



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PENNSYLVANIA 19406-2713**

May 14, 2018

Mr. Bryan C. Hanson
Senior Vice President, Exelon Generation Company, LLC
President and Chief Nuclear Officer, Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT – INTEGRATED
INSPECTION REPORT 05000333/2018001

Dear Mr. Hanson:

On March 31, 2018, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at the James A. FitzPatrick Nuclear Power Plant (FitzPatrick). On May 2, 2018, the NRC inspectors discussed the results of this inspection with Mr. Joseph Pacher, Site Vice President, and other members of your staff. The results of this inspection are documented in the enclosed report.

The NRC inspectors did not identify any finding or violation of more than minor significance.

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 the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR), Part 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Anthony Dimitriadis, Chief
Reactor Projects Branch 5
Division of Reactor Projects

Docket Number: 50-333
License Number: DPR-59

Enclosure:
Inspection Report 05000333/2018001

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SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT – INTEGRATED
INSPECTION REPORT 05000333/2018001 dated May 14, 2018

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

Docket Number: 50-333

License Number: DPR-59

Report Number: 05000333/2018001

Enterprise Identifier: I-2018-001-0048

Licensee: Exelon Generation Company, LLC

Facility: James A. FitzPatrick Nuclear Power Plant

Location: Scriba, NY

Inspection Dates: January 1, 2018 to March 31, 2018

Inspectors: K. Kolaczyk, Senior Resident Inspector
G. Stock, Resident Inspector
J. Ambrosini, Senior Emergency Preparedness Inspector
T. Dunn, Operations Engineer
J. Kulp, Senior Reactor Inspector
R. Rolph, Health Physicist
C. Safouri, Project Engineer
A. Turilin, Resident Inspector

Approved By: A. Dimitriadis, Chief
Reactor Projects Branch 5
Division of Reactor Projects

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring Exelon's performance at FitzPatrick by conducting the baseline inspections described in this report 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.

No findings or more-than-minor violations were identified.

PLANT STATUS

FitzPatrick began the inspection period at rated thermal power. On February 25, 2018, operators reduced power to 54 percent to perform scram time testing and turbine and main steam isolation valve stroke time testing. Operators returned FitzPatrick to rated thermal power March 1, 2018, and the plant remained at or near rated thermal power for the remainder of the inspection 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 Exelon's performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

REACTOR SAFETY

71111.01 - Adverse Weather Protection

Impending Severe Weather (1 Sample)

The inspectors evaluated readiness for impending extreme weather conditions prior to the unseasonably cold weather during the week of January 1, 2018.

71111.04 - Equipment Alignment

Partial Walkdown (5 Samples)

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

- (1) Containment air dilution system following completion of maintenance activities conducted the week of January 15, 2018
- (2) High pressure coolant injection (HPCI) system on January 18, 2018
- (3) Drywell outage cooling system on January 26, 2018
- (4) 'A' control room emergency ventilation system with 'B' train inoperable for relay maintenance on March 3, 2018
- (5) 'B' spent fuel pool cooling system while the 'A' system was out of service for unplanned maintenance on March 22, 2018

Complete Walkdown (1 Sample)

The inspectors evaluated system configurations during a complete walkdown of the drywell vent and purge and containment pressurization system on March 16, 2018.

71111.05A/Q - Fire Protection Annual/Quarterly

Quarterly Inspection (6 Samples)

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

- (1) North cable tunnel fire zone CT-4 on January 3, 2018
- (2) South cable tunnel fire zone CT-3 on January 3, 2018
- (3) Relay room fire zone RR-1 on January 3, 2018
- (4) East pipe tunnel fire zone RW-1 on January 18, 2018
- (5) Battery room 'A' fire zone BR-1 on February 21, 2018
- (6) Interim waste storage facility, fire area yard on March 28, 2018

71111.06 - Flood Protection Measures (1 Sample)

Internal Flooding

The inspectors evaluated internal flooding mitigation protections on floor plug 4, which was removed for west crescent cooler maintenance, on March 9, 2018.

71111.11 - Licensed Operator Requalification Program and Licensed Operator Performance

Operator Requalification (1 Sample)

The inspectors observed and evaluated a simulator scenario including swapping of service water pumps, a loss of the T-13 transformer, a steam leak inside the drywell requiring reactor pressure vessel blowdown, and the loss of all reactor pressure vessel level instrumentation on January 25, 2018.

