

August 12, 2019

Mr. Daniel G. Stoddard Senior Vice President and Chief Nuclear Officer Dominion Energy Innsbrook Technical Center 5000 Dominion Blvd., Floor: IN-2SW Glen Allen, VA 29060

# SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION – NRC INTEGRATED INSPECTION REPORT 05000395/2019002

Dear Mr. Stoddard:

On June 30, 2019, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Virgil C. Summer Nuclear Station. On July 29, 2019, the NRC inspectors discussed the results of this inspection with Mr. George Lippard 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.

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

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

Sincerely,

/**RA**/

Randall A. Musser, Chief Reactor Projects Branch 3 Division of Reactor Projects

Docket No. 05000395 License No. NPF-12

Enclosure: Inspection Report 05000395/2019002

cc w/ encl: Distribution via LISTSERV

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# U.S. NUCLEAR REGULATORY COMMISSION Inspection Report

Docket Number:	05000395
License Number:	NPF-12
Report Number:	05000395/2019002
Enterprise Identifier:	I-2019-002-0019
Licensee:	Dominion Energy
Facility:	Virgil C. Summer Nuclear Station
Location:	Jenkinsville, SC
Inspection Dates:	April 01, 2019 to June 30, 2019
Inspectors:	S. Downey, Senior Reactor Inspector E. Hilton, Resident Inspector M. Magyar, Reactor Inspector T. Nazario Cruz, Senior Resident Inspector J. Reece, Senior Resident Inspector
Approved By:	Randall A. Musser, Chief Reactor Projects Branch 3 Division of Reactor Projects

## SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Virgil C. Summer Nuclear Station 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 <u>https://www.nrc.gov/reactors/operating/oversight.html</u> for more information. Licensee-identified non-cited violations are documented in report sections: 71111.15.

# List of Findings and Violations

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

## Additional Tracking Items

Туре	Issue Number	Title	Report Section	Status
LER	05000395/2019-001- 00	LER 2019-001-00 for Virgil C. Summer, Unit 1, Condition	71153	Closed
		Prohibited by Technical		
		Specification 3.4.6.1.		

# **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 <a href="http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html">http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html</a>. 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

Impending Severe Weather Sample (IP Section 03.03) (1 Sample)

(1) The inspectors evaluated readiness for impending adverse weather conditions for a tornado watch issued for Fairfield County on April 19, 2019.

## Seasonal Extreme Weather Sample (IP Section 03.02) (1 Sample)

(1) The inspectors evaluated readiness for seasonal extreme weather conditions prior to the onset of hot weather for the following systems: walkdown of emergency diesel generators (EDGs) and service water pumphouse (SWPH) on June 26, 2019.

## Summer Readiness Sample (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated summer readiness of offsite and alternate alternating current (AC) power systems on May 31, 2019.

## 71111.04 - Equipment Alignment

# Partial Walkdown Sample (IP Section 03.01) (4 Samples)

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

- (1) 'A' reactor building (RB) spray pump during scheduled maintenance on 'B' RB spray components on April 17, 2019
- (2) 'A' emergency diesel generator (EDG) during major maintenance on 'B' EDG on April 10, 2019
- (3) 'B' EDG during major maintenance on 'A' EDG on May 23, 2019
- (4) 'B' residual heat removal (RHR) during maintenance on 'A' RHR on June 18, 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 intermediate building (IB) 412' elevation of 'B' train component cooling water (CCW) system on June 24, 2019.

