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

August 8, 2019

Mr. Charles Kharrl
Site Vice President
Southern Nuclear Operating Co., Inc.
7388 North State Highway 95
Columbia, AL 36319

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT UNITS 1, 2 – NRC INTEGRATED INSPECTION REPORT 05000348/2019002, 05000364/2019002 AND 07200042/2019001

Dear Mr. Kharrl:

On June 30, 2019, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Farley Units 1, 2. On July 23, 2019, the NRC inspectors discussed the results of this inspection with Mr. Charles Kharrl and other members of your staff. The results of this inspection are documented in the enclosed report.

Two 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.a of the Enforcement Policy.

If you contest the violations or 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 Farley.

If you disagree with a cross-cutting aspect assignment 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 Farley.

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 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Alan J. Blamey, Chief
Reactor Projects Branch 2
Division of Reactor Projects

Docket Nos. 05000348, 05000364 and 07200042
License Nos. NPF-2 and NPF-8

Enclosure:
As stated

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DATE	**7/24/2019**	**7/24/2019**	**7/24/2019**	**7/23/2019**	**7/23/2019**
OFFICE	RII/DRP	RII/DRP	RII/DRP		
NAME	DMas-Penaranda	PMeier	ABlamey		
DATE	**8/7/2019**	**8/7/2019**	**08/08/2019**		

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Numbers:	05000348, 05000364 and 07200042
License Numbers:	NPF-2 and NPF-8
Report Numbers:	05000348/2019002, 05000364/2019002 and 07200042/2019001
Enterprise Identifier:	I-2019-002-0026 and I-2019-001-0136
Licensee:	Southern Nuclear Operating Co., Inc.
Facility:	Joseph M. Farley Nuclear Plant Units 1, 2
Location:	Columbia, AL
Inspection Dates:	April 1, 2019 to June 30, 2019
Inspectors:	P. Meier, Senior Resident Inspector K. Miller, Resident Inspector R. Carrion, Senior Reactor Inspector B. Collins, Reactor Inspector S. Downey, Senior Reactor Inspector C. Dykes, Health Physicist W. Loo, Senior Health Physicist W. Pursley, Health Physicist J. Rivera, Health Physicist S. Sanchez, Senior Emergency Preparedness Inspector J. Walker, Emergency Response Inspector
Approved By:	Alan J. Blamey, Chief Reactor Projects Branch 2 Division of Reactor Projects

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting a integrated inspection at Farley Units 1, 2 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 Perform Radiological Surveys Adequate to Identify and Control a High Radiation Area with Dose Rates Greater than 1,000 millirem/hour @ 30 centimeters			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Occupational Radiation Safety	Green NCV 05000364, 05000348/2019002-01 Open/Closed	[H.5] - Work Management	71124.01
A self-revealing, Green, Non-Cited Violation (NCV) of 10 CFR 20.1501 and Technical Specifications (TS) 5.7.2 "High Radiation Area," was identified when a worker received a dose rate alarm upon entering an unlocked and unguarded high radiation area (HRA) with dose rates greater than 1,000 millirem/hour at 30 centimeters in the unit 2 (U-2) Drumming room. Specifically, the licensee failed to perform surveys of seven tri-nuke filters after they had been put together in a cart and moved to the U-2 Drumming room. Failure to perform the surveys after the filters were put together resulted in an operator entering an area that was unposted, unguarded and unlocked with dose rates greater than 1,000 mrem/hr at 30 centimeters.			

Inoperable Containment Isolation Valve due to Design Control Error			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Barrier Integrity	Green NCV 05000364/2019002-03 Open/Closed	[H.3] - Change Management	71153
A self-revealing, Green, Non-Cited Violation of 10 CFR 50, Appendix B, Criterion III, "Design Control', was identified for the licensee's failure to translate design requirements for a unit 2 containment isolation valve modification into instructions or procedures, ensuring that the valve would automatically close in response to a safety injection (SI) signal. The improper design change resulted in an associated violation of Technical Specification 3.6.3, "Containment Isolation Valves".			

Additional Tracking Items

Type	Issue Number	Title	Report Section	Status
URI	05000364,05000348/2019002-02	Fire protection systems compliance issue of concern	71152	Open
LER	05000364/2019-001-00	LER 2019-001-00 for Joseph M. Farley Nuclear Plant, Unit 2, Inoperable Containment	71153	Closed

		Isolation Valve due to Design Control Error.		
LER	05000364/2019-002-00	LER 2019-002-00 for Joseph M. Farley Nuclear Plant, Unit 2, Manual Reactor Trip due to Misaligned Rod during Low Power Physics Testing.	71153	Closed

PLANT STATUS

Unit 1 began the report period at approximately 100 percent rated thermal power (RTP) and operated at or near 100 percent RTP for the entire report period.

Unit 2 began the report period at or near 100 percent RTP. Unit 2 operated at or near 100 percent RTP until April 7, when the reactor was shut down to support a planned refueling outage. The reactor was started on May 3 and achieved approximately 48 percent RTP on May 4. Power was then lowered on May 4 to approximately 8 percent RTP to take the main generator off line for secondary side steam leak repairs. Again on May 4, following repairs, the main generator was synched to the grid. Eventually Unit 2 achieved 100 percent RTP on May 8 and operated at or near 100 percent RTP level through the end of the report 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

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 expected temperatures of greater than 95 Fahrenheit for seven days or more for the following systems on May 24, 2019. (FNP-0-AOP-21):

- Ultimate heat sink
- Service water
- U1 & U2 Containment

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

(1) The inspectors evaluated summer readiness of offsite and alternate alternating current (AC) power systems (NMP-GM-025).

71111.04 - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (3 Samples)

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

(1) Unit 2 spent fuel pool system during the defueling window on April 12, 2019 (Draw D205043).
(2) Unit 1 'A' train residual heat removal system during testing of the unit 1 'B' train residual heat removal system on June 11, 2019 (FNP-1-SOP-7.0A).
(3) Unit 2 'A' train charging system on June 18, 2019 before the unit 2 'B' charging system surveillance on June 19, 2019 (Draw D205039; FNP-2-SOP-8.1A).

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 2 auxiliary feedwater system on May 8, 2019. (FNP-2-SOP-22.0A; FNP-2-SOP-17.0B).

71111.05Q - Fire Protection

Quarterly Inspection (IP Section 03.01) (4 Samples)

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

(1) Unit 2 Containment Building on April 28, 2019 and May 1, 2019 (FNP-2-FPP-3.0).
(2) Unit 2 'A' charging pump room on June 11, 2019 (FNP-2-FPP-1.0).
(3) Unit 2 'B' charging pump room on June 11, 2019 (FNP-2-FPP-1.0).
(4) Unit 2 'C' charging pump room on June 11, 2019 (FNP-2-FPP-1.0).