Operator Performance (1 Sample)

The inspectors observed 'B' turbine driven feed pump taken to manual to perform operational decision making issue actions for motor gear unit sticking, and the performance of ST-5BB system 'B' channel function test on March 13, 2018.

71111.12 - Maintenance Effectiveness

Routine Maintenance Effectiveness (2 Samples)

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

- (1) Structural monitoring program walkdown of the torus room on March 1, 2018

- (2) Structural monitoring program walkdown of reactor building refuel floor exterior on March 13, 2018

71111.13 - Maintenance Risk Assessments and Emergent Work Control (5 Samples)

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

- (1) 'C' battery room ventilation fan maintenance on January 26, 2018
- (2) HPCI planned maintenance on February 13, 2018
- (3) 'B' station air compressor planned maintenance on February 13, 2018
- (4) 'A' and 'C' diesel generators planned maintenance the week of February 19, 2018
- (5) Hardened containment vent tie-in to normal ventilation on February 27, 2018

71111.15 - Operability Determinations and Functionality Assessments (9 Samples)

The inspectors evaluated the following operability determinations and functionality assessments:

- (1) HPCI system with steam trap T-3 allowing steam downstream on January 18, 2018
- (2) Standby gas treatment 'A' after excessive runtime without a charcoal sample on January 31, 2018
- (3) HPCI foam actuation valve 76-SOV-132 failure to close on February 8, 2018
- (4) Bypass valve operability following intermittent partial open indication on February 12, 2018
- (5) 70MOD-108A control room vent exhaust fan 4A outlet isolation damper not closed on February 15, 2018
- (6) Alternate shutdown panel isolation switches due to Part 21 notification NRC-21-2016-00 on February 23, 2018
- (7) Past operability for the safety pump room with the fire dampers covered with herculite on February 27, 2018
- (8) HPCI secured during surveillance test due to high flow on March 9, 2018
- (9) 70MOD-110A indicated dual with control room vent placed in purge on March 29, 2018

71111.17T - Evaluations of Changes, Tests, and Experiments (29 Samples)

The inspectors evaluated the following from March 26, 2018 to March 29, 2018:

10 CFR 50.59 Evaluations

- (1) JAF-SE-17-01, Main Turbine Steam Valve Testing Periodicity Change, Revision 0
- (2) JAF-SE-17-02, Removal of Existing Intake Structure Bar-Racks, Revision 0

10 CFR 50.59 Screening/Applicability Determinations

- (1) 2452, PRCR: AOP-77, Revision 5
- (2) 9000051059, Replace Obsolete 06FM-100 Flow Monitor, Revision 0
- (3) 9000052728, Fukushima-Spent Fuel Pool Level Instrumentation, Revision 0
- (4) 9000063007, Install Temporary Pump to Maintain Fire Protection Fire Header Pressure, Revision 1

- (5) 9000067365, 10MOV-89A/B Replacement, Revision 0
- (6) 9000068099, Modify DHR Fan Control Circuits For Reverse Operation, Revision 0
- (7) 9000068175, 92MOD-150A(OP) Replacement with New Model Operator, Revision 0
- (8) 9000069558, Enlarge Alignment Slot on Fuel Support Casting for Location 38-39, Revision 1
- (9) AR04078735, Revision 37 of OP-55B, Revision 0
- (10) DRN 16-00288, Revision 36 of OP-55B, Revision 0
- (11) DRN-00156, OP-65B, Shutdown Operation, Revision 0
- (12) EC 50942, Install Fuses in Remote DC Ammeter Circuits from 71BCB-2A, Revision 0
- (13) EC 57625, Changes to the JAF Facility to Support the NYPSA 345kV Capacitor Bank Additions, Revision 0
- (14) EC 61046, Disconnect Power and Communication to Smoke Detection Zones 47, 48, 49, 50, and 51 and Retire in Place, Revision 0
- (15) EC 61755, Lift Lead for TCV-121B to Ensure Valve Remains in the Fail-Safe Position (Open), Revision 0
- (16) EC 620605, Hardened Containment Vent System Phase 2, Revision 0
- (17) EC 66088, Provide Isolation Between Secondary Containment and Residual Heat Removal Service Water for Work on 10MOV-89B, Revision 0
- (18) EC 66125, Evaluate Increasing the Reactor Protection System Motor-Generator Set Overvoltage Relay Setpoint, Revision 0
- (19) EC 9000067410, Replace 3-stage Safety Relief Valves with 2-stage Valves 2RV-71E and 2RV-71F, Revision 0
- (20) EC 9000067794, Replacement of 92TIC-101B, Revision 0
- (21) EC 9000069344, 12MOV-15 and 12MOV-18 Throttle Capability, Revision 0
- (22) JAF-SCN-18-008, 125 Vdc Station Battery and Charger Surveillance Test, Revision 0
- (23) JAF-SCN-18-021, IMP-93.1, Emergency Diesel Generator Pressure Switch Calibration, Revision 0
- (24) JAF-SCN-18-026, Cut and Cap Body Drain Lines, Revision 0
- (25) JAF-SCR-18-017, AOP-56, Intake Water Level Trouble Procedure Revision, Revision 0
- (26) OP-22, Diesel Generator Emergency Power, Revision 62, Revision 0
- (27) TRM 17-003, Technical Requirements Manual, Appendix I, Surveillance Requirement 3.3.1.1.8 Frequency Change, Revision 0

