



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

April 24, 2020

Mr. J. Ed Burchfield
Site Vice President
Duke Energy Carolinas, LLC
7800 Rochester Highway
Seneca, SC 29672-0752

SUBJECT: OCONEE NUCLEAR STATION – INTEGRATED INSPECTION REPORT
05000269/2020001, 05000270/2020001, 05000287/2020001, AND
07200004/2020001

Dear Mr. Burchfield:

On March 31, 2020, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Oconee Nuclear Station. On April 23, 2020, the NRC inspectors discussed the results of this inspection with you and other members of your staff. The results of this inspection are documented in the enclosed report.

Three findings of very low safety significance (Green) are documented in this report. Two of these findings involved violations of NRC requirements. We are treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest the violations or the significance or severity of the violations documented in this inspection report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement; and the NRC Resident Inspector at Oconee Nuclear Station.

If you disagree with a cross-cutting aspect assignment or a finding not associated with a regulatory requirement in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region II; and the NRC Resident Inspector at Oconee Nuclear Station.

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."

J. Burchfield

2

Sincerely,

/RA/

Frank J. Ehrhardt, Chief
Reactor Projects Branch 1
Division of Reactor Projects

Docket Nos. 50-269, 50-270, 50-287, and 72-004
License Nos. DPR-38, DPR-47, DPR-55, and SNM-2503

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV®

SUBJECT: OCONEE NUCLEAR STATION – INTEGRATED INSPECTION REPORT
05000269/2020001, 05000270/2020001, 05000287/2020001, AND
07200004/2020001 Dated April 24, 2020

DISTRIBUTION:

M. Kowal, RII

S. Price, RII

L. Gibson, RII

PUBLIC

RidsNrrPMOconee Resource

Non-Public Designation Category: MD 3.4 Non-Public _____ (A.3 - A.7 or B.1)**ADAMS ACCESSION NUMBER: ML20115E339**

<input checked="" type="checkbox"/> SUNSI Review		<input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Sensitive		<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available	
OFFICE	RII: DRP	RII: DRP	RII: DRP	RII: DRP	RII: DRP
NAME	J. Nadel	J. Parent	A. Ruh	J. Worosilo	F. Ehrhardt
DATE	4/22/2020	4/21/202	4/21/2020	4/22/2020	4/24/2020

OFFICIAL RECORD COPY

U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Numbers: 50-269, 50-270, 50-287, 72-004

License Numbers: DPR-38, DPR-47, DPR-55, SNM-2503

Report Numbers: 05000269/2020001, 05000270/2020001, 05000287/2020001,
07200004/2020001

Enterprise Identifier: I-2020-001-0031, 1-2020-001-0111

Licensee: Duke Energy Carolinas, LLC

Facility: Oconee Nuclear Station

Location: Seneca, SC

Inspection Dates: January 01, 2020 to March 31, 2020

Inspectors: J. Nadel, Senior Resident Inspector
J. Parent, Resident Inspector
A. Ruh, Resident Inspector

Approved By: Frank J. Ehrhardt, Chief
Reactor Projects Branch 1
Division of Reactor Projects

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Oconee 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 <https://www.nrc.gov/reactors/operating/oversight.html> for more information.

List of Findings and Violations

Failure to Obtain a Transient Combustible Permit and Set a Fire Watch			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000269,05000270,05000287/2020001-01 Open/Closed	[H.2] - Field Presence	71111.05
The inspectors identified a Green finding and associated non-cited violation (NCV) of Oconee Nuclear Station Units 1, 2, and 3 Renewed Facility Operating License Condition 3.D when the licensee failed to follow procedure: AD-EG-ALL-1520, "Transient Combustible Control," Rev. 12. Specifically, the licensee failed to obtain a transient combustible permit and set a fire watch prior to exceeding the transient combustible limit for the area under the 'A' standby shutdown facility (SSF) diesel engine.			

Failure to Follow Protected Equipment Procedure While Performing Work in 1XE MCC			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green FIN 05000269,05000270,05000287/2020001-02 Open/Closed	[H.5] - Work Management	71111.13
A self-revealed Green finding was identified when the licensee failed to follow procedure: AD-OP-ALL-0201, "Protected Equipment," Rev. 6. Specifically, the licensee failed to complete Attachment 2, "Protected Equipment/SPV Work or Protected Area Access Approval Form," when working on or near protected equipment.			

Failure to Identify and Correct a Condition Adverse to Quality Associated with Submerged Cables			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000269,05000270,05000287/2020001-03 Open/Closed	[H.12] - Avoid Complacency	71152
Inspectors identified a Green NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," when the licensee failed to identify and correct a condition adverse to quality associated with submerged cables. Specifically, the inspectors identified QA-1 cables			

associated with the standby shutdown facility (SSF) as being subject to repetitive submergence.

Additional Tracking Items

None.

PLANT STATUS

Unit 1 operated at or near 100 percent rated thermal power (RTP) for the entire inspection period.

Unit 2 operated at or near 100 percent RTP for the entire inspection period.

Unit 3 operated at or near 100 percent RTP until March 22, 2020, when operators started to slowly reduce power as part of a planned coastdown for the upcoming refueling outage. At the end of the inspection period Unit 3 had been reduced to 97 percent power.

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." From January 1 – March 19, 2020, 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.

Starting on March 20, 2020, in response to the National Emergency declared by the President of the United States on the public health risks of the coronavirus (COVID-19), resident inspectors were directed to begin telework and to remotely access licensee information using available technology. During this time the resident inspectors performed periodic site visits each week and during that time conducted plant status activities as described in IMC 2515, Appendix D; and observed risk significant activities when warranted. In addition, resident and regional baseline inspections were evaluated to determine if all or portion of the objectives and requirements stated in the IP could be performed remotely. If the inspections could be performed remotely, they were conducted per the applicable IP. In the cases where it was determined the objectives and requirements could not be performed remotely, management elected to postpone and reschedule the inspection to a later date.