71111.06 - Flood Protection Measures

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

The inspectors evaluated cable submergence protection in:

(1) Pull Box 1ZB1M42 (control & power cables supplying service water intake structure) on May 16, 2019. (WO SNC933873)

71111.07A - Heat Sink Performance

Annual Review (IP Section 02.01) (1 Sample)

The inspectors evaluated readiness and performance of:

(1) Unit 'B' train residual heat removal heat exchanger during the Unit 2R26 outage in April 2019 (WO SNC800130; NMP-ES-012).

71111.08P - Inservice Inspection Activities (PWR)

PWR Inservice Inspection Activities Sample (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated pressurized water reactor non-destructive testing by reviewing the following examinations from April 15 – 19, 2019:

1. Ultrasonic Examination (UT)
    a. three 6” safety injection system pipe-to-pipe welds (APR1-4202-2-RB, -3-RB, -4-RB), ASME Class 1, manual UT (observed).
    b. 565” steam generator upper head-to-shell weld (APR2-3100-6R), ASME Class 3, manual UT (reviewed).
2. Liquid Penetrant Examination (PT)
    a. steam generator A trunnion weld (APR2-3100-11R), ASME Class 1 (observed as part of 71003 inspection, Sample 3.a).
    b. three 2” seal injection system valve-to-pipe welds (FW-4FA, -5FA, -6FA), ASME Class 2 (observed welding; reviewed examination records).
3. Visual Examination (VT)
    a. four reactor vessel head control rod drive mechanism penetrations (#8, #32, #45, #54), ASME Class 1 (observed via video).
    b. reactor vessel bottom-mounted instrumentation penetrations (observed via photos).
4. Eddy Current Testing (EC)
    a. SG B (tubes R36C60, R41C44, R47C50), ASME Class 1 (observed).

The inspectors evaluated the licensee's boric acid corrosion control program performance.

71111.11Q - Licensed Operator Requalification 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 unit 2 downpower for the 2R26 refueling outage on April 7, 2019 and during lowered RCS level conditions in preparation for defueling on April 10, 2019.

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

(1) The inspectors observed and evaluated simulator exam scenario, 19-3 as-found exam, involving a loss of condenser vacuum, high main turbine vibrations, a faulted steam generator, a ruptured steam generator, and an event notification on June 17, 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) Unit 1 DC / Annunciator related grounds (WO SNC937364).
(2) River water system (FNP-0-SOP-25.0).

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (4 Samples)

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

(1) Unit 1 risk while performing unit 2 'A' train loss of offsite power and emergency diesel generator sequencer testing of the 1-2A and 1C emergency diesel generators on April 8, 2019 (FNP-2-STP-80.14).
(2) Unit 2 governor valve #1 repair; unit 2 'C' charging pump surveillance; unit 2 'B' train pressurizer heater surveillance; spent fuel pool cooling with less than 15 hr time to boil on May 14, 2019.
(3) Infrequently performed test or evolution for NERC generator capacity testing on June 14, 2019 and June 15, 2019 (FNP-1-ETP-4223; NMP-DP-001-001).
(4) Unit 2 power range NI N44 calibration; unit 2 'B' pressurizer heater capacity checks; unit 2 'B' residual heat removal system surveillance on June 18, 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) 1-2 R load center failed to transfer to U1 during U2 loss of offsite power test on April 8, 2019 (CR10598917).
(2) Unit 2 residual heat removal and containment spray containment sump suction valve encapsulation covers removed while in mode 1 before the 2R26 outage that started on April 7, 2019 (FNP-0-SOP-0.0; RER 2070129101).
(3) Unit 2 containment integrity set in preparation for moving fuel in containment (mode 6) with credit given to a FME 'bladder' in the main steam line normally isolated by a main steam isolation valve on April 22, 2019 (CR10602209).
(4) Unit 2 charging pump suction check valve from refueling water storage tank, Q2E21V0026, seat leakage discovered on April 14, 2019 (CR10601018).
(5) Non-conservative conditions assumed in ultimate heat sink analysis and past determination of operability identified on May 23, 2019 (CR10613664).

71111.18 - Plant Modifications

Temporary Modifications and/or Permanent Modifications (IP Section 03.01 and/or 03.02) (1 Sample)

The inspectors evaluated the following temporary or permanent modifications:

(1) 2C service water mini-flow line sleeve code repair made permanent (SNC1012404; CR1060093).

71111.19 - Post-Maintenance Testing

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

The inspectors evaluated the following post maintenance tests:

(1) 'R' load center relay replacement affecting unit 1 'A' train emergency diesel generator operability on April 11, 2019 (WO SNC1011166).
(2) Unit 2 containment mini-purge valve, Q2P13V0302, seat replacement during the unit 2R26 outage in April 2019 (WO SNC344260; FNP-2-STP-18.3).
(3) Unit 2 upstream main steam isolation valve overhauls during 2R26 outage (WO SNC893619).
(4) Unit 1 'D' service water pump motor replacement on May 20, 2019 through 26, 2019 (WO SNC988875).
(5) Unit 1 'B' component cooling water pump outage on June 12, 2019 (WO SNC979164).
(6) Unit 1 'C' charging pump seal replacement on June 18, 2019 through June 21, 2019 (WO SNC890516).

71111.20 - Refueling and Other Outage Activities

Refueling/Other Outage Sample (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated the unit 2 refueling outage 2R26 activities from April 7, 2019 to May 4, 2019.

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

Containment Isolation Valve Testing (IP Section 03.01) (1 Sample)

(1) Outside containment isolation valve (MOV-3052; Pen 42) for component cooling water to reactor coolant pump cooling test on April 24, 2019 (WOSNC682755; FNP-2-STP-627.0).

Inservice Testing (IP Section 03.01) (1 Sample)

(1) Unit 2 turbine driven auxiliary feedwater pump quarterly inservice test on May 1, 2019 (FNP-2-STP-22.16).

Surveillance Tests (other) (IP Section 03.01) (3 Samples)

(1) Unit 2 charging pump full flow testing on April 23, 2019 (FNP-2-STP-4.11).
(2) 'A' train #1 service water battery performance test on May 28, 2019 (FNP-0-STP-906.5; WO SNC542546; CR10615230).
(3) Unit 2 'E' service water pump discharge check valve flow surveillance on June 14, 2019 (FNP-2-STP-24.2).

71114.02 - Alert and Notification System Testing

Inspection Review (IP Section 02.01-02.04) (1 Sample)

(1) The inspectors evaluated the maintenance and testing of the alert and notification system during the week of April 8, 2019.

