung and that equipment was appropriately configured to safely support the associated work or testing
- Status and configuration of electrical systems and switchyard activities to ensure that TSs were met
- Monitoring of decay heat removal operations
- Activities that could affect reactivity
- Power ascension activities

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 – 5 samples)a. Inspection Scope

The inspectors observed performance of surveillance tests and/or reviewed test data of selected risk-significant SSCs to assess whether test results satisfied TSs, the UFSAR, and CENG procedure requirements. The inspectors verified that test acceptance criteria were clear, tests demonstrated operational readiness and were consistent with design documentation, test instrumentation had current calibrations and the range and accuracy for the application, tests were performed as written, and applicable test prerequisites were satisfied. Upon test completion, the inspectors considered whether the test results supported that equipment was capable of performing the required safety functions. The inspectors reviewed the following surveillance tests:

- Unit 1, N1-ISP-201-501, Type 'B' Containment Isolation Airlock Door Leak Rate Test on July 10, 2013
- Unit 1, N1-ST-Q20, Reactor Building Heating, Cooling, and Ventilation System Test on July 31, 2013
- Unit 1, N1-ST-M4B, Emergency Diesel Generator 103 and PB 103 Operability Test on August 5, 2013
- Unit 1, N1-ST-M1B, Liquid Poison Pump 12 Operability Test on August 26, 2013 (inservice test)
- Unit 1, N1-ST-M6, Core Spray Keep Fill Verification Test on September 24, 2013

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness1EP4 Emergency Action Level and Emergency Plan Changes (71114.04 – 1 sample)a. Inspection Scope

The Office of Nuclear Security and Incident Response headquarters staff performed an in-office review of the latest revisions of various emergency plan implementing procedures and the emergency plan located under ADAMS accession number ML13155A006.

CENG staff determined that in accordance with 10 CFR 50.54(q), the changes made in the revisions resulted in no reduction in the effectiveness of the plan and that the revised plan continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR Part 50, "Emergency Planning and Preparedness of Production and Utilization Facilities." The NRC review was not documented in a safety evaluation report and did not constitute approval of licensee-generated changes; therefore, this revision is subject to future inspection.

b. Findings

No findings were identified.

1EP6 Drill Evaluation (71114.06 – 1 sample)

Training Observation

a. Inspection Scope

The inspectors observed a simulator training evolution for Unit 1 licensed operators on September 3, 2013, which required emergency plan implementation by an operations crew. CENG staff planned for this evolution to be evaluated and included in performance indicator (PI) data regarding drill and exercise performance. The inspectors observed event classification and notification activities performed by the crew. The inspectors also attended the post-evolution critique for the scenario. The focus of the inspectors' activities was to note any weaknesses and deficiencies in the crew's performance and ensure that CENG evaluators noted the same issues and entered them into the CAP.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

.1 Safety System Functional Failures (2 samples)

a. Inspection Scope

The inspectors sampled CENG's submittals for the Safety System Functional Failures PIs for Unit 1 and Unit 2 for the period of July 1, 2012, through June 30, 2013. To determine the accuracy of the PI data reported during those periods, inspectors used definitions and guidance contained in the Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, and NUREG-1022, "Event Reporting Guidelines 10 CFR 50.72 and 10 CFR 50.73." The inspectors reviewed CENG's operator narrative logs, operability assessments, maintenance rule records, CRs, event reports, and NRC integrated inspection reports to validate the accuracy of the submittals.

b. Findings

No findings were identified.

.2 Mitigating Systems Performance Index (10 samples)

a. Inspection Scope

The inspectors reviewed CENG's submittal of the Mitigating Systems Performance Index for the following systems for the period of July 1, 2012, through June 30, 2013:

Unit 1 and Unit 2

- Emergency AC Power System (MS06)
- High-Pressure Injection System (MS07)
- Heat Removal System (MS08)
- Residual Heat Removal System (MS09)
- Cooling Water System (MS10)

To determine the accuracy of the PI data reported during those periods, the inspectors used definitions and guidance contained in NEI 99-02. The inspectors also reviewed CENG's operator narrative logs, CR, mitigating systems performance index basis document, event reports, and NRC integrated inspection reports to validate the accuracy of the submittals.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152 – 2 samples)

.1 Routine Review of Problem Identification and Resolution Activities

a. Inspection Scope

As required by Inspection Procedure 71152, "Problem Identification and Resolution," the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that CENG personnel entered issues into the CAP at an appropriate threshold, gave adequate attention to timely corrective actions, and identified and addressed adverse trends. 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 CAP.

b. Findings

No findings were identified.