REACTOR SAFETY

71111.01 - Adverse Weather Protection

Seasonal Extreme Weather Sample (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated readiness for seasonal extreme weather conditions prior to the onset of seasonal cold temperatures for the following systems:
 - essential siphon and vacuum
 - diesel-driven service air compressors
 - standby shutdown facility (SSF) building ventilation
 - turbine building ventilation

- auxiliary building ventilation

Impending Severe Weather Sample (IP Section 03.02) (1 Sample)

- (1) Tornado watch issued for Oconee county and all three units entered AP/0/A/1700/006, "Natural Disaster," on February 6, 2020.

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) SSF diesel generator on January 6, 2020, while the protected service water system was out of service (OOS) for chiller repair
- (2) Temporary main control room chiller train on January 7, 2020, during the unplanned inoperability of the 'A' chiller
- (3) KHU-1 aligned to underground power path on January 29, 2020, while KHU-2 was OOS for a stator replacement outage
- (4) KHU-1 AC/DC sump system on January 30, 2020, during KHU-2 stator replacement outage

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

- (1) The inspectors evaluated system configurations during a complete walkdown of the protected service water system during and following performance of PT/0/A/0500/001, "Protected Service Water Primary and Booster Pump Test."

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (5 Samples)

The inspectors evaluated the implementation of the fire protection program by conducting a walkdown and performing a review to verify program compliance, equipment functionality, material condition, and operational readiness of the following fire areas:

- (1) Protected area - west, Fire Zones: W-001 - dry cask equipment storage facility (Building 8015), W-002 - Warehouse 2G (Building 8019), W-007 - contaminated storage warehouse 10 (Building 8090), CT5 - CT5 switchyard, SSF-001/-002/-003/-004 - standby shutdown facility (Building 8094), on January 6, 2020
- (2) Keowee hydro station, Fire Zones: KEO-001/-002/-003/-004, on January 13, 2020
- (3) Unit 1 (U1) auxiliary building Elevation 796', Fire Zones: 93/94/95/96/97, on March 17, 2020
- (4) Unit 2 (U2) auxiliary building Elevation 796', Fire Zones: 90-1/90-2/91/92, on March 17, 2020
- (5) Unit 3 (U3) auxiliary building Elevation 796', Fire Zones: 86/87/88/89, on March 17, 2020

Fire Brigade Drill Performance Sample (IP Section 03.02) (1 Sample)

- (1) U3 cable room fire drill, on February 19, 2020

71111.06 - Flood Protection Measures

Cable Degradation (IP Section 03.02) (1 Sample)

The inspectors evaluated cable submergence protection in:

- (1) Work Order (WO) 20378444-01, CT-5 Trench Inspection and Dewatering, on February 19, 2020

71111.07A - Heat Sink Performance

Annual Review (IP Section 03.01) (1 Sample)

The inspectors evaluated readiness and performance of:

- (1) 1A low pressure injection cooler

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 during the KHU-2 stator replacement post maintenance testing on February 3, 2020.

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

- (1) The inspectors observed and evaluated a portion of an in-progress annual regualification operating test on February 27, 2020.

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (2 Samples)

The inspectors evaluated the effectiveness of maintenance to ensure the following structures, systems, and components (SSCs) remain capable of performing their intended function:

- (1) Nuclear Condition Reports (NCRs) 2309216, 2308971, and 2311364, diesel driven service air compressors, fuel filter, and cold weather package problems
- (2) NCR 2300055, (a)(1) evaluation for U3 radiation monitor system repetitive failures

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (7 Samples)

The inspectors evaluated the accuracy and completeness of risk assessments for the following planned and emergent work activities to ensure configuration changes and appropriate work controls were addressed;

- (1) Risk assessment for January 7, 2020, following 1XE motor control center power loss
- (2) Risk assessment for January 16, 2020, with KHU-2 OOS for stator replacement outage
- (3) Risk assessment for January 17, 2020, with KHU-1 and KHU-2 OOS for stator replacement outage
- (4) Risk assessment for January 31, 2020, for the Lee Power Station during KHU-2 stator replacement outage
- (5) Risk assessment for February 6, 2020, due to tornado warning and abnormal procedure entry
- (6) Risk assessment for February 25, 2020, with 10 inch system breach in low pressure service water system inside the auxiliary building
- (7) Risk assessment for March 2, 2020, with auxiliary building flood barrier removed in Unit 2 east penetration room for motor control center XH maintenance

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (7 Samples)

The inspectors evaluated the licensee's justifications and actions associated with the following operability determinations and functionality assessments:

- (1) Immediate determination of operability (IDO) for NCR 2313555, nitrogen leakage through containment isolation check valve 3CF-44
- (2) IDO for NCR 2315082, Unit 3 emergency safeguards protection system voter trouble
- (3) Operator evaluation of NCR 23088971, malfunction of diesel driven service air compressor block heater
- (4) Engineering evaluation for NCR 2306288, aggregate NRC observations on U2R29 containment closeout walkdown
- (5) IDO for NCR 2305752, negative trend in low pressure service water (LPSW) flowrates to reactor building cooling units and low pressure injection coolers
- (6) Documented engineering justification for NCR 2309647, 50.72 notification retraction of the B main control room chiller Technical Specification 3.0.3 entry
- (7) IDO for NCR 2317055, 3NI-5 power range flux spiking

71111.18 - Plant Modifications

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

The inspectors evaluated the following temporary or permanent modifications:

- (1) Design change OD501667, "Justify Temporary Cooling Train Connected to Chilled Water System"
- (2) Engineering change 101839, "Keowee Unit 2 Stator Replacement Functional and Acceptance Testing, TT/0/A/EC101839/001"

71111.19 - Post-Maintenance Testing

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

The inspectors evaluated the following post maintenance test activities to verify system operability and functionality:

- (1) MP/0/A/3016/010, "Generic Equipment - Vibration Testing - Using Analyzer," following replacement of the 'B' Chiller compressor, on January 18, 2020
- (2) TT/0/A/EC101839/001, "Keowee Stator Unit 2 Functional and Acceptance Testing," following installation of new stator, on February 3, 2020
- (3) WO 20296005, PT/2/A/0152/013, "Low Pressure Service Water System Valve Stroke Test," following maintenance of 2LPSW-4 and 2LPSW-251, on February 27, 2020
- (4) PT/1/A/2200/020, "KHU-1 ACB IST Surveillance," following air leakage repairs to ACB-1, on February 29, 2020
- (5) WOs 20383396 and 20297877, following replacement of 'B' diesel driven service air compressor battery charger and auto-start relay, on March 5, 2020
- (6) WO 20374476, PT/1/A/0600/013, "1B Motor Driven Emergency Feedwater Pump Test," following system and breaker maintenance, on March 31, 2020

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

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

- (1) PT/2/A/0204/007, "Reactor Building Spray Pump Testing on the 2A Reactor Building Spray Pump," on February 11, 2020
- (2) PT/0/A/0600/021, "Standby Shutdown Facility Diesel-Generator Operation," on February 18, 2020

Inservice Testing (IP Section 03.01) (2 Samples)

- (1) PT/2/A/0400/007, "SSF Reactor Coolant Makeup Pump Test on the Unit 2 Reactor Coolant Makeup Pump," on January 2, 2020
- (2) PT/3/A/0202/011, "High Pressure Injection Pump Test on 3C High Pressure Injection Pump," on February 5, 2020

71114.06 - Drill Evaluation

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

The inspectors evaluated:

- (1) Licensee performed drill simulating: a unit blackout on U3, loss of coolant accident (LOCA) on U1 – General Emergency declaration (failure of reactor coolant system, fuel failure and a loss of both reactor building spray (RBS) trains hence failure of containment), on February 22, 2020

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

IE01: Unplanned Scrams per 7000 Critical Hours Sample (IP Section 02.01) (3 Samples)

- (1) Unit 1 (January 1, 2019 - December 31, 2019)
- (2) Unit 2 (January 1, 2019 - December 31, 2019)
- (3) Unit 3 (January 1, 2019 - December 31, 2019)

IE03: Unplanned Power Changes per 7000 Critical Hours Sample (IP Section 02.02) (3 Samples)

- (1) Unit 1 (January 1, 2019 - December 31, 2019)
- (2) Unit 2 (January 1, 2019 - December 31, 2019)
- (3) Unit 3 (January 1, 2019 - December 31, 2019)

IE04: Unplanned Scrams with Complications (USwC) Sample (IP Section 02.03) (3 Samples)

- (1) Unit 1 (January 1, 2019 - December 31, 2019)
- (2) Unit 2 (January 1, 2019 - December 31, 2019)
- (3) Unit 3 (January 1, 2019 - December 31, 2019)

MS07: High Pressure Injection Systems (IP Section 02.06) (3 Samples)

- (1) Unit 1 (April 1, 2019 - December 31, 2019)
- (2) Unit 2 (April 1, 2019 - December 31, 2019)
- (3) Unit 3 (April 1, 2019 - December 31, 2019)

71152 - Problem Identification and Resolution

Annual Follow-up of Selected Issues (IP Section 02.03) (2 Samples)

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

- (1) NCR 2277256, discrepancy regarding description of automatic feedwater isolation system for main steam line breaks in UFSAR
- (2) NCRs 2122484 and 2303752, current situation of the CT-5 trench and NRC observation of submerged cables

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 on February 20, 2020 for Cask #160. Specifically, the inspectors observed the following activities;
- Drying and backfill evolutions
 - Closure welding and non-destructive weld evaluations
 - Transfer and transport evolutions
 - Radiological field surveys

INSPECTION RESULTS

Failure to Obtain a Transient Combustible Permit and Set a Fire Watch			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000269,05000270,05000287/2020001-01 Open/Closed	[H.2] - Field Presence	71111.05
<p>The inspectors identified a Green finding and associated non-cited violation (NCV) of Oconee Nuclear Station Units 1, 2, and 3 Renewed Facility Operating License Condition 3.D when the licensee failed to follow procedure: AD-EG-ALL-1520, "Transient Combustible Control," Rev. 12. Specifically, the licensee failed to obtain a transient combustible permit and set a fire watch prior to exceeding the transient combustible limit for the area under the 'A' standby shutdown facility (SSF) diesel engine.</p> <p><u>Description:</u> On December 21, 2018, the licensee observed a ¼ drop per minute oil leak coming from a flexible coupling on the 'A' SSF diesel engine. The licensee entered this leak into their corrective actions program and wrote a work request to repair the leak.</p> <p>On January 3, 2020, the inspectors identified a large pooling of oil and some saturated absorbent pads under the SSF diesel engine. The inspectors informed the licensee and the licensee removed five absorbent pads, two of which were saturated with oil. The licensee also mopped up oil on the floor. On January 6, 2020, the inspectors performed a follow-up inspection on the licensee's clean-up efforts and identified that four saturated absorbent pads that were under the engine on January 3 were still present. Three of these pads were beneath a cable tray associated with the engine. The inspectors informed the licensee and the licensee removed the saturated absorbent pads and oil and placed new absorbent pads.</p> <p>Upon further investigation, the licensee determined that there was a total of three oil leaks that contributed to the pooling of oil under the diesel engine. One leak was from the flexible coupling which had increased from ¼ drops per minute to 1 drop per minute. The inspectors calculated the amount of oil that was present on the January 3, 2020 initial observation and determined that the transient combustible limit of 0.7 gallons, outlined in licensee procedure AD-EG-ALL-1520, "Transient Combustible Control," had been exceeded. The residents presented the licensee with the calculation and bases for the calculation and the licensee agreed that the transient combustible loading had been exceeded. AD-EG-ALL-1520 requires a transient combustible permit and establishment of a watch until the quantity of oil is within the transient combustible limit.</p> <p>Corrective Actions: The licensee removed all saturated absorbent pads and mopped residual oil. The licensee placed new absorbent pads under the diesel and put a catchment bucket</p>			