71114.03 - Emergency Response Organization Staffing and Augmentation System

Inspection Review (IP Section 02.01-02.02) (1 Sample)

(1) The inspectors evaluated the readiness of the Emergency Response Organization during the week of April 8, 2019.

71114.04 - Emergency Action Level and Emergency Plan Changes

Inspection Review (IP Section 02.01-02.03) (1 Sample)

(1) The inspectors evaluated submitted Emergency Action Level, Emergency Plan, and Emergency Plan Implementing Procedure changes during the week of April 8, 2019. This evaluation does not constitute NRC approval.

71114.05 - Maintenance of Emergency Preparedness

Inspection Review (IP Section 02.01 - 02.11) (1 Sample)

(1) The inspectors evaluated the maintenance of the emergency preparedness program during the week of April 8, 2019.

71114.06 - Drill Evaluation

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

(1) The inspectors observed and evaluated a simulator exam scenario, 19-3 as-found exam, involving a faulted steam generator and a ruptured steam generator that required an event notification that contributed to drill and exercise performance on June 17, 2019.

RADIATION SAFETY

71124.01 - Radiological Hazard Assessment and Exposure Controls

During facility tours, the inspectors directly observed radiological postings, dosimetry placement, container labeling, and radiological surveys for areas established within the restricted area including the Independent Spent Fuel Storage Installation.

Radiological Hazard Assessment (IP Section 02.01) (1 Sample)

The inspectors evaluated radiological hazards assessments and controls. Samples included the following:

Radiological surveys:

(1) Survey #136525, U2 Residual Heat Removal (RHR) Heat Exchanger Room 04/16/2019.
(2) Survey #136574, U2 RHR Heat Exchanger Room 04/17/2019.
(3) Survey #129553, U1 Regin Hx Vlv (1CB105), 04/13/2018.
(4) Survey #135387, U-1 A/B Monday 121ft, 03/04/2019.
(5) Survey #135582, U-2 A/B Monday 121ft, 03/17/2019.
(6) Survey #136434, U-2 A/B Monday 83ft, 04/14/2019.

Air sample survey records:

(1) U2 'A' Steam Generator (SG) Negative Pressure Unit (NPU) Sample ID 219546, 4/15/2019.
(2) U2 'A' Steam Generator Primary Platform Sample ID 219549, 04/15/2019.
(3) U2 RCP 2A Bowl Sample ID 219227, 04/11/2019.
(4) U2 RHR O/S Tent Sample ID 219813 04/17/2019.

Instructions to Workers (IP Section 02.02) (1 Sample)

The inspectors evaluated instructions to workers including radiation work permits used to access high radiation areas: Some of the items reviewed by inspectors included but was not limited to the following:

Radiation work permits (RWP), including RWPs for airborne areas as available:

(1) RWP 19-2718, Radiography on Plant Site to support the outage, Rev 0.
(2) RWP 19-2731, Engineering Initial radiological surveys and Installation and Removal of Nozzle Dam/Covers in the Primary Steam Generator (SG) to support the outage, Rev 0.
(3) RWP 19-2457, Maintenance, Removal of #1,2,3 Reactor Coolant Pump (RCP) Seals in support of the outage work in Alpha level 3 areas.
(4) RWP 19-2730, Engineering, Work associated with the primary SG Eddy Current Testing and repairs to support the outage..., Rev 0.

Electronic alarming dosimeter alarms:

(1) 03/19/2019 Dose rate alarm
(2) 04/22/2019 Dose rate alarm, 320/305
(3) 04/22/2019 Dose rate alarm, 339/305
(4) 04/22/2019 Dose rate alarm. 359/305

Labeling of containers:

(1) U2 Drum storage area
(2) Solidification and Dewatering Facility

Contamination and Radioactive Material Control (IP Section 02.03) (1 Sample)

The inspectors evaluated licensee processes for monitoring and controlling contamination and radioactive material. The inspectors verified transactions for nationally tracked sources had been reported and the following sealed sources are accounted for and are intact:

(1) Source ID 0619 1.2e6 uCi
(2) Source ID 0690 1.43e8 uCi
(3) Source ID 1843 8.0e6 uCi

Radiological Hazards Control and Work Coverage (IP Section 02.04) (1 Sample)

The inspectors evaluated in-plant radiological conditions during facility walkdowns and observation of radiological work activities. The observed work activities included but was not limited to the following:

Risk significant radiological work activities:

(1) Unit 2 Reactor Coolant Pump seal removal, Survey #136355 04/13/2011.
(2) Unit 2 A Steam Generator Hot leg work, Survey #136439 04/15/2019.
(3) Unit 2 A Steam Generator Cold leg work, Survey #136444 04/15/2019.

High Radiation Area and Very High Radiation Area Controls (IP Section 02.05) (1 Sample)

The inspectors evaluated risk-significant high radiation area and very high radiation area controls, including postings and physical controls.

Radiation Worker Performance and Radiation Protection Technician Proficiency (IP Section 02.06) (1 Sample)

The inspectors evaluated radiation worker awareness and performance and radiation protection technician proficiency.

71124.06 - Radioactive Gaseous and Liquid Effluent Treatment

Inspectors evaluated licensee performance in ensuring gaseous and liquid effluent processing systems are maintained to properly mitigate, monitor, and evaluate radiological discharges to the public. Inspectors reviewed compensatory measures for out-of-service effluent monitors.

Walk Downs and Observations (IP Section 02.01) (1 Sample)

The inspectors walked down the following gaseous and liquid radioactive effluent monitoring and filtered ventilation systems to assess the material condition and verify proper alignment according to plant design:

(1) Unit 1 Penetration Room Monitoring System (R-10).
(2) Unit 2 Condenser Air Ejector Monitoring System (R-15B).
(3) Unit 1 Liquid Waste Processing Monitoring System (R-18).
(4) Unit 2 Plant Vent Stack Monitoring System (R-29B).
(5) Unit 1 Penetration Room Ventilation Filtration System.

Calibration and Testing Program (Process & Effluent Monitors) (IP Section 02.02) (1 Sample)

The inspectors reviewed gaseous and liquid effluent monitor instrument calibrations or tests by reviewing information not limited to but including alarm set points, periodicity, and National Institute of Standards and Technology (NIST) traceability for sources used for the following sample set of monitors:

(1) Unit 1 Plant Vent Stack Effluent Monitor RE-29B (July 2016 & June 2018 calibrations).
(2) Unit 2 Liquid Waste Processing Monitor R-18 (June 2017 & January 2019 calibrations).

Sampling and Analysis (IP Section 02.03) (1 Sample)

The inspectors reviewed the following radioactive effluent sampling and analysis activities:

- Unit 2 Liquid Waste Monitor Tank sampling and effluent release permit preparation.
- Unit 2 Plant Vent Stack Monitor iodine and particulate filter change-out and effluent release permit preparation.