.2 Annual Sample: Maintenance Rule Implementation Assessment

a. Inspection Scope

The inspector's maintenance rule implementation review focused on CENG staff's screening of CRs for maintenance rule applicability, incorporation of operating experience (OE) into the maintenance rule, timing of maintenance rule evaluations once

the threshold for (a)(1) was met, and balancing unavailability and unreliability. The inspectors reviewed CRs, system health reports, the (a)(1) database, and interviewed the maintenance rule coordinator and system engineers in order to assess if CENG was implementing the program in accordance with CNG-AM-1.01-1023, "Maintenance Rule Program," Revision 00201, and CNG-CA-1.01-1010, "Use of Operating Experience," Revision 01000.

b. Findings and Observations

No findings were identified.

The inspectors reviewed CRs that were screened for maintenance rule applicability for three systems (AC electric power, control room HVAC, and EDG room ventilation). In general, the CRs were screened appropriately; however, there were two CRs in which the inspectors were unable to conclude that the CENG staff's determination that maintenance rule not applicable was correct until CENG staff provided additional information.

The inspectors determined that OE was being incorporated into the maintenance rule through the system engineers' health reports, maintenance rule manager software, and cause evaluations when required. The inspector's review of the OE sections of several systems in the maintenance rule manager software indicated that they were being maintained up-to-date with applicable OE.

The inspectors reviewed 24 systems that were currently in (a)(1) status and determined that (a)(1) evaluations were typically done in a timely manner. The average time to make an (a)(1) determination was 35 days with a range of 0 to 78 days.

.3 Annual Sample: Corrective Actions to Address Repetitive Failures of the Radiation Monitoring Equipment

a. Inspection Scope

Units 1 and 2 have experienced repetitive failures of several radiation monitoring systems between August 2011 and August 2013. The four effluent monitors with the highest number of hours of unavailability were selected for a detailed sample review. The four effluent radiation monitors and associated number of CRs that were reviewed included:

- Unit 1 off-gas effluent monitoring system (OGEMS) (6 CRs)
- Unit 1 service water (SW) radiation monitors PMP-72-461 and PMP-72-462 (20 CRs)
- Unit 2 SW radiation monitors 2SWP*CAB146A and 2SWP*CAB146B (52 CRs)
- Unit 2 radwaste/reactor building vent radiation monitor (20 CRs)

From August 4 through 9, 2013, the inspectors performed an in-depth review of the events in these CRs to assess CENG staff's actions for initiating corrective and/or compensatory actions, timeliness, and addressing adverse trends. To perform this review, the inspectors conducted walkdowns of these radiation monitors, interviewed

plant personnel, reviewed WOs, and associated apparent cause evaluations (ACEs). In addition, system health reports for the radiation monitoring system and associated maintenance rule reports were also reviewed.

b. Findings and Observations

No findings were identified.

After identifying an adverse trend in radiation monitor availability and reliability, CENG personnel initiated its first generic CR on radiation monitors for Units 1 and 2 on January 16, 2013, and the second CR on February 27, 2013. These two CRs resulted in two ACEs. The first one was to investigate maintenance and engineering corrective actions for the effluent radiation monitors (CR-2013-000434), and the second was to investigate human performance impacts on equipment reliability of these instruments (CR-2013-001613). These two ACEs appeared to be thorough and included the extent of condition, common causes, and action plans to prevent recurrence. Based on these evaluations, CENG staff concluded that there were a number of system design improvements that could be made to improve reliability of the effluent monitoring systems. It was concluded that there had been errors assigning the appropriate priority (priority two or three instead of priority four) on the WOs resulting in untimely completion of some of the radiation monitoring equipment repairs. Briefings were conducted by CENG personnel with the appropriate staff to indicate the importance of the radiation monitoring instruments relative to event classification in the emergency plan. In addition, training was also provided on the steps that should be taken to expedite these instruments return to service.

Listed below are summaries of the corrective actions CENG personnel developed to improve system availability and reliability for the four radiation monitors of concern:

Unit 1 Off-Gas Effluent Monitoring System

Corrective action (CA)-2012-004479 was initiated to develop and execute a troubleshooting plan to isolate the cause for the noise intrusion on the Unit 1 stack radiation monitor. CENG is planning to implement the electrical troubleshooting plan via WO C92073592. No unplanned unavailability has occurred on the OGEMS radiation monitor since April 2013. CENG plans to monitor system performance until corrective actions are completed.

Unit 1 Service Water Radiation Monitor

CR-2011-006930 was written to revise the procedures for biocide/chemical injections and sample line flushes to reduce the impact of both biofouling and zebra mussels on the SW system. In particular, chemistry procedure N1-CTP-V945, "Service Water Zebra Mussel Treatment," Revision 01600, was revised to notify the Unit 1 operations department of a requirement to perform N1-OP-18, "Service Water System," Revision 03000, sections 8 and 9, daily during biocide treatment and for 21 days following completion of the activity. Preventive maintenance surveillance N1149646 was established to track this operations activity in January 2012. The operations department has been performing these flushes daily following two biocide treatments conducted in 2013.