under the flexible coupling. The licensee also established increased monitoring and clean-up of oil leaks under and around the SSF diesel engine.

Corrective Action References: NCRs: 2313247, 2311838, 2250039

Performance Assessment:

Performance Deficiency: The inspectors determined that the failure to follow AD-EG-ALL-1520, "Transient Combustible Control," was a performance deficiency and violation of Oconee Nuclear Station Units 1, 2, and 3 Renewed Facility Operating License Condition 3.D. Specifically, the licensee failed to obtain a transient combustible permit and set a fire watch prior to exceeding the transient combustible limit for oil in the area under the 'A' SSF diesel engine.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the Protection Against External Factors attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the fire loading for the 'A' SSF diesel engine's fire zone was not within the fire hazard analysis limit which decreased the external event mitigation for fire prevention.

Significance: The inspectors determined that the performance deficiency affected the mitigating systems cornerstone per IMC 0609, Attachment 4, "Initial Characterization of Findings." The inspectors assessed the significance of the finding using Appendix F, "Fire Protection Significance Determination Process." Using Attachment 2, "Degradation Rating Guidance," the inspectors determined that the deficiency had a low degradation rating since the oil had a high flashpoint of 500 degrees Fahrenheit. Since the deficiency had a low degradation rating, the inspectors determined the finding was of very low safety significance (Green).

Cross-Cutting Aspect: H.2 - Field Presence: Leaders are commonly seen in the work areas of the plant observing, coaching, and reinforcing standards and expectations. Deviations from standards and expectations are corrected promptly. Senior managers ensure supervisory and management oversight of work activities, including contractors and supplemental personnel. In this case, leaders did not walk down the 'A' SSF diesel engine's fire zone to observe, coach, and reinforce standards and expectations. Also, deviations from standards and expectations were not promptly corrected.

Enforcement:

Violation: Oconee Nuclear Station Units 1, 2, and 3 Renewed Facility Operating License Condition 3.D required, in part, Duke Energy Carolinas, LLC shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c) and NFPA 805. NFPA 805 Section 3.3.1.2 requires that procedures for the control of transient combustibles shall be developed and implemented, and that these procedures include program elements such as; combustible storage or staging areas shall be designated, and limits shall be established on the types and quantities of stored materials. Oconee implemented this NFPA requirement through procedure AD-EG-ALL-1520, "Transient Combustible Control." Per Section 5.2.1.7.f of AD-EG-ALL-1520, the licensee is required to obtain a transient combustible permit from the work control center (WCC) or designee per Attachment 6, "Transient Combustible Permit – Generic Requirements," and establish compensatory measure, as defined in Column D of Table 2 (once per shift fire

watch), if the minimum separation distances in Table 2, "Required Compensatory Measure Based on Fuel Package Size and Minimum Separation Distance from Energized Equipment, Vertical and Horizontal Conduit, and Cable Trays for Level C Areas," are not met. Contrary to the above, before January 3, 2020 and until January 6, 2020, the licensee failed to implement the requirements of AD-EG-ALL-1520, "Transient Combustible Control." Specifically, the licensee failed to obtain a transient combustible permit and set a fire watch for the 'A' SSF diesel engine's fire zone.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

Failure to Follow Protected Equipment Procedure While Performing Work in 1XE MCC			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green FIN 05000269,05000270,05000287/2020001-02 Open/Closed	[H.5] - Work Management	71111.13
A self-revealed Green finding was identified when the licensee failed to follow procedure: AD-OP-ALL-0201, "Protected Equipment," Rev. 6. Specifically, the licensee failed to complete Attachment 2, "Protected Equipment/SPV Work or Protected Area Access Approval Form," when working on or near protected equipment.			
<p><u>Description:</u> On December 31, 2019, when attempting to backwash/pre-coat the 1C Powdex cell the licensee discovered that the 1C Powdex cell holding pump breaker (1XE-F3D), which is on the 1XE motor control center (MCC), had a broken tab and the backwash/pre-coat could not be performed.</p> <p>On January 7, 2020, after searching for a replacement breaker and confirming that one was not available, the licensee decided that the 1XE-F3D breaker could be manually closed using an insulated screw driver. The licensee determined that, since the tab pin was protruding out of the broken tab, it would be safer for others if the tab pin was covered with a piece of insulation. The licensee also concluded that a check for voltage on the pin was needed to verify that it needed an insulated covering. After successfully closing breaker 1XE-F3D the technician went to perform the voltage check on the degraded tab to verify voltage prior to insulating the breaker tab. While performing the voltage check the technician inadvertently contacted the breaker operating mechanism bracket while touching the breaker tab pin, resulting in an electrical fault, which caused the incoming feeder breaker for the 1XE MCC to trip open upon seeing high current through the breaker cabinet. This resulted in all breakers on the 1XE MCC losing power, including 1XE-F3E ('A' chilled water pump motor) breaker, which was being controlled as protected equipment at the time. When the 'A' chilled water pump lost power, the 'A' chiller became inoperable. The licensee entered AP/1-2/A/1700/036, "Degraded Control Room Area Cooling," and AP/3/A/1700/036, "Degraded Control Room Area Cooling," and proceeded with restoring the temporary chiller and declaring it operable. During this period, the control rooms, cable rooms, and equipment rooms remained within acceptable temperature bands.</p> <p>The inspectors interviewed several personnel and determined there was a break down in communications between the work crew, work control, and the shift manager in respect to the scope of the work that was to be performed. The shift manager was under the impression that the 1XE-F3D breaker was to be replaced with a new breaker. Work control was aware that a</p>			