No effluent discharges were available to observe during this inspection.

Instrumentation and Equipment (IP Section 02.04) (1 Sample)

The inspectors reviewed the following radioactive effluent discharge system surveillance test results:

The inspectors reviewed flow rates for effluent stack and related vent flow and surveillances. Inspectors also reviewed maintenance and methodologies for one high-range effluent monitors relied on in emergency operating procedures for decision making. Some records reviewed were:

- Unit 1A Penetration Room Filtration Performance Tests (February 2016 & June 2018).
- Unit 1 Plant Vent Stack Effluent Monitor RE-29B (July 2016 & June 2018 calibrations).

Dose Calculations (IP Section 02.05) (1 Sample)

The inspectors reviewed the following to asses public dose:

The inspectors reviewed required annual reports for changes, release permits, and the offsite dose calculation manual for changes and results. Some documents reviewed include the following:

(1) Unit 2 Waste Monitor Tank Liquid Waste Release Permit, 6/18/19.
(2) Unit 2 Plant Vent Stack Continuous Gaseous Waste Release Permit, 6/6/19.
(3) Unit 1 Plant Vent Stack Continuous Gaseous Waste Release Permit, 6/11/19.

No abnormal gaseous or liquid tank discharges were available for review during this inspection period.

71124.07 - Radiological Environmental Monitoring Program

Site Inspection (IP Section 02.01) (1 Sample)

The inspectors performed walk-downs of sampling stations, thermoluminescent dosimeter (TLD) locations and meteorological instrumentation. Inspectors also performed observations of preparation and collection of different environmental sample types. Inspectors reviewed sampling results, maintenance and calibration, quality control, and ground water records. Records reviewed, and samples observed included but were not limited to the following:

Walk-down, and calibration and maintenance record review:

(1) Location 1601-W1 North Perimeter.
(2) Location 0701-W1 SSE Perimeter.
(3) Location 1101-W1 Plant Entrance.
(4) 0703-W1 GP Paper Mill.

The inspectors observed the following environmental sample collections and preparation:

(1) Water Sample at Cedar Springs, GA.
(2) Water Sample at Andrews Lock and Dam.
(3) Particulate and Iodine Air Samples and TLD at Location 1601-W1 North Perimeter.
(4) Particulate and Iodine Air Samples and TLD at Location 0701-W1 SSE Perimeter.
(5) Particulate and Iodine Air Samples and TLD at Location 1101-W1 Plant Entrance.
(6) Particulate and Iodine Air Samples and TLD at 0703-W1 GP Paper Mill.

Licensee actions in response to missed sample, inoperable sampler, lost TLD or anomalous measurement:

(1) Condition Report 10398803.
(2) Condition Report 10426179.
(3) Condition Report 10481215.

Sampling program for the potential of licensed material entering groundwater:

(1) Waste Monitor Tank Discharge Line.
(2) Reactor Makeup Water Storage Tanks.
(3) Refueling Water Storage Tanks.

Groundwater Protection Initiative (GPI) Implementation (IP Section 02.02) (1 Sample)

The inspectors reviewed the licensees continuing implementation of the voluntary Nuclear Energy Institute Ground Water Protection Initiative.

71124.08 - Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation

Radioactive Material Storage (IP Section 02.01) (1 Sample)

The inspectors evaluated radioactive material storage in the follow areas:

- Low Level Radwaste Bulding
- Solidification and Dewatering Facility
- Units 1 and 2 Auxiliary Buildings

Container check (e.g., swelling, leakage and deformation):

- Observed selected containers in the Solidification and Dewatering Facility, Units 1 and 2 Auxiliary Buildings, Low Level Radwaste Building, Shipping/Receiving Warehouse, and fenced Radiation Controlled Area next to the Old Steam Generator Facility.

Radioactive Waste System Walkdown (IP Section 02.02) (1 Sample)

The inspectors evaluated the following radioactive waste processing systems and processes during plant walkdowns:

Liquid or solid radioactive waste processing systems:

- Chem Nuclear Liquid Waste Processing System

Radioactive waste resin and/or sludge discharges processes:

- Solidification and Dewatering Facility

Waste Characterization and Classification (IP Section 02.03) (1 Sample)

The inspectors evaluated the radioactive waste characterization and classification for the following waste streams:

(1) Liquid Waste Processing Media (Resin/Charcoal).
(2) Solidification and Dewatering Facility B Primary Resin.
(3) Solidification Dewatering Facility C Primary Resin.

Shipment Preparation (IP Section 02.04) (1 Sample)

The inspectors evaluated and observed the radioactive material shipment preparation processes.

- Radioactive Waste Shipment 19-08, Dry Active Waste (Low Specific Activity-I).

Shipping Records (IP Section 02.05) (1 Sample)

The inspectors evaluated the following non-excepted package shipment records:

(1) Radioactive Waste Shipment 17-12, Spent Resin, (Type B Package).
(2) Radioactive Material Shipment 18-19, Ex-Vessel Neutron Dosimeter and Reactor Vessel Level Indicating System Probe Piece (Type A Package).
(3) Radioactive Waste Shipment 18-23, Spent Mechanical Filters (Low Specific Activity-II).

(4) Radioactive Material Shipment 18-58, Control Rod Drive Mechanisms (Surface Contaminated Object-II).

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

EP01: Drill/Exercise Performance (IP Section 02.12) (1 Sample)

(1) EP01: Drill & Exercise Performance for the period July 1, 2018, through December 31, 2018.

EP02: ERO Drill Participation (IP Section 02.13) (1 Sample)

(1) EP02: Emergency Response Organization Drill Participation for the period July 1, 2018, through December 31, 2018.

EP03: Alert & Notification System Reliability (IP Section 02.14) (1 Sample)

(1) EP03: Alert & Notification System Reliability for the period July 1, 2018, through December 31, 2018.

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

(1) Unit 1 (April 1, 2018 - March 31, 2019).
(2) Unit 2 (April 1, 2018 - March 31, 2019).

MS10: Cooling Water Support Systems (IP Section 02.09) (2 Samples)

(1) Unit 1 (April 1, 2018 - March 31, 2019).
(2) Unit 2 (April 1, 2018 - March 31, 2019).

OR01: Occupational Exposure Control Effectiveness Sample (IP Section 02.15) (1 Sample)

(1) Monthly Performance Indicator Data for the Occupational Radiation Safety Cornerstone from April 1, 2018, to March 31, 2019.

PR01: Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual Radiological Effluent Occurrences (RETS/ODCM) Radiological Effluent Occurrences Sample. (IP Section 02.16) (1 Sample)

(1) Monthly Performance Indicator Data for the Public Radiation Safety Cornerstone from March 2018 to March 2019.