CA-2012-000076 was initiated to correct unexpected radiation monitor process annunciator H1-4-5 alarms of the SW radiation monitor. The system and central processing unit circuit cards were replaced in January 2013. No spurious annunciator alarms have occurred since completion of this maintenance activity.

CR-2012-008164 was initiated to perform a maintenance rule 10 CFR 50.65 (a)(1) evaluation for Unit 1 SW radiation monitor because the functional failure performance criteria was exceeded. On October 2, 2012, the plant health committee approved the system performance goals and action plan.

CR-2012-002176 investigated the root cause for the repeated low flow alarms on the SW radiation monitor pump. It was determined that the installed pump, PMP-72-462, was being operated outside the manufacturer pump curve and was likely being operated near the pump's shutoff head. ECP 13-000167, "Unit 1 Service Water Radiation Monitor Sample Pumps are Over-Sized Resulting in Premature Failure," was processed and has resulted in the replacement of the PMP-72-462 pump with a smaller capacity centrifugal pump on June 28, 2013. No unplanned unavailability has occurred on the Unit 1 SW radiation monitor since June 2013. Corrective actions appear to be effective.

Unit 2 Service Water Radiation Monitor

CR-2012-011225 was initiated to perform a maintenance rule 10 CFR 50.65 (a)(1) evaluation for Unit 2 SW radiation monitors, 2-RMS-F11. On January 29, 2013, the plant health committee approved the system performance goals and action plan. The following corrective actions from this plan are listed below along with their current status:

- Replace the remaining piping in accordance with ECP 12-000565, "2SWP*CAB146B Replace Carbon Steel Pipe to Stainless Steel" and WO C91883844. This action was completed on April 1, 2013.
- Initiate temporary sodium bisulfate injection until repairs can be completed on the permanent chemical treatment equipment per WO C92156031 (CA-2013-000702). The temporary equipment for injecting the chemical to SW was completed in April 2013. Injection of chemicals into SW was reinitiated on April 22, 2013.
- Replace the current flow switch design with a design less susceptible to fouling and scaling. ECP 13-000140, "Replacement of the Existing Resistance-Type Flow Switch with a New Magnetic Flow Switch" is projected to be completed by December 31, 2013, as identified in CR-2013-001810.

The inspectors noted that one of the a(1) action plan items, chemical treatments, was not performed on the SW system for over 7 months, from September 2012 to April 22, 2013, due to a leak in one of the chemical injection tanks. Unavailability problems continue as evidenced by a recent reactor operating event notification report number 49391. This notification indicated that the SW digital radiation monitor received a low sample flow alarm and was nonfunctional on September 28 and 29, 2013.

In accordance with the NRC Enforcement Manual, this does not constitute a violation of 10 CFR 50.65.(a)(1) since an action plan was developed and was being implemented and monitoring goals in accordance with the 50.65 (a)(1). CENG initiated CR-2013-005232 to address the need to create PIs for key system chemical parameters to assist in more optimal scheduling of chemical treatments and flushes on the SW system. Corrective actions are not yet completed.

Unit 2 Radwaste/Reactor Building Vent Radiation Monitor

Several instrument calibrations failures have occurred on this instrument due to issues with the calibration equipment associated with this monitor. CA-2013-000226 was initiated to create a preventive maintenance surveillance to periodically inspect the check source insertion assembly for wear, re-orient steel roll pin in the check source assembly so that it does not contact the aluminum guide tube, and replace the aluminum guide tube with an equivalent sized steel guide tube. These inspections and modifications will be completed during the next monitor surveillance currently scheduled to be completed in November 2013.

A design issue for this flow sensor was identified and documented on March 10, 2009. In 2011, ECP 11-000140, "Install a Separate Flow Sensor Array on the Radwaste Vent Ducting" was initiated. These flow sensors were designed to establish representative flow sample rates for the plant configuration when the RB ventilation flow is isolated or when the RB ventilation fans are not available.

CR-2013-006249 identified the degraded flow sensing array modification was not being tracked properly and developed corrective actions which included long-term asset management. On August 26, 2013, this modification was approved for conceptual design work. CENG initiated CR-2013-006249 to track completion of this modification.

The inspectors noted that the Unit 2 radwaste/RB vent radiation monitor was nonfunctional for 2,731 hours between August 2011 and August 2013. A non safety related, low risk system is only required to monitor for reliability and not required to monitor for system unavailability; however, the high level of system unavailability has resulted in a reduction of EP staff's assessment capability. Although 10 CFR 50.65 a(2) performance criteria were met and no maintenance rule functional failures were identified by CENG staff, on two occasions CENG staff made reports to the NRC as required by 10 CFR 50.72 (b)(3)(xiii) due to unavailability of these instruments. This included reactor operating event notification reports 49127 and 49176 for loss of radwaste/RB vent gaseous effluent radiation monitor that occurred in June and July 2013. No findings were identified since compensatory sampling of the gaseous effluents occurred as required. CR-2013-008833 was written to address this observation.