new breaker was not available and that the work crew wanted to manually close the breaker by using an insulated screw driver but was not aware that the work crew intended on performing a voltage check and insulating the exposed tab pin following the manual closing of the 1XE-F3D breaker. The controlling work document, WR # 20162548, had no specific procedural or work steps listed beyond "breaker tab is broken so breaker cannot be operated."

Inspectors also determined that the licensee failed to follow the protected equipment procedure (AD-OP-ALL-0201) which directs the licensee to complete Attachment 2, "Protected Equipment/SPV Work or Protected Area Access Approval Form," when working on or near protected equipment. Attachment 2 requires the shift manager, work group supervisor, and work crew to evaluate the adequacy of the work area and the potential impact on other protected train equipment. Since the 1XE-F3E breaker was directly below and within 2 feet of the 1XE-F3D breaker (breaker being manually closed), and electrically connected to the 1XE MCC, Attachment 2 of the protected equipment procedure should have been performed. Had the licensee recognized the need to complete Attachment 2, they would have had the opportunity to evaluate and discuss the potential effects on the protected 1XE-F3E breaker and its effect on the operability of the 'A' chiller if power was lost to the 1XE-F3E breaker. Follow-up discussions with licensee personnel confirmed that the work would not have been approved if the proximity to protected equipment and Attachment 2 had been properly considered.

Corrective Actions: As an immediate corrective action, the licensee connected a temporary chiller and then restored power to the 1XE MCC. The licensee also performed various cause evaluations and conducted training for maintenance personnel.

Corrective Action References: NCRs: 02309647, 02314538

Performance Assessment:

Performance Deficiency: The failure to follow procedure AD-OP-ALL-0201, "Protected Equipment," Rev. 6 was a performance deficiency. Specifically, the licensee failed to complete Attachment 2, "Protected Equipment/SPV Work or Protected Area Access Approval Form," when working on or near protected equipment.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the Human Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, by not following the protected equipment procedure, the licensee performed work which caused the 'A' chiller to become inoperable.

Significance: The inspectors determined that the performance deficiency affected the mitigating systems cornerstone per IMC 0609, Attachment 4, "Initial Characterization of Findings." The inspectors assessed the significance of the finding using Appendix A, "The Significance Determination Process For Findings At-Power." Using Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined that the finding was of very low safety significance (Green) because the deficiency did not cause the control rooms, cables rooms, and equipment rooms to deviate from their set temperature bands.

Cross-Cutting Aspect: H.5 - Work Management: The organization implements a process of planning, controlling, and executing work activities such that nuclear safety is the overriding

priority. The work process includes the identification and management of risk commensurate to the work and the need for coordination with different groups or job activities. In this case, the licensee failed to properly plan their work so that it wouldn't have a potential negative effect on other necessary systems.

Enforcement: Inspectors did not identify a violation of regulatory requirements associated with this finding.

Failure to Identify and Correct a Condition Adverse to Quality Associated with Submerged Cables

Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000269,05000270,05000287/2020001-03 Open/Closed	[H.12] - Avoid Complacency	71152

Inspectors identified a Green NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," when the licensee failed to identify and correct a condition adverse to quality associated with submerged cables. Specifically, the inspectors identified QA-1 cables associated with the standby shutdown facility (SSF) as being subject to repetitive submergence.

Description: Starting in October 2019, inspectors began reviewing NCR 2122484, "Evaluate solution for water in CT-5 cable trench," as part of an "annual follow-up of selected issues" sample under inspection procedure 71152. NCR 2122484 documents the history of site actions associated with water collecting in the CT-5 trench. The trench contains cables associated with transformer CT-5. Some of these cables are part of the technical specification required emergency power switching logic, and some route backup 4160V power to the standby buses. The trench is not sealed from rainwater intrusion and historically had multiple sump pumps installed at low points to automatically remove accumulated water and prevent submergence of the risk-significant, medium voltage (4160V), QA-5 cables in the trench. A quarterly preventive maintenance (PM) activity was also in place to verify conditions in the trench and proper operation of the pumps. However, in 2010, the licensee identified in Action Request (AR) 1758820 that the power source for the sump pumps was inadvertently eliminated when the building that housed the associated switchgear, the leakrate compressor building, was demolished. A corrective action to create a design change to restore power to the sump pumps never progressed beyond the planning stages. Past instances of cable submergence in the CT-5 trench and NRC inspections prompted a review of this situation in 2017 as documented in AR 2122484. The result was to abandon the design change and increase frequency of the inspection PM to monthly.