71152 - Problem Identification and Resolution

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

(1) The inspectors reviewed the licensee's corrective action program for potential adverse trends on instrument and control air-line breaks resulting in adverse plant conditions that might be indicative of a more significant safety issue (CR10614812; TE1044520).

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) Service water DC battery issues from March through May 2019 (CR10611092).
(2) Corrective actions for previously identified compliance issues and potential compliance issues associated with the fire protection system.

71153 - Followup of Events and Notices of Enforcement Discretion

Event Report (IP Section 03.02) (2 Samples)

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

(1) LER 05000364/2019-001-00, Inoperable Containment Isolation Valve due to Design Control Error.(ADAMS accession: ML19161A200) The circumstances surrounding this LER are documented in Results section.

(2) LER 05000364/2019-002-00, Manual Reactor Trip due to Misaligned Rod during Low Power Physics Testing (ADAMS accession: ML19178A238). The inspectors determined that it was not reasonable to foresee or correct the cause discussed in the LER therefore no performance deficiency was identified. The inspectors also concluded that no violation of NRC requirements occurred.

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 on June 13, 2019.

71003 - Post-Approval Site Inspection for License Renewal

Post-Approval Site Inspection for License Renewal (1 Sample)

The inspectors observed the implementation of the following license renewal activities (listed by aging management program) from April 15, 2019 to April 19, 2019:

1. External Surfaces Monitoring
    a. Visual examination of the external surfaces of Valve Q2E21V01188
    b. Visual examination of the external surfaces of exposed 10" piping on the 2B RHR Heat Exchanger (Q2E11H0001B)

c. Visual examination of the external surfaces of the RCDT Heat Exchanger (Q2621H0001) Shell

2. Flow Accelerated Corrosion Program
   c. Ultrasonic examination of Valve 02-023-8a
   d. Ultrasonic examination of Small Expander 02-023-8b
   e. Ultrasonic examination of Large Expander 02-023-8c
3. Inservice Inspection Program
   a. Liquid Penetrant Examination of Steam Generator(SG) A Trunion #2 Attachment Weld (APR2-3100-11R)
   b. Ultrasonic Examination of SG A Head to Upper Shell Weld (APR2-3100-6R)
4. Reactor Vessel Internals Program
   a. Visual examination of Control Rod Guide Tubes (CRGTs) J9, J13, and H14
   b. Wear measurement for CRGT H6 guide card 7
   c. Wear measurements for CRGT J9 guide cards 2, 3, 4, 5, 6, 7 and 8
   d. Wear measurements for CRGT J13 guide cards 2, 3, 4, 5, 6, 7, and 8

INSPECTION RESULTS

<table>
<tr><td colspan="4">Failure to Perform Radiological Surveys Adequate to Identify and Control a High Radiation Area with Dose Rates Greater than 1,000 millirem/hour @ 30 centimeters</td></tr>
<tr><td>Cornerstone</td><td>Significance</td><td>Cross-Cutting Aspect</td><td>Report Section</td></tr>
<tr><td>Occupational Radiation Safety</td><td>Green
NCV 05000364, 05000348/2019002-01
Open/Closed</td><td>[H.5] - Work Management</td><td>71124.01</td></tr>
<tr><td colspan="4">A self-revealing, Green, Non-Cited Violation of 10 CFR 20.1501 and Technical Specifications (TS) 5.7.2 “High Radiation Area,” was identified when a worker received a dose rate alarm upon entering an unlocked and unguarded high radiation area (HRA) with dose rates greater than 1,000 millirem/hour at 30 centimeters in the unit 2 (U-2) Drumming room. Specifically, the licensee failed to perform surveys of seven tri-nuke filters after they had been put together in a cart and moved to the U-2 Drumming room. Failure to perform the surveys after the filters were put together resulted in an operator entering an area that was unposted, unguarded and unlocked with dose rates greater than 1,000 mrem/hr at 30 centimeters.</td></tr>
<tr><td colspan="4">Description: On March 19, 2019, 53 Tri-Nuclear filters were being removed from the U-2 Spent Fuel Pool. As part of the removal seven of the filters were placed on a cart and stored in the U-2 Drumming room within a barricaded posted HRA. Each of the seven filters placed on the cart was individually surveyed with readings between 642 millirem and 950 millirem at 30 centimeters however once all the filters were placed on the cart together no survey was performed to determine the aggregate dose rate of the seven filters. An operator not associated with the filter movement entered the room and proceeded to an area near the filters but outside of the HRA barricade, as the operator got closer to the area the operator received an unanticipated dose rate alarm. The operator immediately exited the room upon receiving the dose rate alarm. The maximum dose rate the operator entered was 779 mrem/hr. The dose rate alarm was the result of an unposted Locked High Radiation Area</td></tr>
</table>

(LHRA) created by the accumulated dose of the seven filters stored together on the cart. The accumulated dose rate of the seven filters was greater than 1,200 mrem/hr at 30 centimeters.

Corrective Actions: The licensee took immediate corrective actions including stopping work, securing the area from further access and placing the cart in a posted and secured LHRA. The licensee investigated the Radiation Protection (RP) personnel covering the job and removed radiologically controlled area (RCA) access from the individual who received the alarm pending further investigation.

Corrective Action References: CR 10593185

Performance Assessment:

Performance Deficiency: The licensee's failure to perform surveys adequate to identify the HRA with dose rates greater than 1,000 mrem/hr at 30 centimeters in the Drumming room as required by 10CFR 20.1501 was a performance deficiency.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the Human Performance attribute of the Occupational Radiation Safety cornerstone. The performance deficiency adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. Failure to perform adequate surveys, and subsequently barricade and post HRAs, could lead to unplanned radiation exposures.

Significance: The inspectors assessed the significance of the finding using Appendix C, "Occupational Radiation Safety SDP." This finding was determined to be greater than minor because it was associated with the Occupational Radiation Safety Cornerstone attribute of Human Performance and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. The finding was not related to ALARA planning, nor did it involve an overexposure or substantial potential for overexposure, and the ability to assess dose was not compromised. Therefore, the inspectors determined the finding to be of very low safety significance (Green).

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.

Enforcement:

Violation: 10 CFR 20.1501 requires that licensees perform surveys, that may be necessary to comply with the regulations in this part, to evaluate the magnitude of radiation levels. Technical Specification 5.7.2 "High Radiation Area," says in part, areas accessible to personnel with radiation levels, as measured at 30 centimeters from the radiation source or from any surface that the radiation penetrates, such that a major portion of the body could receive in one hour a dose greater than 1,000 millirem, shall be provided with locked or continuously guarded doors to prevent unauthorized entry. Contrary to that, on March 19, 2019, the licensee did not perform surveys adequate to identify radiation levels greater than 1,000 mrem/hr which resulted in the failure to appropriately post, lock or guard the areas

surrounding the seven Tri-Nuclear filters that were placed together on a cart and moved to the U-2 Drumming room.