## 71111.05Q - Fire Protection

## Quarterly Inspection (IP Section 03.01) (5 Samples)

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

- (1) Relay room solid state protection system (SSPS) instrumentation and inverter (fire zones CB06, CB10, CB12) on April 10, 2019
- (2) Auxiliary building switchgear room 463' elevation (fire zone AB01.29) on April 17, 2019
- (3) Auxiliary building 374' elevation (fire zones AB01.01.01, 01.01.02, AB01.02, AB01.02) on April 17, 2019
- (4) Battery / charger rooms 'A' and 'B' and cable room (fire zones IB02, 03, 04, 05, 06 and IB27) on June 26, 2019
- (5) Turbine driven emergency feedwater (TDEFW) pump room (fire zone IB25.02) on June 26, 2019

## 71111.06 - Flood Protection Measures

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

The inspectors evaluated internal flooding mitigation protections in the:

(1) Service water (SW) pumphouse (SW pumps and associated mechanical and electrical components) on June 26, 2019

## Inspection Activities - Underground Cables (IP Section 02.02c.) (1 Sample)

The inspectors evaluated cable submergence protection in:

(1) Safety-related electrical manholes (EMH)-1 and EMH-2; inspection completed on June 17, 2019

## 71111.07A - Heat Sink Performance

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

The inspectors evaluated readiness and performance of:

(1) WO 1904815, service water (SW) heat exchanger performance testing following replacement of 'A' EDG heat exchanger tube bundles on June 3, 2019

# 71111.07T - Heat Sink Performance

# Triennial Review (IP Section 02.02) (4 Samples)

The inspectors evaluated heat exchanger/sink performance on the following from June 24, 2018 to June 28, 2018:

- (1) Component Cooling Water Heat Exchanger A (XHE0002A), Section 02.02b
- (2) Emergency Diesel Generator A Intercooler (XHE0017A-HE3), 02.02b
- (3) Emergency Diesel Generator Lube Oil Coolers (XHE0017A-HE1, XHE0017B-HE1), 02.02b
- (4) Service Water Pond, Section 02.02.d. Specifically Sections 02.02.d.1, 02.02.d.6, and 02.02d.7 were completed.

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

# Licensed Operator Performance in the Actual Plant/Main Control Room (IP Section 03.01) (4 Samples)

- (1) The inspectors observed and evaluated licensed operator performance in the Control Room during reactor coolant system (RCS) dilutions for maintaining temperature; replacement of card for vibration monitoring on 'A' main feedwater pump on June 3, 2019.
- (2) The inspectors observed and evaluated licensed operator performance in the Control Room during nuclear instrumentation calibration on June 21, 2019.
- (3) The inspectors observed and evaluated licensed operator performance in the Control Room during 'A' train safety-related chiller troubleshooting and alarm response on June 26, 2019.
- (4) The inspectors observed and evaluated licensed operator performance in the Control Room during 'A' train solid state protection system (SSPS) testing on June 28, 2019.

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

(1) The inspectors observed and evaluated inspection of the simulator requalification examination on May 20, 2019.

## 71111.12 - Maintenance Effectiveness

# Routine Maintenance Effectiveness Inspection (IP Section 02.01) (2 Samples)

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

- (1) 'A' service water (SW) pump seismic restraints were found out of tolerance on April 15, 2019
- (2) A maintenance rule (a)(1) evaluation for reactor coolant system (RCS) leak detection function due to reactor building cooling unit (RBCU) drain flow switch failures on June 17, 2019

# 71111.13 - Maintenance Risk Assessments and Emergent Work Control

## Risk Assessment and Management Sample (IP Section 03.01) (5 Samples)

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

- (1) Yellow risk for 'B' train SSPS surveillance test on May 10, 2019
- (2) Emergent work associated with replacing the master pressurizer controller on June 14, 2019
- (3) Emergent work associated with calibrating nuclear instrumentation (NIs) on June 21, 2019
- (4) Emergent work associated with 'A' EDG lube oil temperature switch replacement on June 28, 2019
- (5) Yellow risk condition for 'A' train SSPS surveillance test on June 28, 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) CR-19-00207, Gas found in 'B' train residual heat removal (RHR) on April 1, 2019
- (2) CR-19-01330, 'B' SW pipe tee with pinhole leak on April 18, 2019
- (3) CR-19-00393, Non-conforming condition for 'A' train SW pump due to seismic restraints out of tolerance on April 8, 2019
- (4) CR-19-01499, 'A' EDG air start tanks minimum wall and debris on May 6, 2019
- (5) CR-19-01874, Accept as is disposition for 'A' EDG low lube oil pressure and jacket water pressure switch support bracket non-conformance on May 29, 2019

