



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION II  
245 PEACHTREE CENTER AVENUE N.E., SUITE 1200  
ATLANTA, GEORGIA 30303-1200

February 11, 2020

Mr. John Krakuszeski  
Site Vice President  
Duke Energy Progress, LLC  
8470 River Road, SE (M/C BNP001)  
Southport, NC 28461

SUBJECT: BRUNSWICK STEAM ELECTRIC PLANT – NRC INSPECTION REPORT  
05000324/2019004 AND 05000325/2019004; 07200006/2019002

Dear Mr. Krakuszeski:

On December 31, 2019, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Brunswick Steam Electric Plant. On January 27, 2020, the NRC inspectors discussed the results of this inspection with Mr. Karl Moser and other members of your staff. The results of this inspection are documented in the enclosed report.

No NRC-identified or self-revealing findings were identified during this inspection.

A licensee-identified violation which was determined to be of very low safety significance is documented in this report. We are treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2 of the Enforcement Policy.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

**/RA/**

Louis J. McKown, II, Chief (Acting)  
Reactor Projects Branch 4  
Division of Reactor Projects

Docket Nos. 05000324, 05000325 and 07200006  
License Nos. DPR-62 and DPR-71

Enclosure:  
As stated

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SUBJECT: BRUNSWICK STEAM ELECTRIC PLANT – NRC INSPECTION REPORT  
05000324/2019004 AND 05000325/2019004; 07200006/2019002 Dated  
February 11, 2020

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OFFICE	RII/DRP	RII/DRP	RII/DRP	RII/DRP	
NAME	G. Smith	J. Steward	P. Niebaum	L. McKown	
DATE	2/10/2020	2/10/2020	2/11/2020	2/ /2020	

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**U.S. NUCLEAR REGULATORY COMMISSION**  
**Inspection Report**

Docket Numbers: 05000324, 05000325 and 07200006

License Numbers: DPR-62 and DPR-71

Report Numbers: 05000324/2019004, 05000325/2019004 and 07200006/2019002

Enterprise Identifier: I-2019-004-0026  
I-2019-002-0098

Licensee: Duke Energy Progress, LLC

Facility: Brunswick Steam Electric Plant

Location: Southport, NC

Inspection Dates: October 01, 2019 to December 31, 2019

Inspectors: M. Bates, Senior Operations Engineer  
T. Fanelli, Senior Reactor Inspector  
M. Schwieg, Reactor Inspector  
G. Smith, Senior Resident Inspector  
J. Steward, Resident Inspector

Approved By: Louis J. McKown, II, Chief  
Reactor Projects Branch 4  
Division of Reactor Projects

Enclosure

## SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting a NRC inspection at Brunswick Steam Electric Plant, in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to <https://www.nrc.gov/reactors/operating/oversight.html> for more information. A licensee-identified non-cited violation is documented in report section: 71152.

### List of Findings and Violations

No findings or violations of more than minor significance were identified.

### Additional Tracking Items

Type	Issue Number	Title	Report Section	Status
URI	05000324,05000325/201904-01	Limitorque MOV space heater impact on qualified life	71152	Open
LER	05000324/2019-001-00	LER 2019-001-00 for Brunswick Steam Electric Plant, Unit No. 2, Automatic Actuation of the Primary Containment Isolation System.	71153	Closed

## PLANT STATUS

Unit 1 began the inspection period at 100 percent rated thermal power (RTP) and continued to operate there until October 8, when power was reduced to 70 percent RTP due to removal of an off-site power line. Following maintenance on the line, power was restored to 100 percent RTP on the same day where it continued to operate until October 18 when power was reduced to 92 percent RTP for turbine bypass valve testing and control rod operability testing. Following completion of the testing, power was restored to 100 percent RTP on October 19 where the unit continued to operate until November 15 when power was reduced to 65 percent RTP for a control rod sequence exchange. Following the sequence exchange as well as two follow-on control rod improvements, power was restored to 100 percent RTP on November 21 where the unit continued to operate until December 20 when power was reduced to 82 percent RTP for turbine bypass valve testing and control rod operability testing. Following completion of the testing and one control rod improvement, power was returned to 100 percent RTP where the unit continued to operate until the end of the period.