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

Observation: Semi-annual trend review of instrument and control air-line breaks	71152

The inspectors performed a review of issues entered in the licensee's corrective action program (CAP) and reviewed associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspectors focused their review on instrument and control air-line breaks resulting in adverse plant conditions, but also considered the results of inspector daily condition report screenings, licensee trending efforts, and licensee human performance results. The review nominally considered the 6-month period beginning in January 2019 through June 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.

No findings were identified. The inspectors performed a search of the CAP database and found 10 examples of condition reports initiated since the beginning of 2019 associated with instrument and control air-line damage or breaks. The licensee identified an adverse trend with instrument and control air-lines damaged or broken and initiated a trend CR (10614812) on May 28, 2019, citing one CR as an example. Since that time there were two additional CRs initiated for issues associated with instrument and control air-line breaks, one of which had a small impact on reactor power. The licensee initiated Technical Evaluation (TE) 1044520 in an effort to evaluate the cause of the trend, and implement corrective actions. The inspectors continue to monitor this issue.

Unresolved Item (Open)	Fire protection systems compliance issue of concern 05000364,05000348/2019002-02	71152

Description: An unresolved item was identified for compliance concerns regarding various fire protection systems required as part of the licensee's fire protection program and license amendment for the transition to NFPA 805. It was identified that these systems may not specifically meet the design and installation of the original NFPA code on record. However, since the licensee was licensed in accordance with 10 CFR 50.48(a) and 10 CFR 50.48(c) and specifically the NFPA-805 Performance Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants, 2001 edition, alternatives to the specific NFPA code on record may be utilized. The specific unresolved item is whether or not the identified systems meet the current license bases and requirements of NFPA 805. Below are the specific systems in question as part of this URI:

- Service Water Intake Structure (SWIS) (1SW-111) - Water Spray
- U1 & U2 auxiliary building, elevation 121' (1A-36; 2A-36) - Pre-action sprinkler
- U1 auxiliary building, elevation 100' (1A-118) - Pre-action sprinkler
- Service Water Intake Structure Battery Room - fire damper smoke release devices (SRDs)

- U1 & U2 Computer, CRDM, & Hot-shutdown panel rooms - fire damper SRDs

Planned Closure Actions: Follow up inspection using IP 71152, Problem Identification and Resolution, to evaluate the current license basis and review corrective actions associated with previously identified issues regarding similar concerns. Previous concerns are documented in I/R number 05000348(364)/2018011 as NCV 0500348-364/2018011-1 (ML18256A251) and I/R number 05000348(364)/2016003 as NCV 05000348/2016003-1 (ML16307A008).

Licensee Actions: The licensee is in the process of evaluating their license relating to NFPA 805 to clarify statements of compliance where needed and to correct any errors or omissions. This is documented in CR 10629438.

Corrective Action References: CR10596111; CR10574910; CR10293683; CR10542542

Inoperable Containment Isolation Valve due to Design Control Error			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Barrier Integrity	Green NCV 05000364/2019002-03 Open/Closed	[H.3] - Change Management	71153

A self-revealing, Green, Non-Cited Violation of 10 CFR 50, Appendix B, Criterion III, "Design Control', was identified for the licensee's failure to translate design requirements for a unit 2 containment isolation valve modification into instructions or procedures, ensuring that the valve would automatically close in response to a safety injection (SI) signal. The improper design change resulted in an associated violation of Technical Specification 3.6.3, "Containment Isolation Valves".

Description:

On April 12, 2019, while Farley Unit 2 was in Mode 6 for the 2R26 Refueling Outage, during performance of surveillance test FNP-2-STP-40.0A, 'A' Train Safety Injection With Loss of Offsite Power Test, service water containment isolation valve (CIV), MOV-3131, did not close on a simulated safety injection (SI) signal. MOV-3131 is the inside containment isolation valve that isolates the common service water return piping line from the reactor coolant pump motor coolers. The system is a non-safety related closed system inside containment. The failure to close on a SI signal existed since November 3, 2017, when MOV-3131was declared operable following implementation of an electrical design change per LDCP SNC728696. The design change implementation error occurred during the previous refueling outage (2R25) and remained undetected for 18 months. Prior to the design change, MOV-3131 functioned properly to close automatically on an 'A' train SI signal.

The immediate cause of the issue was the failure to properly land wires associated with the operation of the valve on the inboard and outboard terminals of a containment electrical penetration. The design change that was developed in November 2016 and approved in February 2017, involved changing the motor driven actuation circuitry such that valve closure would stop on a torque switch setting rather than a geared limit switch contact. An electrical wiring diagram was revised to use two spare conductors in the existing valve control cable. However, the associated penetration electrical connection diagrams were not updated by the

design change and the terminations were not addressed by the design change implementation instructions.

The post maintenance testing did not identify the failed control circuitry. Although the specified post maintenance testing identified in the design change package was satisfactorily completed, the package and the work release approval and acceptance process did not specify testing for the safety related function of automatic valve closure in response to a simulated 'A' train SI signal. The inadequate post maintenance testing was a missed opportunity to identify the wiring error before declaring the valve operable in 2017.

The improper design change also resulted in a violation of Technical Specification 3.6.3, "Containment Isolation Valves". Farley Nuclear Plant Unit 2 Technical Specifications (TS) limiting condition for operation (LCO) 3.6.3, "Containment Isolation Valves," required each containment isolation valve shall be operable, while the Unit is in Modes 1, 2, 3, and 4. With a containment isolation valve inoperable in modes 1 to 4 for a penetration flow path with two containment isolation valves, action statement, condition 'A', required action 'A.1', requires isolation of the affected penetration flow path within 4 hours. If the required action and associated completion time cannot be met, action statement condition 'E', required action 'E.1', requires that the unit be in mode 3 within 6 hours and required action 'E.2', requires that the unit be in mode 5 within 36 hours.

The licensee determined on April 12, 2019, while Farley Unit 2 was in mode 6 that MOV-3131 was inoperable for not closing on a SI Signal. This condition existed from November 9, 2017, when unit 2 entered mode 4 with MOV-3131 declared operable, until April 7, 2019, when the unit entered mode 5 for the refueling outage 2R26. This time period exceeded the TS allowed outage times.