## 71111.18 - Plant Modifications

## Severe Accident Management Guidelines (SAMG) Update (IP Section 03.03) (1 Sample)

(1) Review of new Severe Accident Management Guidelines (SAMGs); inspection completed on April 30, 2019

## 71111.19 - Post-Maintenance Testing

# Post Maintenance Test Sample (IP Section 03.01) (6 Samples)

The inspectors evaluated the following post maintenance tests:

- (1) Rebuild 'A' EDG intercooler water pump housing work order (WO) 1810607, on April 26, 2019
- (2) Remove SW motor oil cooler spool pieces for ES-505 inspection WO1809226, on May 9, 2019
- (3) EB-04 7.2 kV breaker operational check WO1809270, on May 15, 2019
- Replace lube oil heat exchanger tube bundle on 'A' EDG WO1702673, on June 11, 2019

- (5) Replace thermostatic valve power pill on 'A' EDG WO1807014, on June 13, 2019
- (6) Replace master pressurizer controller WO1906239, on June 14, 2019

# 71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

## Inservice Testing (IP Section 03.01) (4 Samples)

- (1) STP-121.002A, "Steam Generator PORV Operability Test," Revision 0D, WO1904919 on May 8, 2019
- (2) STP-220.002, "Turbine Driven Emergency Feedwater Pump and Valve Test," Revision 9B, WO1907077 on June 25, 2019
- (3) STP-223.002A, "Service Water Pump Test," Revision 10C, for 'A' train, WO1904489 on June 8, 2019
- (4) STP-205.003, "Charging/Safety Injection Pump and Valve Test," Revision 8B, for 'C' pump, WO1904481 on June 8, 2019

## Surveillance Tests (other) (IP Section 03.01) (2 Samples)

- (1) STP-124.004, "Control Room Emergency Unfiltered Air Inleakage Testing," Revision 0D, WO1807357 on May 17, 2019
- (2) STP-111.001, "Seismic Instrumentation Channel Check," Revision 7D, WO1904413 on June 11, 2019

## 71114.06 - Drill Evaluation

# Drill/Training Evolution Observation (IP Section 03.02) (1 Sample)

The inspectors evaluated:

(1) On June 4, 2019, the inspectors reviewed and observed the performance of a simulator drill that involved multiple equipment failures which required a Notice of Unusual Event (NOUE), Alert, Site Area Emergency (SAE) and General Emergency to be declared. The inspectors assessed emergency procedure usage, emergency plan classification, notifications, and the licensee's identification and entrance of any problems into their corrective action program. This inspection evaluated the adequacy of the licensee's conduct of the drill and critique performance. Drill issues were captured by the licensee in CR-19-02038.

# OTHER ACTIVITIES – BASELINE

## 71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

## BI01: Reactor Coolant System (RCS) Specific Activity Sample (IP Section 02.10) (1 Sample)

(1) Unit 1 for the period from April 1, 2018, through March 31, 2019.

# BI02: RCS Leak Rate Sample (IP Section 02.11) (1 Sample)

The inspectors verified licensee performance indicators submittals listed below:

(1) Unit 1 for the period from April 1, 2018, through March 31, 2019.

## 71152 - Problem Identification and Resolution

## Annual Follow-up of Selected Issues (IP Section 02.03) (1 Sample)

The inspectors reviewed the licensee's implementation of its corrective action program related to the following issues:

(1) CR-18-02706, SW pinhole leak in pipe tee downstream of XVB03123B on May 6, 2019

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

(1) The inspectors reviewed the licensee's corrective action program for potential adverse trends related to the EDG air start system and noted the licensee initiated CR-17-03653 in response to a negative trend associated with EDG air start system debris issues. The inspectors reviewed CR-17-03653 and the associated common cause evaluation. The inspectors noted in the common cause evaluation identified debris intrusion, which resulted from corrosion in the air start supply lines and tanks. The inspectors reviewed the licensee's current plans to address the EDG air start system issues which includes bridging strategies and aging management documentation.