Unit 2 began the inspection period at 100 percent RTP and continued to operate there until October 3, when power was reduced to 94 percent RTP due to removal of a condensate demineralizer from service. Following restoration of the demineralizer, power was restored to 100 percent RTP on the October 5 where the unit continued to operate until December 6 when power was reduced to 65 percent RTP for a control rod sequence exchange, turbine bypass valve testing, feed water heater maintenance, and control rod drive system maintenance. Following completion of the testing, maintenance, and one control rod improvement, power was restored to 100 percent RTP on December 9 where the unit continued to operate until the end of the period.

## INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors performed plant status activities described in IMC 2515, Appendix D, "Plant Status," and conducted routine reviews using IP 71152, "Problem Identification and Resolution." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

## REACTOR SAFETY

### 71111.01 - Adverse Weather Protection

#### External Flooding Sample (IP Section 03.04) (1 Sample)

- (1) On December 31, 2019, the inspectors completed an evaluation of the site's readiness to cope with external flooding for the following areas:
  - Service Water Building
  - Emergency Diesel Generator Building
  - Independent Spent Fuel Storage Installation (ISFSI)

#### 71111.04Q - Equipment Alignment

##### Partial Walkdown Sample (IP Section 03.01) (2 Samples)

The inspectors evaluated system configurations during partial walkdowns of the following systems/trains:

- (1) Unit 2 'A' residual heat removal (RHR) train during a maintenance outage on the 'B' RHR train on November 14, 2019
- (2) Unit 2 'A' and 'B' conventional service water (CSW) pumps as well Unit 2 nuclear service water (NSW) system while the Unit 2 'B' CSW pump was out-of-service (OOS) for planned maintenance on December 17, 2019

#### 71111.04S - Equipment Alignment

##### Complete Walkdown Sample (IP Section 03.02) (1 Sample)

- (1) The inspectors evaluated system configurations during a complete walkdown of the Unit 1 Reactor Core Isolation and Cooling (RCIC) system on November 26, 2019

#### 71111.05A - Fire Protection (Annual)

##### Annual Inspection (IP Section 03.02) (1 Sample)

- (1) The inspectors evaluated a smoldering event in the elevator machinery room (elev. 70') of the radioactive waste building (0PFP-RW-01E) on December 10, 2019.

#### 71111.05Q - Fire Protection

##### Quarterly Inspection (IP Section 03.01) (2 Samples)

The inspectors evaluated fire protection program implementation in the following selected areas:

- (1) Unit 1 Turbine Building (20' elevation) air compressor area (1PFP-TB1-01D) on October 10, 2019
- (2) Unit 2 Reactor Building (-17' elevation), RHR A/C pump room, Northeast RHR pump room (2PFP-RB2-01C) on November 14, 2019

#### 71111.06 - Flood Protection Measures

##### Inspection Activities - Internal Flooding (IP Section 02.02a.) (1 Sample)

On December 31, 2019, the inspectors completed an evaluation of internal flooding mitigation protections in the:

- (1) Radioactive Waste Building

#### 71111.07A - Heat Sink Performance

#### Annual Review (IP Section 02.01) (1 Sample)

On December 31, 2019, the inspectors completed an evaluation of the readiness and performance of the below heat exchanger:

- (1) Unit 2 'A' RHR heat exchanger

#### 71111.11A - Licensed Operator Regualification Program and Licensed Operator Performance

##### Regualification Examination Results (IP Section 03.03) (1 Sample)

The licensee completed the annual regualification operating examinations required to be administered to all licensed operators in accordance with Title 10 of the *Code of Federal Regulations* 55.59(a)(2), "Regualification Requirements," of the NRC's "Operator's Licenses." During the week of October 28, 2019, the inspector performed an in-office review of the overall pass/fail results of the individual operating examinations, the crew simulator operating examinations, and the biennial written examinations in accordance with Inspection Procedure (IP) 71111.11, "Licensed Operator Regualification Program." These results were compared to the thresholds established in Section 3.02, "Regualification Examination Results," of IP 71111.11.