Corrective Actions:
On April 26, 2019, with Unit 2 in Mode 5, the licensee terminated the spare conductors at the containment electrical penetration and satisfactorily performed surveillance test FNP-2-STP-40.0A, 'A' Train Safety Injection With Loss of Offsite Power Test. MOV-3131 was declared operable on April 26, 2019, before Unit 2 entered Mode 4. The licensee issued LER, 2019-001-00 in accordance with the requirements of 10 CFR 50.73(a)(2)(i)(B).

Corrective Action References: Condition Reports (CR) 10604403; WO SNC1014666.

Performance Assessment:

Performance Deficiency: The licensee's failure to assure that the containment isolation valve design requirements were translated into instructions, procedures, or drawings is a performance deficiency. Specifically, the failure to specify the correct implementation of the two spare wire terminations prevented the safety related function of an automatic SI signal from closing MOV-3131.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the Design Control attribute of the Barrier Integrity cornerstone. The barrier integrity cornerstone is affected because MOV-3131 provides a containment boundary isolation. If left uncorrected, the risk of a release following a loss of coolant accident slightly increases.

Significance: The inspectors assessed the significance of the finding using Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." Exhibit 3, Barrier Integrity Screening Questions, dated June 19, 2012. This finding was determined to be of very low safety significance (Green) because there was no actual open pathway in the physical integrity of containment and it did not involve an actual reduction in the function of the hydrogen igniters in containment. In addition, MOV-3131 was fully capable of opening and closing manually from the remote hand switch on the main control board in the control room. Operators would have been alerted to the problem by main control board indication and closed MOV-3131 per plant emergency procedures. Valve MOV-3134, the outboard containment isolation valve on the same common service water return piping line as MOV-3131, was fully capable of automatic closure on a 'B 'train SI signal to isolate the containment penetration.

Cross-Cutting Aspect: H.3 - Change Management: Leaders use a systematic process for evaluating and implementing change so that nuclear safety remains the overriding priority.

Enforcement:

Violation:

Title 10, Code of Federal Regulations Part 50, Appendix B, Criterion III, "Design Control" requires, in part, that measure shall be established to assure that applicable regulatory requirements and the design basis for those structures, systems, and components to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions.

Contrary to the above, the licensee failed to assure the applicable regulatory requirements and the design basis for the containment isolation valve modification was translated appropriately into the design change package. Specifically, the licensee failed to document the requirements of landing the spare wires correctly and the required post maintenance testing which resulted in disabling the automatic safety injection containment isolation signal to the valve for its credited modes of operation and a violation of Technical Specification 3.6.3.

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 July 23, 2019, the inspectors presented the integrated inspection results to Mr. Charles Kharrl and other members of the licensee staff.
- On April 12, 2019, the inspectors presented the Emergency Preparedness to Daniel Komm and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71003	NDE Reports	S19F2P004	Liquid Penetrant Examination of Component APR2-3100-11R	04/17/2019
71003	NDE Reports	S19F2U5-015	Flow Accelerated Corrosion Examination of Component 2-23-8a, Valve	04/16/2019
71003	NDE Reports	S19F2U5-016	Flow Accelerated Corrosion Examination of Component 2-23-8b, Small Expander	04/16/2019
71003	NDE Reports	S19F2U5-017	Flow Accelerated Corrosion Examination of Component 2-23-8c, Large Expander	04/16/2019
71003	Procedures	54-ISI-370-007	Remote Underwater Visual Examination of PWR Reactor Pressure Vessel Internals in Accordance with MRP 227 & 228	Rev 7
71003	Procedures	NMP-ES-024-301	Liquid Penetrant Examination Color Contrast and Fluorescent	Rev 13
71003	Procedures	NMP-ES-024-510	Ultrasonic Flow-Accelerated Corrosion Examination Procedure	Rev 9
71003	Work Orders	SNC985875	Perform 2R26 under-insulation External Surfaces Monitoring Inspections for License Renewal	Rev 0
71111.08P	Calibration Records	MIZ-80(iD), SN 089	Certificate of Calibration of Zetec Eddy Current Tester	07/23/2018
71111.08P	Calibration Records	MIZ-80(iD), SN 091	Certificate of Calibration of Zetec Eddy Current Tester	09/13/2018
71111.08P	Miscellaneous	54-ISI-400-023, Site Applicability: 2 3C+P	Examination Technique Specification Sheet	Rev. 0
71111.08P	Miscellaneous	54-ISI-400-023, Site Applicability: 3 1C+P	Examination Technique Specification Sheet	Rev. 0
71111.08P	Miscellaneous	54-ISI-400-023, Site Applicability: 4 Array	Examination Technique Specification Sheet	Rev. 0
71111.08P	Miscellaneous	54-ISI-400-023, Site Applicability:	Examination Technique Specification Sheet	Rev. 1

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		1 Bobbin		
71111.08P	Miscellaneous	8.20N	Welding Procedure Specification	Rev. 6
71111.08P	Miscellaneous	Avansino	Sonic Systems International, Inc. Vision Acuity Record	11/28/2018
71111.08P	Miscellaneous	B06	Procedure Qualification Record	10-5-76
71111.08P	Miscellaneous	Greene, Lareau	Personnel Qualification Records for EC Data Analysis Personnel	
71111.08P	Miscellaneous	Helms	International Quality Consultants, Inc. Vision Examination	01/10/19
71111.08P	Miscellaneous	PT (Helms)	International Quality Consultants, Inc. Nondestructive/Visual Examination Certification Record	1/11/2019
71111.08P	Miscellaneous	Reid	Sonic Systems International, Inc. Vision Acuity Record	5/23/2018
71111.08P	Miscellaneous	Rubio, Yi	Personnel Qualification Records for EC Data Acquisition	
71111.08P	Miscellaneous	UT II (Reid)	Sonic Systems International, Inc. Certificate of Qualification	3-6-19
71111.08P	Miscellaneous	UT II-PDI (Avansino)	Sonic Systems International, Inc. Certificate of Qualification	1-21-19
71111.08P	NDE Reports	Q2E21V127B	Liquid Penetrant Examination Record	04-18-19
71111.08P	NDE Reports	S19F2U037	UT Calibration/Examination Record (APR1-4202-2-RB)	4/16/2019
71111.08P	NDE Reports	S19F2U038	UT Calibration/Examination Record (APR1-4202-3-RB)	4/16/2019
71111.08P	NDE Reports	S19F2U039	UT Calibration/Examination Record (APR1-4202-4-RB)	4/16/2019
71111.08P	NDE Reports	S19F2U044	UT Calibration/Examination Record (APR2-3100-6R)	4/18/2019
71111.08P	Procedures	FNP-0-ETP-019.0	Leakage Assessment Program	Ver. 2.0
71111.08P	Procedures	Framatome 03-9293806	Farley Unit 1 and Unit 2 Steam Generator Eddy Current Data Analysis Guidelines Level 3	Rev. 000
71111.08P	Procedures	Framatome Engineering Information Record, Document No. 51 - 9293809 – 000	Site Validation of Eddy Current Examination Techniques for Farley 2R26	Rev. 000
71111.08P	Procedures	NMP-ES-019	Boric Acid Corrosion Control Program	Ver. 11.1
71111.08P	Procedures	NMP-ES-024	Nondestructive Examination and Certification Processes	Ver. 7.0
71111.08P	Procedures	NMP-ES-024-501	PDI Generic Procedure for the Ultrasonic Examination of Austenitic Pipe Welds (Appendix VIII)	Ver. 7.0
71111.08P	Procedures	NMP-ES-024-516	Manual Ultrasonic Examination of Pressure Vessel Welds (Non-Appendix VIII)	Ver. 5.0