In October 2019, inspectors reviewed the past actions associated with the CT-5 trench and noted that several underground cable trenches on the west side of the plant, including the CT-5 trench, combine into a common trench that penetrates the auxiliary building in a place that is accessible and observable from the turbine building. This common trench is designated the T-100 trench. Inspectors observed that all cables in the T-100 trench were being submerged during periods of rain onsite and that trash and debris had collected at the end of the trench. Inspectors also noted a layer of mud and silt on the floor of the trench which covered some cables. The T-100 trench included: QA-5 cables from CT-5, 4160V QA-1 cables from the SSF, cables from the condenser circulating water pumps, and at least 36 additional QA-1 cables ranging from 125VDC to 600VAC. The SSF is a QA-1 system

designed to provide a means to bring all three units to safe shutdown in the case of certain fire, flooding, and security events. When inspectors initially pointed out the conditions in the T-100 trench, the licensee did not enter the issues into the corrective action program as a condition adverse to quality. The licensee had accepted these conditions in accordance with language in their license renewal program for buried, inaccessible cables and the associated cable degradation testing performed on those cables. In addition, an operator round existed to manually siphon the water from the T-100 trench when it filled up due to rainwater intrusion, but this action was not intended nor was it successful at preventing submergence of the cables.

Further review by the inspectors determined that there were over 500 cables that pass through the T-100 trench. At least 38 of these were designated as QA-1, meaning that 10 CFR Part 50, Appendix B criteria apply as defined in the Oconee licensing basis. Of those 38, cable numbers "1ETS 1" and "1ETS 2" are medium voltage cables that provide the normal source of power to SSF switchgear OTS1-1 from the main feeder buses at switchgear B2T-4. The inspectors also discovered that these two cables had been screened out of the licensee's license renewal program and as such had not been tested for degradation since initial installation. Furthermore, the licensee could not confirm manufacturer and cable specifications for these cables.

The residents concluded that QA-1 medium voltage cables that are subject to repetitive submergence conditions for which they were not designed constitutes a condition adverse to quality in accordance with 10 CFR Part 50, Appendix B, Criterion XVI. Furthermore, medium voltage cables subject to these conditions for which no testing or degradation monitoring has occurred represent a higher risk of failure over time.

Through ongoing discussions and discovery of the additional factors discussed above, the licensee agreed that a condition adverse to quality exists and has entered these issues into the corrective action program.

Corrective Actions: The licensee created actions to review the need to include cables "1ETS 1" and "1ETS 2" in the cable aging management program, to divert water from entering the T-100 trench, to promptly remove water from the trench, and to remove the trash, dirt, and mud from the trench. Additionally, the licensee is reviewing the operator rounds for the T-100 trench to enhance the ability to prevent and monitor cable submergence in the trench.

Corrective Action References: NCR 02315317

Performance Assessment:

Performance Deficiency: The failure to identify and correct a condition adverse to quality as required by 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was a performance deficiency. Specifically, QA-1 medium voltage cables associated with the SSF were identified by the inspectors as being subject to repetitive submergence.

Screening: The inspectors determined the performance deficiency was more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern. Specifically, medium voltage cables subject to repetitive submergence, for which no testing or degradation monitoring has occurred, are more likely to result in a failure of the cable insulation system and subsequent impact to the SSF.

Significance: The inspectors assessed the significance of the finding using Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." Using exhibit 2, "Mitigating Systems Screening Questions," inspectors determined the finding was of very low safety significance (Green) because it was a deficiency affecting the design and qualification of the SSF normal power supply, but the SSF maintained its operability.

Cross-Cutting Aspect: H.12 - Avoid Complacency: Individuals recognize and plan for the possibility of mistakes, latent issues, and inherent risk, even while expecting successful outcomes. Individuals implement appropriate error reduction tools. In this case, the licensee became complacent with the ongoing management of water intrusion into the T-100 trench and therefore did not identify degraded conditions which required corrective action.

Enforcement:

Violation: 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requires, in part, that conditions adverse to quality be promptly identified and corrected. Contrary to the above, since October 2019, a condition associated with the submergence of cables in trench T-100 was neither identified nor corrected. Specifically, the inspectors identified QA-1 medium voltage cables associated with the SSF as being subject to repetitive submergence.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

EXIT MEETINGS AND DEBRIEFS

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

- On April 23, 2020, the inspectors presented the integrated inspection results to J. Ed Burchfield and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
60855.1	Corrective Action Documents		02280737	
	Miscellaneous	Amendment Number 13 to COC 1004	Technical Specifications for the Standardized NUHOMS Horizontal Modular Storage System	1
		Docket NO. 72-1004, Amendment NO. 13	Final Safety Evaluation Report TRANSNUCLEAR, Inc. Standardized NUHOMS Horizontal Modular Storage System for Irradiated Nuclear Fuel	
		NUH-003	Updated Final Safety Analysis Report for the Standardized NUHOMS Horizontal Modular System for Irradiated Nuclear Fuel	14
	Procedures	AD-HU-ALL-0003	Conduct of Pre-Job Briefs and Post-Job Critiques	9
		HP/0/B/1000/097	Radiological Protection Requirements For Independent Spent Fuel Storage Installation	018
		MP/0/A/1500/024	Independent Spent Fuel Storage Installation Phase VIII DSC Loading and Storage	001
		MP/0/A/1810/019	Cask – Nuhoms 24PTH-S-LC Dry Storage Canister - Welding	032
	Work Orders		20359921	
71111.01	Calculations	OSC-6659	Station Blackout (SBO) Event Mitigation Requirements	8
		OSC-8994	MS System Response During SBO With and Without Instrument Air	0
	Corrective Action Documents		1772458, 1784638, 1813665, 02312006, 02312200	
	Miscellaneous	OM 214-0116.001	Ingersoll-Rand Operating, Maintenance and Parts Manual for Compressor HPI600WCU	D02
		OSS-0254.00-00-1024	Design Basis Specification for Service Air System	8
	Procedures	OP/0/A/1104/041	Auxiliary Building Ventilation	041
		OP/0/A/1106/041	Turbine Building Ventilation	006
		OP/0/B/1104/050	Weather Related Activities	005