- (1) The inspectors reviewed and evaluated the licensed operator examination failure rates for the regualification annual operating exam and biennial written examination completed on September 27, 2019.

#### 71111.11Q - Licensed Operator Regualification Program and Licensed Operator Performance

##### Licensed Operator Performance in the Actual Plant/Main Control Room (IP Section 03.01) (1 Sample)

- (1) The inspectors observed and evaluated licensed operator performance in the Control Room while performing reactivity manipulation in accordance with OPT-14.1, "Monthly Control Rod Exercise Test," Rev. 70 on November 15, 2019

##### Licensed Operator Regualification Training/Examinations (IP Section 03.02) (1 Sample)

- (1) The inspectors observed and evaluated the Cycle 4 Requal Simulator evaluation on October 23, 2019. This scenario dealt with a failure of an automatic depressurization system valve and an anticipated transient without scram (ATWS).

#### 71111.12 - Maintenance Effectiveness

##### Routine Maintenance Effectiveness Inspection (IP Section 02.01) (4 Samples)

The inspectors evaluated the effectiveness of routine maintenance activities associated with the following equipment and/or safety significant functions:

- (1) CR 2206596 Unit 1 Drywell Temperature abnormally high for plant conditions on December 31, 2019
- (2) Unit 1 Stator Water Cooling filter chemical cleaning on October 17, 2019

- (3) Unit 2 EDG Fuel Oil Storage Tank clean and inspect under PMRQ 6914-02 on December 9, 2019
- (4) Unit 2 Intermediate Range channel 'A' detector (2-C51-K601A) calibration and functional testing, following troubleshooting and repair activities on December 31, 2019

#### 71111.13 - Maintenance Risk Assessments and Emergent Work Control

##### Risk Assessment and Management Sample (IP Section 03.01) (2 Samples)

The inspectors evaluated the risk assessments for the following planned and emergent work activities:

- (1) Emergent Failure of Relay 1-E11-K14B (Reactor Vessel Shroud Level Below Low Level) on October 8, 2019
- (2) Unit 2 'B' RHR Pump breaker emergent failure on December 16, 2019

#### 71111.15 - Operability Determinations and Functionality Assessments

##### Operability Determination or Functionality Assessment (IP Section 02.02) (5 Samples)

The inspectors evaluated the following operability determinations and functionality assessments:

- (1) NCR 2294630: Thru wall leak at flange weld upstream of 1-SW-V110 (PDO) on October 3, 2019
- (2) NCR 2260472: Leak from piping downstream of 2-E11-PDV-F068B on October 31, 2019
- (3) NCR 2287709: Unit 1 RCIC line does not meet stress allowable on November 8, 2019
- (4) NCR 2303382: Unit 1, 1-SW-140-20-157 Flange Bolt Material Nonconforming to Spec 248-117 on December 2, 2019
- (5) NCR 2301991: Unit 2 RCIC (2-E51-F013) Required in-service inspection not performed on December 31, 2019

#### 71111.18 - Plant Modifications

##### Temporary Modifications and/or Permanent Modifications (IP Section 03.01 and/or 03.02) (2 Samples)

On December 31, 2019, the inspectors completed an evaluation of the following permanent modifications:

- (1) Engineering Change (EC) 299232, "Unit 2 Reactor Building Roof Drain Piping Replacement" completed on December 11, 2019
- (2) EC 400467, "1A CSW Pump Replacement" completed on December 31, 2019

#### 71111.19 - Post-Maintenance Testing

##### Post-Maintenance Test Sample (IP Section 03.01) (5 Samples)



The inspectors evaluated the following post maintenance tests (PMTs):

- (1) Unit 2 'B' NSW Pump Discharge Strainer Flange and downstream piping on November 22, 2019
- (2) Unit 2 'B' NSW Pump B Discharge Strainer Blowdown Valve, 2-SW-PV-140, on December 12, 2019
- (3) Unit 1 Standby Liquid Control System drain valve (1-C41-V23) following valve replacement under WO 20097108 on December 31, 2019
- (4) Unit 2 Intermediate Range Channel 'A' following maintenance/functional testing per 0MST-IRM25R on December 31, 2019
- (5) Unit 2 'B' RHR pump breaker following breaker replacement under WO 20372008 on December 26, 2019