71111.19 - Post Maintenance Testing (7 Samples)

The inspectors evaluated post maintenance testing for the following maintenance/repair activities:

- (1) 76-P4 run preventive maintenance on February 12, 2018
- (2) HPCI system turbine steam supply drain trap replacement on February 13, 2018
- (3) Installation of Fukushima nitrogen supply line 27AOV-117 on February 28, 2018
- (4) 'B' turbine driven feed pump motor gear unit replacement and testing on February 28, 2018
- (5) 'B' control room emergency ventilation system relay maintenance on March 13, 2018
- (6) 'A' residual heat removal maintenance window on March 22, 2018
- (7) 'A' emergency diesel generator circulating oil pump coupling replacement and realignment on March 28, 2018

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

Routine (3 Samples)

- (1) ST-9BA, Emergency Diesel Generator 'A' and 'C' Full Load Test and Emergency Service Water Pump Operability Test, on January 29, 2017
- (2) MST-071.16, Instrument Battery Quarterly Surveillance Test, on February 8, 2018
- (3) ST-9R, Emergency Diesel Generator 'A' and 'C' System Quick-Start Operability Test and Offsite Circuit Verification, on February 5, 2018

Inservice (2 Samples)

- (1) ST-2AL , 'A' Residual Heat Removal Quarterly Operability Test (IST), on January 2, 2018
- (2) ST-25BB, Containment Atmosphere Dilution System 'B' Quarterly Operability Test (IST), on January 19, 2018

71114.06 - Drill EvaluationDrill/Training Evolution (1 Sample)

The inspectors evaluated a simulator scenario including swapping of service water pumps, a loss of the T-13 transformer, a steam leak inside the drywell requiring reactor pressure vessel blowdown, an alert declaration, and the loss of all reactor pressure vessel level instrumentation which led to a site area emergency declaration, on January 25, 2018.

RADIATION SAFETY71124.01 - Radiological Hazard Assessment and Exposure ControlsRadiological Hazard Assessment (1 Sample)

The inspectors reviewed recent plant radiation surveys and for radiological hazards to onsite workers or members of the public. The inspectors evaluated assessments and controls for new radiological hazards.

Instructions to Workers (1 Sample)

The inspectors evaluated instructions provided to workers.

Contamination and Radioactive Material Control (1 Sample)

The inspectors observed the monitoring of potentially contaminated material leaving the radiological control area and evaluated contamination and radioactive material controls. The inspectors selected several sealed sources from inventory records and assessed whether the sources were accounted for and were tested for loose surface contamination.

Radiological Hazards Control and Work Coverage (1 Sample)

The inspectors evaluated in-plant radiological conditions and performed independent radiation measurements during facility walk-downs and observation of radiological work activities. The inspectors assessed whether posted surveys, radiation work permits, worker radiological briefings, and the use of continuous air monitoring and dosimetry monitoring were consistent with the present conditions.

High Radiation Area and Very High Radiation Area Controls (1 Sample)

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

Radiation Worker Performance and Radiation Protection Technician Proficiency (1 Sample)

The inspectors evaluated radiation worker and radiation protection technician radiological performance.

71124.02 - Occupational As Low As Reasonably Achievable (ALARA) Planning and Controls

Verification of Dose Estimates and Exposure Tracking Systems (1 Sample)

The inspectors evaluated dose estimates and exposure tracking.

Radiation Worker Performance (1 Sample)

The inspectors evaluated radiation worker and radiation protection technician performance.