## 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 (LER): 05000395/2019-001-00, Virgil C. Summer, Unit 1, Condition Prohibited by Technical Specification 3.4.6.1. ADAMS accession ML19105B284

(1) From September 16, 2017, to October 6, 2018, the licensee operated in Modes 1 through 4 without an operable reactor building cooling unit (RBCU) condensate flow switch necessary to meet the requirements of TS 3.4.6.1. The inspectors noted that the licensee had determined that debris had rendered both channels, IFS01900A & B, inoperable, and, consequently, issued a Green, non-cited violation coupled with a Severity Level IV traditional enforcement non-cited violation in NRC Inspection Report 05000395/2019001. The inspectors' review of the LER identified incomplete information relating to the dates in which TS required action requirements were not met. The licensee initiated CR-18-048666 and CR-19-02144 for corrective actions and plan to issue a supplemental LER to correct the discrepancy.

This LER is closed.

# 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 independent spent fuel storage installation cask loadings; inspection was completed on April 12, 2019.

# **INSPECTION RESULTS**

Licensee-Identified Non-Cited Violation	71111.15
This violation of very low safety significance was identified by the licensee and entered into the licensee corrective action program and is being treated as a p	has been on-cited
violation, consistent with Section 2.3.2 of the Enforcement Policy.	
Violation: TS 6.8.1a states in part that written procedures shall be established	covering the
"Procedures for Startup, Operation, and Shutdown of Safety-Related PWR	uon 3,
Systems." Contrary to the above, on January 17, 2019, the licensee failed to a establish procedures to ensure gas in 'B' train RHR piping had been removed Fall, 2018 refueling outage.	adequately following the
Significance/Severity: Green. The finding was more than minor because it adv impacted the mitigating systems cornerstone and the respective attribute of eq reliability. Specifically, the amount of gas that had accumulated was greater th licensee's analyzed limit in SAP-0162, "Gas Intrusion Management Program," however, a vendor analysis determined the volume of gas did not exceed a qu limit. The finding was evaluated in accordance with IMC 0609, Appendix A, Ex screened as Green, or very low safety significance because it was not a design and did not result in a loss of function.	rersely uipment nan the Revision 0; alitative hibit 2, and n deficiency
Corrective Action References: The licensee has documented this problem in to CR-19-00207.	heir CAP as

Minor Violation

71152

Minor Violation: 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for failure to promptly identify and correct a condition adverse to quality (CAQ). Specifically, during the Fall, 2018, refueling outage the licensee did not identify a CAQ related to cavitation damage on the downstream pipe tee for the component cooling water heat exchanger service water (SW) discharge butterfly valve, XVB03123B-SW, which was normally throttled for flow control. Specifically, the licensee had performed extent of condition ultrasonic testing including video surveillance for cavitation damage resulting in pinhole leaks from the previous operating cycle in order to perform repairs but failed to identify an area of cavitation damage.

During the inspection, the inspectors reviewed in detail the licensee's evaluations, inspections and corrective actions associated with cavitation damage on both 'A' and 'B' SW piping tee's downstream of throttled butterfly valves. The inspectors also reviewed CR-18-02706: "pinhole leak below field weld (FW-1), downstream of XVB03123B. Reference CR-18-02364 for previous pinhole leak from FW-1" as part of the annual inspection sample. Additional related information documented in NRC integrated inspection reports 05000395/2018001 and

05000395/2018004.

The inspectors noted that the licensee determined the cause as cavitation, and the inspectors also noted the licensee initiated CR-19-01436 to document their failure to identify the existing cavitation damage during inspections conducted in the previous refueling outage when existing damage was identified and remediated.

As a result of these failures to identify a condition adverse to quality related to cavitation damage, the piping tee sustained another pinhole leak during the current operating cycle on April 9, 2019, requiring the licensee to seek NRC approval for a relief request.