#### 71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

#### Inservice Testing (IP Section 03.01) (1 Sample)

- (1) OPT-09.2, HPCI System Operability Test (Unit 1) on October 10, 2019

#### 71114.06 - Drill Evaluation

#### Select Emergency Preparedness Drills and/or Training for Observation (IP Section 03.01) (1 Sample)

- (1) Emergency Preparedness Drill conducted on October 9, 2019

### **OTHER ACTIVITIES – BASELINE**

#### 71151 - Performance Indicator Verification

On December 31, 2019 the inspectors completed a verification of the licensee performance indicator submittals listed below:

#### MS07: High Pressure Injection Systems (IP Section 02.06) (2 Samples)

- (1) Unit 1 (October 1, 2018 – September 30, 2019)
- (2) Unit 2 (October 1, 2018 – September 30, 2019)

#### MS08: Heat Removal Systems (IP Section 02.07) (2 Samples)

- (1) Unit 1 (October 1, 2018 – September 30, 2019)
- (2) Unit 2 (October 1, 2018 – September 30, 2019)

#### MS09: Residual Heat Removal Systems (IP Section 02.08) (2 Samples)

- (1) Unit 1 (October 1, 2018 – September 30, 2019)
- (2) Unit 2 (October 1, 2018 – September 30, 2019)

#### 71152 - Problem Identification and Resolution

#### Semiannual Trend Review (IP Section 02.02) (1 Sample)

- (1) On December 31, 2019, the inspectors completed a review of the licensee's corrective action program looking for potential adverse trends that might be indicative of a more significant safety issue.

#### Annual Follow-up of Selected Issues (IP Section 02.03) (3 Samples)

On December 31, 2019, the inspectors completed an evaluation of the licensee's implementation of its corrective action program related to the following issues:

- (1) CR 2277159 Unit 2 HPCI Overspeed and Unexplained Speed Response During Testing
- (2) CR 2271482, Fire in Unit 2 'B' Heater Drain Pump
- (3) CR 2214514, EQ violation followup

#### 71153 - Followup of Events and Notices of Enforcement Discretion

#### Event Report (IP Section 03.02) (1 Sample)

The inspectors evaluated the following licensee event reports (LERs):

- (1) LER 05000324/2019-001-00, Automatic Actuation of the Primary Containment Isolation System (ADAMS accession: ML 19120A333). The circumstances surrounding this LER are documented in Inspection Report 05000324,325/2019001-01. This issue involved an inadvertent reactor vessel low level signal that resulted in a temporary loss of shutdown cooling. A Green Non-Cited Violation was issued under the above mentioned report.

### **OTHER ACTIVITIES – TEMPORARY INSTRUCTIONS, INFREQUENT AND ABNORMAL**

#### 60855.1 - Operation of an Independent Spent Fuel Storage Installation at Operating Plants

#### Operation of an Independent Spent Fuel Storage Installation at Operating Plants (1 Sample)

- (1) The inspectors evaluated the licensee's activities related to long-term operation and monitoring of their independent spent fuel storage installation (ISFSI). This inspection included a detailed walkdown of the ISFSI on December 31, 2019.

### **INSPECTION RESULTS**

Unresolved Item (Open)	Limitorque MOV space heater impact on qualified life URI 05000324,05000325/2019004-01	71152
<u>Description:</u> The NRC opened an unresolved item (URI) following a review of the corrective actions for non-cited violation (NCV) 05000324, 325/2018011-02 (ADAMS Accession No. ML18176A352). The NCV was specifically for not considering potential degradation from space heaters inside the limit switch compartments (LSC) for Limitorque motor operated valves (MOV). The Appendix B supplier, Limitorque, offered these space heaters (resistors) as an optional accessory for short term storage in damp locations, limited to less than one		