4OA3 Follow-Up of Events and Notices of Enforcement Discretion (71153 – 1 sample)

(Closed) Licensee Event Report (LER) 05000220/2013-001-00: Emergency Condenser 11 High Steam Flow Isolation Instrumentation Loss During Plant Startup

On May 14, 2013, at 11:45 a.m., while Unit 1 was in the startup mode of reactor plant operation with reactor power at 3 percent, channel 11 high steam flow instrumentation for emergency condenser loop 11 alarmed due to a gross failure trip. The gross failure trip is a design feature of the instrument loop that monitors the integrity of the emergency condenser piping system. The failure of the channel 11 high steam flow instrumentation concurrently with channel 12, which had failed earlier in the day at 8:40 a.m., resulted in the loss of emergency condenser system loop 11 isolation capability on high steam flow.

In response to the instrument failure, operators declared emergency condenser system loop 11 inoperable, isolated the system, and entered plant TS 3.1.3.b, which required operators to return the system to service within 7 days when the reactor is critical and

reactor coolant system temperature is greater than 212 degree Fahrenheit. Emergency condenser system loop 11 was declared operable on May 15 when the cause for the gross failure trip signal and inadequately filled sensing lines was resolved.

A CENG investigation determined that the cause of the event was leakage from the shared high-pressure sensing line for transmitters DPT-36-06C and DPT-36-06D. The suspected leakage path was seat leakage from instrument blowdown valves VLV-36-374 and VLV-8-172. CENG staff's corrective actions include replacement of the suspect blowdown isolation valves during the next refueling outage and enhanced monitoring of the output signals on the high steam flow instruments to ensure the sensing lines remain full. The inspectors reviewed the LER and determined that no findings or violations of NRC requirements were identified. This LER is closed

4OA5 Other Activities

.1 Institute of Nuclear Power Operations (INPO) Report Review

a. Inspection Scope

The inspectors reviewed the January 30, 2013, final report for the INPO plant assessment of NMPNS conducted for the period of September 2010 to December 2012. The report primarily relied on observations made by INPO representatives during the weeks of October 5 and October 18, 2012.

The inspectors evaluated the report to ensure that NRC perspectives of CENG staff's performance were consistent with any issues identified during the assessment and to verify that the final report content was similar to the initial report provided in January. The inspectors also reviewed the report to determine whether INPO identified any significant safety issues that required further NRC follow-up.

b. Findings

No findings were identified.

.2 Temporary Instruction (TI) 2515/182, Review of the Implementation of the Industry Initiative to Control Degradation of Underground Piping and Tanks, Phase 2

a. Inspection Scope

In accordance with paragraph 03.02.a of TI 2515/182, the inspectors reviewed CENG's programs for buried piping and underground piping and tanks and confirmed that activities which correspond to the completion dates specified in the program which have passed since the Phase 1 inspection was conducted have been completed.

CENG staff's buried piping and underground piping and tanks program were inspected in accordance with paragraph 03.02.b of TI 2515/182 and responses to specific questions found in www.nrc.gov/reactors/operating/ops-experience/buried-pipe-ti-phase-2-insp-req-2011-11-16.pdf were submitted to NRC headquarters staff.

b. Findings

No findings were identified.

.3 TI 2515/190, Inspection of the Proposed Interim Actions Associated with Near-Term Task Force Recommendation 2.1 Flooding Hazard Evaluations.

a. Inspection Scope

Inspectors verified that CENG staff's interim actions will perform their intended function for flooding mitigation.

The inspectors independently verified that CENG staff's proposed interim actions would perform their intended function for flooding mitigation.

- Visual inspection of the flood protection feature was performed if the flood protection feature was relevant. External visual inspection for indications of degradation that would prevent its credited function from being performed was performed.
- Reasonable simulation, if applicable, to the site.
- Flood protection feature functionality was determined using either visual observation or by review of other documents.

The inspectors verified that issues identified were entered into CENG's CAP.

b. Findings

No findings were identified.

.4 Operation of an Independent Spent Fuel Storage Installation (ISFSI) at Operating Plants (IP 60855)

a. Inspection Scope (1 partial sample)

Region I materials inspectors conducted a follow up inspection to review CENG staff's action following a hydrogen deflagration during ISFSI loading operations using NRC Inspection Procedure (IP) 60855.1, "Operation of an Independent Spent Fuel Storage Installation at Operating Plants."