71124.03 - In-Plant Airborne Radioactivity Control and Mitigation

Self-Contained Breathing Apparatus for Emergency Use (1 Sample)

The inspectors evaluated Exelon's self-contained breathing apparatus (SCBA) program at FitzPatrick to include surveillance records for three SCBAs staged in-plant for use during emergencies, procedures, maintenance and test records, the refilling and transporting of SCBA air bottles, SCBA mask size availability, and the qualifications of personnel performing service and repair of this equipment.

71124.04 - Occupational Dose Assessment

Source Term Characterization (1 Sample)

The inspectors evaluated Exelon's source term characterization.

Special Dosimetric Situations (1 Sample)

The inspectors evaluated Exelon's performance for special dosimetric situations.

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification (2 Samples)

The inspectors verified licensee performance indicators submittals listed below for the period from January 1, 2017 through December 31, 2017:

- (1) MS05, Safety System Functional Failures
- (2) IE03, Unplanned Power Changes

71152 - Problem Identification and Resolution

Annual Follow-up of Selected Issues (1 Sample)

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

- (1) Reactor Scram Due to Frazil Ice Build-up and Subsequent Lowering Intake Level

INSPECTION RESULTS

Observations	71152 Annual Follow-up of Selected Issues
<u>Reactor Scram Due to Frazil Ice Build-up and Subsequent Lowering Intake Level</u>	
<p>On January 23, 2016, during power ascension following a downpower for hydraulic control unit maintenance, the station experienced a reduction in intake level. Operators initially attempted to perform a rapid downpower with the intent of securing two circulating water pumps. After securing the first circulating water pump, intake level momentarily began to rise and then continued to lower. When intake level decreased to the procedurally required minimal intake level, operators inserted a manual scram. Exelon determined the cause of the scram was frazil ice build-up on the bar racks at the intake structure, which is an infrequent occurrence, but is expected during winter months during specific meteorological conditions. FitzPatrick has experienced frazil ice build-up previously in 1996, 2004, 2008, and 2010. However, only in 1996 did the event result in a unit scram, which resulted in a number of corrective actions, including new procedures to combat intake level issues. Since the 2004 - 2010 events did not result in a reactor scram, the evaluations for the events were not as in depth or as scrutinizing as the 1996 event. Exelon recognized that these prior events were missed opportunities to not just mitigate the build-up of frazil ice but evaluate and eliminate the potential. Another factor that potentially affected how rapidly the January 2016 progressed, was the re-tubing of the FitzPatrick main condensers in 2015, which increased the flow rate through the intake, which can expedite frazil ice formation in the intake system. Exelon noted this item in the root cause investigation that was completed following the 2016 scram, and implemented several corrective actions to address this issue.</p> <p>The inspectors reviewed the 2016 Exelon root cause analysis documented under IR 03992624. Exelon concluded the event was caused by frazil ice buildup. Contributing causes were that the procedures for mitigating the impact of frazil ice formation were ineffective, and that station leadership accepted mitigating actions vice elimination for issues that potentially jeopardized safe plant operation. Previous analysis has discovered under certain circumstances that the bar rack heaters were incapable of preventing frazil ice. Given the root</p>	

cause and the contributing causes, Exelon pursued corrective actions to eliminate the possibility of frazil ice build-up which included removing two of the eight bar racks on the intake structure as corrective actions. The removal of the two bar racks will allow for sufficient intake flow should the remaining racks be impeded by frazil ice.

The inspectors noted this winter FitzPatrick had no indications of frazil ice build-up or intake level issues which would appear to demonstrate that the removal of the bar racks has improved FitzPatrick's ability to mitigate frazil ice buildup. Further corrective actions include installing an intake level rate of change alarm, revising procedures to increase lake level monitoring during high frazil ice likelihood conditions, and to communicate with Nine Mile Point Unit 1 and 2 and take action if either plant experiences indications of intake icing. The inspectors concluded that Exelon's response and corrective actions for this event were commensurate with the safety significance, were timely, and included appropriate compensatory measures.

EXIT MEETINGS AND DEBRIEFS

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

- On May 2, 2018, the inspectors presented the quarterly resident inspection results to Mr. Joseph Pacher, Site Vice President, and other members of the Exelon staff.