The inspectors concluded that the licensee's failure to promptly identify and correct a CAQ for ongoing cavitation damage of the piping tee downstream of XVB03123B-SW was a minor violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action."

Screening: The inspectors determined the performance deficiency was minor. Because the component was evaluated as operable but degraded, the inspectors identified this as a minor violation of Criterion XVI.

Enforcement: This failure to comply with 10 CFR 50, Appendix B, Criterion XVI constitutes a minor violation that is not subject to enforcement action in accordance with the NRC's Enforcement Policy.

# EXIT MEETINGS AND DEBRIEFS

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

- On July 29, 2019, the inspectors presented the integrated inspection results to Mr. George Lippard III and other members of the licensee staff.
- On June 27, 2019, the inspectors presented the Exit Meeting for Triennial Heat Sink Inspection to Kirk Weir, Plant Support Engineering Manager and other members of the licensee staff.

# **DOCUMENTS REVIEWED**

Inspection	Туре	Designation	Description or Title	Revision or
Procedure				Date
71111.01	Miscellaneous		Transmission Agreement	11/1978
	Procedures	AOP-301.1	Response to Electrical Grid Issues	1
		EE-01	Design Interface With Transmission Planning, Power	0F
			Delivery, and Relay Applications	
		EOP-6.0	Loss of All ESF AC Power	35
		OAP-100.4	Communication	3
		OAP-102.1	Conduct of Operations Scheduling Unit	8E
		SAP-703	Control of Switchyard-Transformer Yard Activities	2
		SOP-301	Main Generator System	16B
		SOP-304	115KV/7.2KV Operations	14A
		STP-125.021	Periodic Testing of the Alternate AC Power Supply	5
71111.04	Drawings	302-351	Diesel Generator Fuel Oil	14
	-	302-353	Diesel Generator Miscellaneous Services	12
		302-661	Reactor Building Spray System	30
	Procedures	SOP-116	Reactor Building Spray System	16F
		SOP-306	Emergency Diesel Generator	19F
71111.04S	Miscellaneous		List of Component Cooling Water System Work Orders	
			List of Component Cooling Water System Condition Reports	
			PI&R Briefing Sheet for Engineering/NRC CCW system	
			walkdown	
			CCW System Parameter Trend Report	
71111.05	Procedures	STP-728.037	Auxiliary building Fire Barrier Inspection Elevations 502'6",	41
		OTD 700 040	485, 475, 474 and 463	10
		STP-728.040	397', 388', and 374'	40
		STP-728.044	Control Building Elevation 436' Fire Barrier Inspection	7J
		STP-728.050	Intermediate Building Elevation 412' Fire Barrier Inspection	4G
71111.07A	Work Orders	1904824-001	EDG Intercooler Heat Exchanger Performance Data	05/23/19
			Collection	
71111.07T	Calculations	DC04310-045	CCWHX Design Basis Limiting Conditions (GL 89-13)	Revision 0
		DC05600-098	Evaluation of Acceptance Criteria Based on Waterhammer	Revision 2