On August 14, 2013, Unit 2 experienced a hydrogen deflagration during ISFSI loading operations (CR-2013-006840). A dry shielded canister (DSC) filled with spent fuel assemblies was on the refuel floor and the DSC inner cover was in the process of being welded in place by an automated welding system. During the welding evolution, hydrogen concentration built up above the lower explosive limit and the deflagration occurred. CENG staff completed a technical evaluation and concluded that spent fuel within the cask was not impacted and that the cask remained within UFSAR specifications.

The ISFSI inspectors performed an on-site inspection August 26 through 28, 2013. The inspection consisted of interviews with CENG personnel and contractor personnel and observations of ISFSI equipment configuration on the refuel floor. The inspectors

reviewed documentation to verify compliance with the conditions of the general license, certificate of compliance, TSs, and the UFSAR. The inspectors also reviewed CRs, WOs, and procedures. The inspectors reviewed CENG staff's evaluations and immediate follow-up actions to assure that CENG staff implemented appropriate compensatory and corrective actions prior to resuming ISFSI welding and loading operations.

b. Findings

This inspection remains open at the end of this inspection period while CENG staff completes their ACE and the inspectors have the opportunity to review CENG staff's evaluation and long-term corrective actions to address the event.

4OA6 Meetings, Including Exit

Exit Meeting

On October 24, 2013, the inspectors presented the inspection results to Mr. Christopher Costanzo, Site Vice President, and other members of the NMPNS staff. The inspectors verified that no propriety information was retained by the inspectors or documented in this report.

ATTACHMENT: SUPPLEMENTARY INFORMATION

SUPPLEMENTARY INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

C. Costanzo, Vice President
J. Stanley, Plant General Manager
P. Bartolini, Supervisor, Design Engineering
J. Bouck, Manager, Operations
B. Busch, Unit 1 General Supervisor, Operations
K. Clark, Director, Security
J. Dean, Supervisor, Quality Assurance
S. Dhar, Design Engineering
S. Eckhard, Supervisor Design Engineering
W. Farnham, System Engineer
N. Fisher, Quality Performance Assessor
J. Gerber, Manager, Training
J. Gillard, Emergency Preparedness Analyst
J. Holton, Supervisor, Systems Engineering
G. Inch, Principle Engineer, EPU Project Manager
M. Kunzwiler, Security Supervisor
M. Khan, General Supervisor Design Engineering
J. Leonard, Supervisor Design Engineering
J. Manly, Unit 2 General Supervisor, Operations
C. McClay, Senior Engineer
E. Perkins, Director, Licensing
J. Reid, Design Engineer
T. Roche, System Engineer
S. Segretto, System Engineer
M. Shanbhag, Licensing Engineer
J. Snyder, Maintenance Rule Coordinator
S. Stone, System Engineer
T. Syrell, Manager, Nuclear Safety and Security
J. Thompson, General Supervisor, Mechanical Maintenance
A. Verno, Director, Emergency Preparedness

LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATED

Closed

05000220/2013-001-00	LER	Emergency Condenser 11 High Steam Flow Isolation Instrumentation Loss During Plant Startup (Section 4OA3)
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LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures

N1-OP-64, Meteorological Monitoring, Revision 00603
N2-OP-102, Meteorological Monitoring, Revision 01103
N2-OP-102, Hot Weather Preparation Checklist, Attachment 3, Revision 01102
NAI-PSH-11, Seasonal Readiness Program, Revision 00700

Condition Reports

CR-2012-008748
CR-2013-007010

Miscellaneous

1EQPBD, Unit 1 Environmental Qualification Program Basis Document, Revision 2.00
UFSAR

Section 1R04: Equipment Alignment

Procedures

N1-OP-40, Reactor Protection and ATWS Systems, Revision 02100
N1-ST-Q5, Primary Containment Isolation Valves Operability Test, Revision 02901
N1-ST-R10, Drywell to Torus Leak Rate Test, Revision 01701
N2-OP-33, High-Pressure Core Spray System, Revision 01201
N2-OP-61B, Standby Gas Treatment System, Revision 01000
N2-OSP-GTS-M001, Standby Gas Treatment System Functional Test, Revision 00201

Drawings

C19408C, AC Station Power Distribution One-Line Diagram, Revision 16
PID-061-A, Primary Containment Purge and Standby Gas Treatment System, Revision 13

Condition Reports

CR-2013-003840
CR-2013-005794
CR-2013-007068

Work Orders

WO C91475487
WO C91948721

Miscellaneous

CNG-CA-1.01-1005, Apparent Cause Evaluation CR- 2013-004755, Revision 00603

Section 1R05: Fire Protection

Procedures

N1-PFP-0101, Unit 1 Pre-Fire Plans, Revision 00200
N2-FPI-PFP-0201, Unit 2 Pre-Fire Plans, Revision 001
NMP-TR-1.01-107, Nuclear Fire Brigade Training Program, Revision 01101