year, per the user instructions in licensee files (FP-20243). However, the licensee used the heaters in service for 22 years until 1997 when they were turned off. The resistors did not perform any safety function, were not safety related, and were not part of the MOV qualification. As a corrective action in the licensee's evaluation, the heat rise value in various Qualification Data Packages (QDPs) was raised to 12 °C from 10 °C. The licensee stated, in part, "this value is from our Appendix B supplier, adjusted 20% higher to account for uncertainty." The current licensee position stated, "In lieu of a separate analysis to determine actual heat rise, and in absence of any design inputs currently available in our records management system to perform a separate analysis, the licensee used the heat rise value from the NUGEQ Clarification Letter, approved by Limitorque, as design input from our Appendix B supplier and applied this heat rise to all components within the LSC." However, the nuclear utility group for environmental qualification (NUGEQ) supplied the 10 °C and was not an Appendix B supplier. No testing or analysis was provided to substantiate the NUGEQ temperature. The heater surface temperatures specified by the heater manufacturer (Ward-Leonard/Ohmite) indicated they could reach as high as 300°C when operated at full power in open air. The manufacturer specified that the heater temperatures were certified by the underwriters laboratories (UL) which used testing as a verification method. The degrading temperatures effects of the heaters on other components were not verified during Limitorque qualification testing. The original performance deficiency specified, that "the failure to address the degrading effects of space heaters in Limitorque MOVs was a performance deficiency (PD)". Testing or analytical methods for determining the degrading effects of the space heaters would account for the verified manufacturer temperatures (UL verified temperatures) in conjunction with installation configurations, which further affect the temperatures (applied power, ambient temperature rise, enclosure temperature rise, and resistor grouping temperature rise). The installed configurations included 25 watt single resistors and parallel resistors in the 40 to 50 watt range that are inside small unventilated enclosures. The failure to determine the degrading effects of the heaters in their installed configurations by test or analysis in accordance with IEEE 323-1974, Section 6, "Qualification Procedures and Methods," was a performance deficiency.

As described in the prior violation, Information notice (IN) 86-71, "Recent Identified Problems with Limitorque Motor Operators," was issued to notify licensees of high temperature damage to MOVs caused by these resistors. The warning and other information was available at the time the licensee evaluated the effect on qualified life of the MOVs in around 1997. The licensee did not correct the prior violation (NCV 05000325/2018011, 05000324/2018011-02) in that they neither identified potential degraded conditions inside the LSCs of the MOVs nor adequately evaluated the impact on the environmentally qualified life of the components.

**Planned Closure Actions:** The inspectors determined more information is needed to sufficiently determine if this issue is more than minor. To support that determination, the inspectors will observe and review the results of the licensee's testing of the MOV space heaters currently scheduled during the first calendar quarter of 2020. The testing should provide a reasonable temperature rise from the LSC space heaters that will allow the licensee to complete an evaluation of any impacts to the qualified life of the MOVs. Additionally, the inspectors will review any revisions to the licensee's operability evaluation of the MOVs as a result of the planned testing.

**Licensee Actions:** The licensee entered this issue into the corrective action program and an initial determination of operability determined the components to be operable. Additionally, the licensee plans to conduct testing of the MOV limit switch compartment space heaters during the first calendar quarter of 2020.

Corrective Action References: This issue has been documented as CR 2214514 in the corrective action program.