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		OP/1/A/1104/051	ESV System	028
		PT/0/A/0110/017	Cold Weather Protection	15
	Work Orders		20163728	
	Corrective Action Documents		2309152	
71111.04	Drawings	6022F03001	Schematic Diagram Lube Oil System	1
		6022F04001	Schematic Diagram Jacket Water System	E
		OFD-116J-1.5	Flow Diagram of Chilled Water System (WC) Pumps and Chillers	26
		OFD-116J-1.6	Flow Diagram of Chilled Water System (WC) Chilled Water Supply & Return	21
		OFD-131A-1.1	Flow Diagram of Protected Service Water (PSW) System	2
		OFD-131A-1.2	Flow Diagram of Protected Service Water (PSW) System (Steam Generator & HPI Pump Motor Cooling Service)	1
		OFD-131A-2.2	Flow Diagram of Protected Service Water (PSW) System (Steam Generator & HPI Pump Motor Cooling Service)	1
		OFD-131A-3.2	Flow Diagram of Protected Service Water (PSW) System (Steam Generator & HPI Pump Motor Cooling Service)	2
		OFD-135B-1.4	Flow Diagram of Lube Oil System (SSF Diesel Engines)	10
		OFD-138A-1.1	Flow Diagram of SSF Diesel Engine Jacket Water System (DJW) (Engine A & B)	8
	Fire Plans	OM 351-0164.001	SSF Diesel Generator Instructions & Parts Manual	54
	Procedures	AP/1-2/A/1700/036	Degraded Control Room Area Cooling	020
		AP/3/A/1700/036	Degraded Control Room Area Cooling	009
		IP/0/A/0380/004 A	Standby Shutdown Facility (SSF) Diesel Generator Diesel Jackets Cooling Water System Temperature	30
		PT/0/A/0500/001	Protected Service Water Primary and Booster Pump Test	003
		PT/1/A/2200/019	KHU-1 Turbine Sump Pump IST Surveillance	025
	Work Orders		20162650, 20352653, 20352654	
71111.05	Corrective Action		02250039, 02310991, 02311838, 02312566, 02313247	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Documents			
	Fire Plans	CSD-ONS-PFP-1AB-0796	Pre-Fire Plan for U1 Auxiliary Building Elevation 796	0
		CSD-ONS-PFP-2AB-0796	Pre-Fire Plan for U2 Auxiliary Building Elevation 796	001
		CSD-ONS-PFP-3AB-0796	Pre-Fire Plan for U3 Auxiliary Building Elevation 796	000
		CSD-ONS-PFP-OC-0003	Pre-Fire Plan for Owner Controlled Area, Keowee Hydro Station	000
		CSD-ONS-PFP-PA-0004	Pre-Fire Plan for Protected Area, West	000
	Miscellaneous		NFPA 805, 2001 Edition	
			Oconee Nuclear Station Units 1, 2, 3 Renewed Facility Operating License Condition 3.D	
			Vendor stats for oil absorber pads	
	Procedures	AD-EG-ALL-1520	Transient Combustible Control	12
		MP/0/A/1705/032 F	Fire Extinguisher Carts – Inspection	002
	Work Orders		20129892, 20162686, 20162687, 20164402, 20303450	
71111.07A	Calculations	OSC-2693	Decay Heat Removal Cooler Performance Calculation Methodology Verification	1
		OSC-3993	U1 LPI Heat Exchanger Performance Calculation	22
	Corrective Action Documents		2305752	
	Drawings	OFD-124B-2.1	Flow Diagram of Low Pressure Service Water System	77
		OM 201-0286.001	#46-128;3940 Decay Heat Coolers	17
		OM 201-3116.001	"1A" Decay Heat Cooler Tube Layout and Plugging Record	D3
	Procedures	PT/1/A/0251/069	LPI Cooler Test	10/20/2018
71111.11Q	Miscellaneous	OP-OC-ASE-40	Active Simulator Exam	0

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Procedures	AD-OP-ALL-1000	Conduct of Operations	17
		AD-TQ-ALL-0420	Conduct of Simulator Training and Evaluation	16
		OP/0/A/1106/019	Keowee Hydro at Oconee	107
		PT/0/A/0610/024	Keowee Emergency Start For Troubleshooting and Post Maintenance Checkouts	015
		PT/0/A/0620/009	Keowee Hydro Operation	054
		PT/0/A/0620/019	Keowee Over Frequency Protection Functional Test	015
		TT/0/A/EC101839/001	Keowee Stator Unit 2 Functional and Acceptance Testing	004
71111.12	Corrective Action Documents		1813665, 2317256	
	Miscellaneous		MREP Meeting Minutes	10/27/11
		OM 214-0116.001	Ingersoll-Rand Operating, Maintenance and Parts Manual for Compressor HP1600WCU	D02
	Procedures	AD-EG-ALL-1210	Maintenance Rule Program	2
		OP/0/A/1107/003 B	Procedure for Furnishing Power to Oconee	015
	Work Orders		20162547	
71111.13	Calculations	OSC-11821	Oconee Phoenix Model Development	2
	Corrective Action Documents		231907, 22318081, 2309647, 2314538	
	Drawings		Central Switchyard	7
		OEE-030-20	Elementary Diagram Diesel Engine Service Air Compressor B Auto Start	3
		OFD-124B-2.1	Flow Diagram of Low Pressure Service Water System	77
	Engineering Changes		EC 101839	
	Miscellaneous		Elevated Risk Activity Plan – KHU-2 stator replacement	0
		Clearance OPS-2-19-LPS-2LPSW 4 FIX-1204		
		OMP 5-05	100 KV Backup/Emergency Power System	002
		SLC 16.9.11a	Auxiliary Building Flood Protection Measures	1