Miscellaneous

Fire Brigade Scenario, OS-FT-FIR-SCN-2-01, Operations Building Fire, Revision 0
Unit 1 UFSAR, Appendix 10A, Fire Hazards Analysis, Revision 22
Unit 2 UFSAR, Sections 9 and 9.5, Appendix A, Revision 20

Section 1R06: Flood Protection Measures

Procedure

N2-CTP-GEN-@200, Floor and Equipment Drain Sump Inspections, Revision 00400

Condition Report

CR-2013-004527

Miscellaneous

Calculation A10.1-AA-014, Flood Heights in RB Elevation 175 feet 0 inches
UFSAR Section 3C, Revision 8
UFSAR Section 3.4, Revision 10

Section 1R11: Licensed Operator Requalification Program and Licensed Operator Performance

Procedure

CNG-OP-1.01-1000, Conduct of Operations, Revision 01000

Section 1R12: Maintenance Effectiveness

Procedures

CNG-AM-1.01-1023, Maintenance Rule Program, Revision 00201
CNG-MN-4.01-1002, Work Order Initiation, Screening, and Prioritization, Revision 00500
CNG-OP-1.01-1002, Conduct of Operability Determinations/Functionality Assessments,
Revision 00201

Condition Reports

CR-2011-006003	CR-2012-008435	CR-2013-001851
CR-2011-009843	CR-2012-009630	CR-2013-002154
CR-2011-009980	CR-2012-009631	CR-2013-002293
CR-2012-000052	CR-2012-010556	CR-2013-005784
CR-2012-001296	CR-2012-010657	CR-2013-006152
CR-2012-002146	CR-2012-010840	CR-2013-006755
CR-2012-002367	CR-2012-010851	CR-2013-006756
CR-2012-002710	CR-2013-000862	CR-2013-006787
CR-2012-002808	CR-2013-000864	CR-2013-007526
CR-2012-007727	CR-2013-000951	CR-2013-007529

Work Orders

WO C91700891
WO C91968032

Miscellaneous

2-BYS-F01- 125 DC Battery Maintenance Rule Scoping Document

AC Electric Power System Health Report, 2nd Quarter 2013
ACE for CR-2012-008435
Control Room HVAC System Health Report, 2nd Quarter 2013
Direct Current Electric Power and UPS System Health Report, 2nd Quarter 2013
EDG System Health Report, 2nd Quarter 2013
SGTS Health Report, 2nd Quarter 2013

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Procedure

S-ODP-OPS-0122, Posting and Control of Protected Equipment during Online and Outage Operations, Revision 00500

Section 1R15: Operability Determinations and Functionality Assessments

Procedures

CNG-HU-1.01-1000, Human Performance, Revision 00801
N1-SO-13-01, NFPA 805 Interim Actions, Revision 0
N2-OSP-RDS-Q001, Scram Discharge Volume Vent and Drain Valve Operability Test on November 4, 2012, Revision 00201
N2-OSP-RDS-Q001, Scram Discharge Volume Vent and Drain Valve Operability Test on February 5, 2013, Revision 00201
N2-OSP-RDS-Q001, Scram Discharge Volume Vent and Drain Valve Operability Test on May 6, 2013, Revision 00201
N2-OSP-RMC-W@001, Control Rod Movement and Position Indicator Verification, Revision 00501

Drawings

0007.243-001-007, Elementary Diagram High Pressure Core Spray System, Revision 3
0007.245-001-018, Elementary Diagram Reactor Core Isolation Cooling System, Revision 6
PID-30C-13, Piping and Instrument Drawing (P&ID) Control Rod Drive Hydraulic System, Revision 11
TL2ISC0060, Test Loop Diagram Reactor Water Level – Wide Range 2ISC*LT9A, Sheets 1 and 2

Condition Reports

CR-2012-005954	CR-2013-005569	CR-2013-007119
CR-2013-004044	CR-2013-006412	CR-2013-007443
CR-2013-005419	CR-2013-006738	CR-2013-004958

Work Order

WO C91934617

Miscellaneous

NUREG-0696, Functional Criteria for Emergency Response Facilities, February 1981

Section 1R18: Plant Modifications

Procedures

CNG-FES-015, Design Engineering and Configuration Management Forms, Revision 00006
CNG-NL-1.01-1011, 10 CFR 50.59/10 CFR 72.48 Applicability Determinations, Screenings and Evaluations, Revision 00300

N1-EPM-GEN-153, Inspection and Testing of AK-15/25 Breakers and Associated Motors, Revision 00600
N1-RCPM-GEN-155, Load Testing of AK and ITE Breaker Trip Devices, Revision 00200