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.08P	Procedures	NMP-MA-005-002	General Welding Standard for Pressure Boundary Applications	Ver. 5.4
71111.08P	Procedures	NMP-MA-013	Leak Management Program	Ver. 14.1
71111.08P	Work Orders	SNC1005383	Work Order: Replace 2B Seal Injection Filter Inlet Isolation Valve Q2E21V127B	Rev. 0
71111.15	Engineering Evaluations	DOEJ-FRSNC487481-M001	Evaluation of the Impact on Offsite and Control Room Doses From the Temporary Removal of Encapsulation Vessel Covers	2
71111.15	Miscellaneous	Regulatory Guide 1.53	Application of the Single-Failure Criterion to Nuclear Power Plant Protection Systems	June 1973
71111.15	Miscellaneous	SECY-77-439	Single Failure Criterion	August 17, 1977
71124.01	Corrective Action Documents	CR 10593185, CR 10593155		
71124.01	Corrective Action Documents	NMP-GM-020-001-F06 Attachement 6	Interim Effectiveness Review: Unposted Locked High Radiation Area CR10593185	
71124.01	Procedures	NMP-HP-204	ALARA Planning and Job Review	Version 6.5
71124.01	Procedures	NMP-HP-300	Radiation Contamination Survey	Version 5.2
71124.01	Procedures	NMP-HP-302	Restricted Area Classification, Postings, and Access Control	Version 10.7
71124.01	Radiation Surveys	Surveys #135629, #135635	Filter Change Out Surveys	03/19/2019
71124.06	Corrective Action Documents	CR 10496278	Unit 2 liquid waste monitor RE-18 inoperable	05/22/18
71124.06	Corrective Action Documents	CR 10496453	Unit 2 ODCM Rad monitors inoperable for greater than 30 days	06/10/18
71124.06	Corrective Action Documents Resulting from Inspection	CR 10621549	Unit 2 WMT sample sink demin water leak	06/19/19
71124.06	Miscellaneous	Offsite Dose Calculation Manual (ODCM)		Ver. 26
71124.06	Procedures	FNP-0-CCP-212	Liquid Waste Release Program	Ver. 22

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71124.06	Procedures	FNP-0-CCP-213	Gaseous Waste Release Program	Ver. 56
71124.06	Procedures	FNP-2-STP-714.0	Waste Monitor Tank Surveillance	Ver 29.1
71124.06	Self-Assessments	NMP-GM-003-F18	Check-In Self-Assessment (CISA) Plan and Report; Pre-NRC RP Public Rad Safety Baseline Inspection Readiness	03/20/2019
71124.07	Calibration Records	Work Order # SNC 746527	Air Sampler Station Calibration at Paper Mill at Cedar Springs	08/07/2018
71124.07	Calibration Records	Work Order # SNC 891353	Water Sampler Calibration at Paper Mill at Cedar Springs	7/26/2018
71124.07	Calibration Records	Work Order #627435	Air Sampler Calibration at Main Gate	03/28/2016
71124.07	Calibration Records	Work order #724602	Air Sampler Calibration SSE Sector	08/31/2017
71124.07	Calibration Records	Work Order #SNC527772	Andrews Lock and Dam Water Sampler Calibration	09/10/2017
71124.07	Corrective Action Documents Resulting from Inspection	CR 10621261	Electrical power on Main Entrance Sample Station.	
71124.07	Corrective Action Documents Resulting from Inspection	CR 1062152	Procedure does not address the use of the rotameters installed in some air sampling stations.	
71124.07	Miscellaneous	GPI Data	Ground Water Well Monitoring Results for Monitor Wells R1, R2, R3, R4, R5 and R6	12/31/2018
71124.07	Miscellaneous	NL-18-0845	Joseph M. Farley Nuclear Plant— Units 1 & 2 Annual Radioloqical Environmental Operating Report for 2017	05/15/2018
71124.07	Miscellaneous	NL-19-0686	Joseph M. Farley Nuclear Plant— Units 1 & 2 Annual Radioloqical Environmental Operating Report for 2018	05/15/2019
71124.07	Miscellaneous	Report No. R-4217157F-008	Plant Farley 2018 Annual Meteorological Report	April 2019
71124.07	Miscellaneous	Report No. R-4217157F-008	Plant Farley 2018 Annual Meteorological Report	04/01/2019
71124.07	Procedures	FNP ODCM	Farley Nuclear Plant Offsite Dose Calculation Manual	Version 26.0
71124.07	Procedures	FNP-0-ENV-17.0	Meteorological Tower	Version 37

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71124.07	Procedures	FNP-0-ENV-793.0	River Water Sampling	Version 6
71124.07	Procedures	FNP-0-EVN-791.0	Air Particulates and Iodine Sampling	Version 10.0
71124.07	Procedures	NMP-EN-002	Radiological Groundwater Protection Program	Version 7.0
71124.07	Procedures	NMP-EN-002-GL01	Farley Nuclear Plant Groundwater Monitoring Plan for Radionuclides	Version 1.0
71124.07	Self-Assessments		Pre-NRC RP Public Rad Safety Baseline Inspection Readiness	03/20/2019
71124.08	Procedures	FNP-0-M-30	Process Control Program	Ver. 17.0
71124.08	Procedures	FNP-0-RCP-845	Operation of the Solidification and Dewatering Facility (SDF)	Ver. 20.0
71124.08	Procedures	NMP-HP-401	Receipt of Radioactive Materials	Ver. 3.8
71124.08	Procedures	NMP-HP-405	Shipment of Radioactive Waste and Radioactive Material	Ver. 3.6
71124.08	Procedures	NMP-HP-406	Performing Surveys for Shipments of Radioactive Containers	Ver. 2.2
71124.08	Procedures	NMP-HP-408	Solid Radioactive Waste Scaling Factor Determination and Implementation and Waste Characterization	Ver. 2.0