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Procedures	AD-NF-ALL-0501	Electronic Risk Assessment Tool (ERAT)	4
		AD-OP-ONS-0003	Emergency Power Systems at ONS	000
		AD-WC-ALL-0200	On-Line Work Management	15
		AD-WC-ALL-0240	On-Line Risk Management Process	1
		AD-WC-ALL-0410	Work Activity Integrated Risk Management	9
		AD/OP/ALL/0201	Protected Equipment	6
		AP/0/A/1700/006	National Disaster	031
		CSD-WC-ONS-0240-00	ONS ERAT Guidance	0
		LECOP/00/TBD/0007	LEE CT Operation For Oconee	007
		OP/0/A/1107/003	100KV Power Supply	097
		OP/0/A/2000/061	KHS – Back-up Auxiliary Power Source	6
71111.15	Work Orders		20264010, 20162548	
	Calculations	OSC-4672	Unit 1 & 2 LPSW System LOCA / LOOP Response (TYPE I)	12
		OSC-8064	ROTSG Long-Term Containment Response Following a Large Break LOCA	16
	Corrective Action Documents		1772458, 2311475, 2305752, 2309647, 2309671, 2314538, 2317055	
	Miscellaneous		'B' Chiller Vibration Data and Results	
			Oil Sample results from Bureau Veritas Oil Condition Monitoring using lube oil analysis management system (LOAMS)	
			NRC Safety Evaluation - Regarding: Amendment 366, 368 and 367 to Oconee Renewed Facility Operating License for RPS and ESPS Digital Upgrade	January 28, 2010
		EMF-2110(NP)	TELEPERM XS: A Digital Reactor Protection System	1
		OM 214-0116.001	Ingersoll-Rand Operating, Maintenance and Parts Manual for Compressor HPI600WCU	D02

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		OM 2201.N-0018.001	Oconee Nuclear Station, Unit 3 RPS/ESFAS Controls Upgrade Replacement Hardware Design Drawings Cabinet #18	D8
	Procedures	AD-EG-ALL-1132	Preparation and Control of Design Change Engineering Changes	15
		OP/3/A/6103/007	Alarm Response Guide 3SA-07	11
		PT/3/A/0151/039 B Enclosure 13.1	Penetration 39B – Leak Rate Data Sheet	5/6/18
	Work Orders		20162941, 20357208	
71111.18	Engineering Changes		EC 101839	
	Procedures	OP/0/A/1106/019	Keowee Hydro at Oconee	017
		PT/0/A/0610/024	Keowee Emergency Start For Troubleshooting and Post Maintenance Checkouts	015
		PT/0/A/0620/009	Keowee Hydro Operation	054
		PT/0/A/0620/019	Keowee Over Frequency Protection Functional Test	015
		TT/0/A/EC101839/001	Keowee Stator Unit 2 Functional and Acceptance Testing	004
71111.19	Corrective Action Documents		2318325, 2317404, 2295613, 2304539	
	Drawings	O-760-05	Connection Diagram Diesel Engine Driven Service Air Compressor Remote Terminal Box	0
		OEE-117-89	Breaker Internal Diagram	0
		OEE-117-91	Elementary Diagram 4160V Switchgear #1TE Unit#0 Motor Driven Emergency Feedwater Pump Motor #1B	14
	Engineering Changes		EC 101839	
	Miscellaneous	OSS-0254.00-00-1039	Design Basis Specification for the Low Pressure Service Water System	52
	Procedures	MP/0/A/3016/010	Generic Equipment – Vibration Testing – Using Analyzer	011
		PT/0/B/0170/018	Diesel Service Air Compressor Performance Test	24

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		PT/1/A/2200/020	KHU-1 ACB IST Surveillance	012
		TT/0/A/EC101839/001	Keowee Stator Unit 2 Functional and Acceptance Testing	004
	Work Orders		20264010, 20294626, 20019621, 20290101, 20166966, 20385548, 20154895, 20357208	
71111.22	Drawings	OFD-101A-2.5	Flow Diagram of High Pressure Injection System (SSF Portion)	23
	Procedures	PT/2/A/0204/007	Reactor Building Spray Pump Test	096
		PT/3/A/0202/011	High Pressure Injection Pump Test	092
		PT/3/A/0230/015	High Pressure Injection Motor Cooler Performance Test	042
	Work Orders		01484852, 01484715, 01484983	
71114.06	Corrective Action Documents		02318395, 20318336, 02318355, 02317974, 02317774	
	Miscellaneous		TSC drill (DEP) 20-04	
		AD-EP-ALL-0101	Emergency Classification	1
		AD-EP-ALL-0105	Activation and Operation of the Technical Support Center	4
		AD-EP-ALL-0106	Activation and Operation of the Operations Support Center	3
		AD-EP-ALL-0111	Control Room Activation of the ERO	1
		AD-EP-ALL-0304	State and County Notifications	2
		AD-EP-ALL-0803	Evaluation and Critique of Drills and Exercises	5
		AD-TQ-ALL-0420	Conduct of Simulator Training and Evaluation	16
71151	Miscellaneous		Oconee Unit 1, 2, 3, High Pressure Injection system Unavailability data from April 1, 2019 to December 31, 2019	
			Review of High Pressure Injection system log entries in eSOMS from April 1, 2019 – December 31, 2019	
		AD-PI-ALL-0700	Performance Indicators	3
		NEI 99-02	Regulatory Assessment Performance Indicator Guideline	7
71152	Calculations	OSC-8222	Anticipated Response of the Instrument Air Header to a	2

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			Loss of Off-site Power (LOOP) Event and a Main Steam Line Break Event	
		OSC-9820	Oconee ROTSG Tube Shell Interaction Analysis for MSLB Without AFIS	0
	Corrective Action Documents		1906468, 1906479	
	Miscellaneous		Technical Specification Bases for LCO 3.3.13, AFIS Digital Channels dated 5/16/12 and proposed changes 10/29/19	