Condition Reports

CR-2013-002926
CR-2013-006479

Work Orders

WO C91736503
WO C92057979
WO C92263206

Miscellaneous

ECP 12-000536, Removal of the Hottest Spot Indicating-Relay from Transformers XF-(16B)4160-600V and XF-(17A)4160-600V Associated With Power Boards PB-16B and PB-17A
ECP 13-000436, Long-Time and Instantaneous Over-Current Settings for 600V Breaker BKR-(16B/010A)52 for the 11 ESW pump motor, Revision 0
ECP 13-000766, Remove Over-Speed Trip from Unit 2 from Unit 2 Diesel Fire Pump, Revision 0
ESR-13-00425, Unit 2 Diesel Fire Pump Tripped on Over-Speed with No Over-Speed Condition
SDBD-503, RB Closed Loop Cooling System Design Basis Document, Revision 07

Section 1R19: Post-Maintenance Testing

Procedures

N1-ST-Q8B, Liquid Poison Pump 12 and Check Valve Operability Test, Revision 00700
N2-OSP-CNT-M003, Reactor Building Integrity Verification Test, Revision 00201
N2-OSP-GTS-M001, Standby Gas Treatment System Functional Test, Revision 00201
N2-OSP-LOG-W@001, GTS and HVC Run Time Log, Revision 00900
S-MMP-SDM-001, Site Doors Maintenance, Revision 00500

Drawing

C-18009-C, Reactor Cleanup System P&ID, Revision 60

Condition Report

CR-2013-005740

Work Orders

WO C92402995
WO C92181936
WO C91214860

Section 1R20: Refueling and Other Outage Activities

Procedures

N1-OP-43A, Plant Startup, Revision 03201
N1-OP-43C, Plant Shutdown, Revision 01200

Drawing

C-18009-C, Reactor Water Clean-Up P&ID, Revision 60

Condition Report

CR-2013-005749

Work Order

C92338737

Section 1R22: Surveillance Testing

Procedures

N1-ISP-201-501, Type 'B' Containment Isolation Airlock Doors Leak Rate Test, Revision 00401

N1-ST-M1B, Liquid Poison Pump 12 Operability Test, Revision 00501

N1-ST-M4B, Emergency Diesel Generator 103 and PB 103 Operability Test, Revision 00802

N1-ST-M6, Core Spray Keep Fill Verification Test, Revision 01300

N1-ST-Q20, Reactor Building Heating, Cooling, and Ventilation System Test, Revision 01300

N1-ST-V13, Drywell Access Doors Interlock Test, Revision 00301

Condition Reports

CR-2013-000829

CR-2013-003266

CR-2013-005604

CR-2013-005840

Work Orders

WO C91979329

WO C91948380

Section 1EP4: Emergency Action Level and Emergency Plan Changes

Procedure

Off-Site Dose Assessment and Protective Action Recommendations, Revision 27

Section 1EP6: Drill Evaluation

Procedure

EPIP-EPP-20, Emergency Notifications, Revision 02900

Section 4OA1: Performance Indicator Verification

Condition Reports

CR-2011-001172

CR-2013-002461

CR-2013-004199

CR-2013-004333

CR-2013-004347

CR-2013-004408

CR-2013-004555

Miscellaneous

LER 05000220/2012-001, Automatic Reactor Scram due to Electronic Pressure Regulator Failure
 LER 05000220/2012-002, Automatic Reactor Scram due to Automatic Generator Protective Trip
 LER 05000220/2012-003, Loss of Isolation Function on Shutdown Cooling System Suction Line due to an Operating Procedure Deficiency
 LER 05000220/2012-004, Automatic Reactor Scram Due to a Generator Load Reject
 LER 05000220/2012-005, Feedwater Level Control Failure, HPCI Initiation and Reactor Scram
 LER 05000220/2012-006, Technical Specification Shutdown due to Containment Leakage
 LER 05000410/2012-002, Loss of Isolation Function on RHR Shutdown Cooling Suction Line due to Breaker Trip
 LER 05000410/2012-003, Suppression Pool Level Below Technical Specification Limit During Mode Change
 LER 05000410/2012-004, Manual Reactor Scram due to a Loss of Main Turbine Gland Sealing Steam Resulting in Lowering Condenser
 LER 05000410/2012-005, Automatic Diesel Actuation due to the Loss of a 115 kV Offsite Power Source
 LER 05000410/2013-001, Reactor Core Isolation Cooling System Isolation due to a Temperature Switch Unit Failure
 LER 05000410/2013-002, Failure of High-Pressure Core Spray System Pressure Pump due to Motor Winding Failure
 NEI 99-02, Regulatory Assessment Performance Indicator Guideline, Revision 7
 Unit 1 Mitigating System Performance Index Basis Document, Revision 9
 Unit 2 Mitigating System Performance Index Basis Document, Revision 11