Licensee-Identified Non-Cited Violation	71152
<p>This violation of very low safety significance was identified by the licensee and has been entered into the licensee corrective action program and is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.</p> <p>Violation: From 2017 to 2019, the licensee failed to maintain the effectiveness of its emergency plan when the licensee failed to utilize a 15-minute average for the data (wind speed and stability class) sent from the metrological tower to the Emergency Response Facility Information System (ERFIS) in the control room and technical support center. This ERFIS data is used to make protective action recommendations during a plant emergency. The data was instead mistakenly sent to ERFIS as an instantaneous value. Using incorrect metrological data in ERFIS could lead to an inaccurate dose assessment. This issue was discovered by the licensee during the replacement of the metrological tower in October 2019. The licensee immediately instituted compensatory measure upon discovery of the error. The issue was placed into the licensee's corrective action program as condition report (CR) 2296881. The use of a 15-minute average is required pursuant to NRC Regulatory Guide 1.23, Rev. 0 and 1.97, Rev. 2. The licensee formally committed to these regulatory guides in their emergency plan.</p> <p>Contrary to 10 CFR 50.54(q)(2) and 10 CFR 50.54(b)(9), Brunswick Nuclear Plant (BNP) failed to maintain the effectiveness of its emergency plan by not ensuring the metrological data sent to ERFIS was assembled as a 15-minute average, thereby affecting the licensee's ability to provide technically accurate dose assessments.</p> <p>Significance/Severity: Green. The inspectors evaluated this issue as affecting dose assessment per IMC 0609, Appendix B, Table 5.9-1. The inspectors screened this issue as a Green NCV (Licensee Identified) because the licensee never lost full capability of performing dose projections at the site.</p> <p>Corrective Action References: CR 2296881</p>	

Observation: Semi Annual Trend Review	71152
<p>The inspectors performed a trend analysis on the licensee's corrective action program in order to identify trends that could indicate the existence of a more significant safety issue. The inspectors focused their review on repetitive equipment failures, human performance trends, and signs of programmatic weakness. The inspectors utilized daily condition report screenings, licensee trending efforts, and licensee human performance results. The review nominally considered the 6-month period of July 2019 through December 2019, although some examples extended beyond those dates when the scope of the trend warranted. The inspectors compared their results with the licensee's analysis of trends. Additionally, the inspectors reviewed the adequacy of corrective actions associated with a sample of the issues identified in the licensee's trend reports. The inspectors also reviewed corrective action documents that were processed by the licensee to identify potential adverse trends in the condition of structures, systems, and/or components as evidenced by acceptance of long-standing non-conforming or degraded conditions.</p> <p>The inspectors noted some sporadic issues where equipment reliability was a</p>	

concern. However, the inspectors observed that, in these cases, the licensee aggressively addressed the underlying concerns and integrated an overall plan to address any negative outcomes regarding equipment reliability issues.

## **EXIT MEETINGS AND DEBRIEFS**

The inspectors verified no proprietary information was retained or documented in this report.

- On January 27, 2020, the inspectors presented the NRC inspection results to Mr. Karl Moser and other members of the licensee staff.

## DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.01	Miscellaneous		Updated Final Safety Analysis Report Sections 3.4.1.1, 2.4.5.2, and 2.4.5.3	26
		DBD-144	External and Internal Flooding	1
	Procedures	0AI-68	Brunswick Nuclear Plant Response to Severe Weather Warnings	55
		0AOP-13.0	Operation during Hurricane, Flood Condition, Tornado, or Earthquake	68
71111.04Q	Drawings	D-02525, Sheet 1A	Reactor Building Residual Heat Removal System Piping Diagram	53
		D-02525, Sheet 1B	Reactor Building Residual Heat Removal System Piping Diagram	72
	Miscellaneous		Updated Final Safety Analysis Report, Section 5.4.7, Residual Heat Removal System	26
	Procedures	1OP-43	Service Water System Operating Procedure	168
		2OP-17	Residual Heat Removal System Operating Procedure	181
		SD-43	Service Water System	27
71111.04S	Procedures	1OP-16	Reactor Core Isolation and Cooling System Operating System	91
		SD-16	Reactor Core Isolation and Cooling System	13
71111.05A	Procedures	0FPP-060	Fire Drill Program	2
		0PFP-013	General Fire Plan	54
		0PLP-01.2	Fire Protection System Operability, Action, and Surveillance Requirements	51
		AD-EG-ALL-1532	NFPA 805 Pre-Fire Plans	1
71111.05Q	Fire Plans	U1 TB EL 20' Air Compressor Area Fire Zone, 1PFP-TB1-01D	Turbine Building Pre-Fire Plans, CSD-BNP-PFP-1TB	3
		U2 RB 17' EL Northeast RHR Room, Fire Zone 2PFP-2B-01C	Reactor Building Pre-Fire Plans, CSD-BNP-PFP-2RB	0