Inspection Procedure	Туре	Designation	Description or Title	Revision or
Flocedule			Phenomena in CCW, EFW, and SW Piping in for VC	Date
		DC06610-99	DG Heat Exchangers Model	Revision 1
	Corrective Action Documents	CR 16-02818	Results of Self-Assessment SA16-PE-03S - Ultimate Heat Sink/89-13.	06/03/2016
		CR 19-01872	Diesel Generator "A" Intercooler Tube Bundle damaged during installation	05/21/2019
		CR-16-03923	CCWHX A Heat Transfer below Admin Limit	08/02/2016
		CR-19-00292	SWS Chem. Injection	01/24/2019
	Miscellaneous		Virgil C. Summer Nuclear Station Design Basis Document: Service Water System	Revision 15
	NDE Reports	SCA2-VCS-01	Eddy Current Inspection Report for EDG-B Lube Oil Cooler	06/13/16
	Procedures	ES-505	Service Water System Corrosion Monitoring and Control Program	Revision 6
		ES-560.211	Service Water System Heat Exchanger Performance	Revision 13
		MMP-150.006	Diving Support for Service Water System Equipment	Revision 1
		PTP-213.002	Service Water System Heat Exchanger Data Collection	Revision 5
		SAP-1255	Service Water System Reliability Optimization Program	Revision 2
		SAP-1257	Heat Exchanger Program	Revision 2
		SAP-1258	Underground Piping and Tank Integrity Program	Revision 1
	Work Orders	WO 1602430	CCWHX A ES-505 Att.02	04/30/2017
		WO 1604087	Service Water Intake Structure and Pump Bay A, B, and C Inspection and Cleaning	05/13/2017
		WO 1613631-001	Eddy Current Inspection of Emergency Diesel Generator A Heat Exchangers	03/01/2017
		WO 1802272-001	Service Water Heat Exchanger Performance for Emergency Diesel Generator B Intercooler	05/10/2018
		WO 1807155-001	Service Water HX Exchanger Performance Collect Data on XHE0002A	02/22/2019
		WO 1814584	Service Water 'A' Pump and Valve Test	10/16/2018
		WO 1904824-001	Service Water Heat Exchanger Performance for Emergency Diesel Generator A Intercooler	05/23/2019
		WO 1905988-001	Service Water HX Performance Collect Data on XHE0002A	06/12/2019

Inspection	Туре	Designation	Description or Title	Revision or
Procedure	•			Date
71111.15	Calculations	DC04410-030	Parametric Evaluation of Void Volumes to Address Generic	2 and 4
			Letter 2008-01	
		DC05600-084	Potential Gas Accumulation Locations in SI, RH and SP	0, 1, and 2
			Piping	
		DC05600-085	Review of Water Hammer Forces on SI, RH, and SP pump	1
			Discharge Piping Due to Gas Voids	
		DC05600-086	Review of Water Hammer Forces on SI, RH and SP Pump	1
			Section Piping Due to Gas Voids	
		DC05600-087	Disposition of Possible Gas Void Locations to Mitigate	0, 1, 2 and 3
			Effects of Gas Intrusion in the SI, RH, and SP Systems	
	Corrective Action	CR-08-00162	Review NRC GL 2008-01 for applicability to the site	01/15/2008
	Documents	CR-09-01592	Review Industry Document 2-05 for applicability to the site	04/21/2009
		CR-14-03500	During venting of RHR gas was detected at two points in the	06/22/2014
			system	
		CR-14-03584	During follow-up venting of RHR additional gas was detected	06/26/2014
			at two points	
		CR-14-03624	During follow-up venting of RHR additional gas was detected	06/29/2014
			at one point in the system	
	Operability	ES-120 for CR-	Operability evaluation for gas found in the RHR system	03/12/2019
	Evaluations	19-00207	documented in CR-19-00207	
71152	Corrective Action	CR-08-01218	'B' EDG main air start valve leak	3/30/2008
	Documents	CR-09-02852	'B' EDG main air start valve leak	7/22/2009
		CR-10-01262	'B' EDG main air start valve leak	03/24/2010
		CR-10-02113	'B' EDG main air start valve leak	05/25/2010
		CR-12-04237	'B' EDG main air start system solenoid valve leak	10/03/2012
		CR-14-01338	'B' EDG main air start system solenoid valve leak	03/22/2014
		CR-14-02111	'B' EDG main air start system solenoid valve leak	04/20/2014
		CR-16-03934	'B' EDG main air start valve leak	08/03/2016
		CR-16-04931	'B' EDG main air start valve leak	09/27/2016
		CR-16-05907	'B' EDG main air start valve leak	11/23/2016
		CR-16-05948	'B' EDG main air start system solenoid valve leak	11/27/2016
		CR-17-03299	'B' EDG main air start valve leak	06/07/2017
		CR-17-03653	Tread identified on 'B' EDG main air start system	06/28/2017

Inspection	Туре	Designation	Description or Title	Revision or
Procedure				Date
	Procedures	SAP-0999	Corrective Action Program	18A