Section 40A2: Problem Identification and ResolutionProcedures

CNG-AM-1.01-1023, Maintenance Rule Program, Revision 00201
 CNG-CA-1.01-1000, Corrective Action Program, Revision 00902
 CNG-CA-1.01-1010, Use of Operating Experience, Revision 01000
 CNG-MN-4.01-1002, Work Order Initiation, Screening, and Prioritization, Revision 00500
 N1-CTP-V937, Operation of the Circulating Water Chemical Injection System, Revision 00100
 N1-CTP-V938, Treatment of Screen and Pump House Raw Water with Biocide, Revision 01900
 N1-CTP-V945, Service Water Zebra Mussel Treatment, Revision 01600,
 N1-OP-18, Service Water System, Revision 03000
 N2-CTP-GEN-@643, EVAC Treatment of the Service Water System, Revision 5
 N2-CTP-SCT-D201, SWP Chemical Treatment System, Revision 10
 N2-ISP-RMS-002, Reactor Building Vent Wide Range Gas Monitor System Calibration, Revision 8
 N2-ISP-SWP-R112, Service Water Effluent Lines 'A' and 'B' Flow Instrument Channel Calibration, Revision 9
 N2-RSP-RMS-SA113, Channel Functional Test of the Service Water Effluent Line Liquid Process Radiation Monitor, Revision 7
 N2-RSP-RMS-R100, Operating Cycle Channel Calibration of the Flow System on the DRMS Gaseous and Gaseous/Particulate Process Radiation Monitor, Revision 3
 N2-RTP-130, Manual Flush of the Service Water Process Radiation Monitors, Revision 9
 S-ODP-OPS-0124, Control of Operator Workarounds and Burdens, Revision 00100

Condition Reports

CR-2002-004577	CR-2011-008817	CR-2011-010817
CR-2011-007830	CR-2011-010179	CR-2012-000013

CR-2012-000017	CR-2012-006587	CR-2012-010933
CR-2012-000622	CR-2012-007193	CR-2012-011481
CR-2012-000977	CR-2012-007303	CR-2012-011483
CR-2012-001210	CR-2012-007977	CR-2012-011501
CR-2012-001605	CR-2012-008126	CR-2012-011517
CR-2012-001638	CR-2012-008164	CR-2012-011574
CR-2012-002146	CR-2012-008548	CR-2012-011620
CR-2012-002176	CR-2012-008831	CR-2013-000007
CR-2012-002198	CR-2012-008912	CR-2013-000012
CR-2012-002249	CR-2012-009055	CR-2013-000136
CR-2012-002616	CR-2012-009080	CR-2013-000141
CR-2012-002711	CR-2012-009274	CR-2013-000243
CR-2012-002713	CR-2012-009400	CR-2013-000563
CR-2012-004475	CR-2012-009583	CR-2013-000868
CR-2012-004609	CR-2012-009594	CR-2013-000917
CR-2012-005012	CR-2012-009830	CR-2013-000978
CR-2012-005017	CR-2012-009968	CR-2013-001234
CR-2012-005119	CR-2012-010220	CR-2013-001286
CR-2012-005270	CR-2012-010313	CR-2013-001491
CR-2012-005315	CR-2012-010343	CR-2013-001810
CR-2012-005422	CR-2012-010442	CR-2013-002562
CR-2012-005465	CR-2012-010467	CR-2013-002615
CR-2012-005525	CR-2012-010479	CR-2013-004689
CR-2012-005752	CR-2012-010515	CR-2013-004986
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LIST OF ACRONYMS

10 CFR	Title 10 of the <i>Code of Federal Regulations</i>
AC	alternating current
ACE	apparent cause evaluation
ADAMS	Agencywide Documents Access and Management System
CAP	corrective action program
CENG	Constellation Energy Nuclear Group, LLC
CR	condition report
DSC	dry shielded canister
ECP	engineering change package
EDG	emergency diesel generator
ESW	emergency service water
FA	fire area
HPCS	high-pressure core spray
HVAC	heating, ventilation, and air conditioning
INPO	Institute of Nuclear Power Operations
IMC	Inspection Manual Chapter
ISFSI	independent spent fuel storage installation
LER	licensee event report
NEI	Nuclear Energy Institute
NMPNS	Nine Mile Point Nuclear Station, LLC
NRC	Nuclear Regulatory Commission
OE	operating experience
OGEMS	off-gas effluent monitoring system
OOS	out of service
PI	performance indicator
RB	reactor building
RCIC	reactor core isolation cooling
SGTS	standby gas treatment system
SSC	structure, system, and component
SW	service water
TI	temporary instruction
TS	technical specification
UFSAR	Updated Final Safety Analysis Report
UPS	uninterruptible power supply
WO	work order