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Procedures	0PFP-013	General Fire Plan	54
		0PLP-01.2	Fire Protection System Operability, Action, and Surveillance Requirements	51
		AD-EG-ALL-1520	Transient Combustible Control	11
		AD-EG-ALL-1532	NFPA 805 Pre-Fire Plans	1
71111.07A	Miscellaneous	FP-5652	RHR Heat Exchanger Technical Manual	K
		Photos	Photos of the 2A RHR heat exchanger	03/31/2019
	Procedures	0ENP-2704	Administrative Control of NRC Generic Letter 89-13 requirements	25
71111.11Q	Miscellaneous	LORX-15	Simulator Guide	0
	Procedures	0PT-14.1	Monthly Control Rod Exercise Test	70
		AD-OP-ALL-1000	Conduct of Operations	13
71111.12	Corrective Action Documents	NCR 2292147	Unit 1 Stator Cooling Filter exceeds 8 psid limit	
	Miscellaneous	Database	Maintenance Rule Database	12/31/2019
		NUMARC 93-01	Industry Guidelines for monitoring the effectiveness of maintenance at Nuclear Power Plants	4A
	Procedures	0MST-IRM21AR	IRM Channel A Calibration/Functional Test	5
		0SMP-DG501	Diesel Fuel Oil Tanks Inspection	2
		AD-EG-ALL-1210	Maintenance Rule Program	1
	Work Orders	20155129, 20119602		
		20341070-01, 20193450-01		
		20353993, 20355308		
71111.13	Corrective Action Documents	NCR 2295055	Emergent Failure of 1E11-K14B	
	Procedures	0AP-025	BNP Integrated Scheduling	57
		AD-OP-ALL-0201	Protected Equipment	5
		AD-WC-ALL-0200	Online Work Management	13

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		AD-WC-ALL-0250	Work Implementation and Completion	9
		AD-WC-ALL-0410	Work Activity Integrated Risk Management	7
	Work Orders	20154566		
71111.15	Operability Evaluations	NCR 2294630	Thru wall leak at flange weld upstream of 1-SW-V110	
		NCR 2301991	Unit 2 RCIC, 2-E51-F013 Required ISI not performed	
		NCR 2303382	1-SW-140-157 Flange Bolt Material NCON to 248-117	
	Procedures	AD-OP-ALL-0105	Operability Determinations and Functionality Assessments	4
		AD-PI-ALL-0100	Corrective Action Program	21
	Work Orders	20356248		
71111.18	Engineering Changes	299232	Unit 2 Reactor Building Roof Drain Piping Replacement	9
		400467	1A Conventional Service Water Pump replacement	11
		400467	EC 295433 CHILD #5 – 1-SW-1A-CONV-PMP REPLACEMENT	06/20/2019
	Engineering Evaluations	G0050A-10	BNP UNIT NO. 1 SERVICE WATER SYSTEM HYDRAULIC ANALYSIS	Rev. 15
	Miscellaneous	238-044	PROCUREMENT OF PRODUCT-LUBRICATED SERVICE WATER PUMPS - AL6XN	Rev. 12
	Procedures	IPT-24.1-1	Service Water Pump and Discharge Valve Operability Test	04/29/2019
71111.19	Procedures	0MST-IRM25R	IRM Channels Range Correlation Adjustment	6
		2OP-17	Residual Heat Removal System Operating Procedure	181
		2PT-24.1-2	Service Water Pump and Discharge Valve Operability Test	86
	Work Orders	20341070-02	2-C51-K601A, IRM A Recorder Value low out of tolerance PMT	
		20364434	Unit 2 NSW Pump B Discharge Strainer Blowdown Line PMT	
		20364434-03	Unit 2 NSW Pump Discharge Strainer Blowdown Valve, 2-SW-PV-140, PMT	
71111.22	Procedures	0PT-09.2	Unit 1 HPCI System Operability Test	152
71152	Procedures	AD-PI-ALL-0100	Corrective Action Program	21