DOCUMENTS REVIEWED**71111.01**

Issue Report
04087668

71111.04Procedures

CAD System B Quarterly Operability Test (IST) ST-25BB, Revision 4
DBD-070, Control Room and Relay Room Ventilation and Cooling Systems, Revision 4
FB-35E, Flow Diagram Control Room Area Service and Chilled Water System 70, Revision 38
FB-45A, Flow Diagram Control and Relay Rooms Heating and Ventilation System 70,
Revision 42
FM-19B Flow Diagram Fuel Pool Cleanup and Cooling System, Revision 45
OP-13F, RHR- Fuel Pool Cooling Assist, Revision 11
OP-30 Fuel Pool Cooling and Cleanup System, Revision 43

Issue Report
04088760

Drawings

FM-15A, Flow Diagram Reactor Bldg Cooling Water System 15, Revision 65
FM-132A, Temporary Drywell Cooling System 68, Revision 5MSK-1652, Drywell Temporary
Cooling System 68, Revision 4
FM-18A, Flow Diagram, Drywell Inerting C.A.D. and Purge System, Revision 57
FM-18B, Flow Diagram, Drywell Inerting C.A.D. Purge and Containment DP System 27,
Revision 44
FM-25A, Flow Diagram High Pressure Coolant Injection System 23, Revision 75
FM-48A, Flow Diagram Standby Gas Treatment System 01-125, Revision 32

71111.05Procedures

JAF Fire Hazards Analysis JAF-RPT-04-00478, Revision 3
PFP-OUT25, Interim Waste Storage Facility Fire Area/Yard, Revision 0
PFP-PWR04 Battery Room Complex, EL 272', Fire Area/Zone BR-1, Br-2, BR-3, BR-4,
Revision 2
PFP-PWR37, East Pipe Tunnel Elevation 258' Fire Area/Zone XIX/RW-1, Revision 002

71111.06Procedures

AP-16.14, Hazard Barrier Controls, Revision 7
CC-AA-201, Plant Barrier Control Program, Revision 12

71111.12Procedures

ST-5BB, APRM System 'B' Channel Functional Test, Revision 2

OP-AA-103-102, Watch-Standing Practices, Revision 18
OP-AA-108-112, Plant Status and Configuration, Revision 10

Issue Report

04114489

Miscellaneous

JAF-1-2017-0609, Revision 1

71111.12

Procedures

ER-AA-450, Structures Monitoring, Revision 6
JAF-RPT-07-00006, Maintenance Rule Structural Monitoring Report, Revision 6

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04114448

71111.13

Procedures

AP-10.10, On-Line Risk Assessment, Revision 9
EN-WM-104, On-Line Risk Assessment, Revision 12
OP-AA-108-117, Protected Equipment Program, Revision 4

71111.15

Procedures

FB-45A, Control and Relay Rooms Heating and Ventilation System 70, Revision 42
OP-AA-108-115, Operability Determinations, Revision 20
RP-RESP-03.02, SGTS, CREVAS, and TSCVASS Testing, Revision 19
ST-4N, HPCI Quick-Start, Inservice, and Transient Monitoring Test (IST), Revision 66
ST-40D, Daily Surveillance and Channel Check, Revision 112

Issue Reports

03992613	04071131	04081869	04088480
04088760	04096823	04097327	04103156
04103690	04112832		

Work Order

4712278

Drawings

Control and Relay Rooms Heating and Ventilation System Flow Diagram 70, Revision 42
FM-25A, Flow Diagram High Pressure Injection System 23, Revision 75

71111.19

Procedures

HU-AA-104-101, Procedure Use and Adherence, Revision 5
ST-2AN, RHR Loop A Monthly Operability Test, Revision 16

ST-18, Main Control Room Emergency Fan and Damper Operability Test, Revision 33
 ST-76AD, East Diesel Fire Pump 76-P4 Performance Test, Revision 10
 WC-AA-111, Surveillance Program Requirements, Revision 5

Issue Reports

04097327	04098786	04103334	04107062
04114905	04119383		

Work Orders

4691285	4731093	82691241	04765320
04666902-32			

Miscellaneous

Engineering Change 50781

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Procedures

MST-071.16, 24V Instrument Battery Quarterly Surveillance Test, Revision 14
 ST-2AL, RHR Loop A Quarterly Operability Test (IST), Revision 37
 ST-9BA, EDG 'A' and 'C' Full Load Test and ESW Pump Operability Test, Revision 16
 ST-9R, EDG System Quick-Start Operability Test and Offsite Circuit Verification, Revision 9

Work Orders

04710258
 04733734

71124.01

Procedures

EN-RP-105, Radiological Work Permits, Revision 16
 EN-RP-106, Radiological Survey Documentation, Revision 7
 EN-RP-106-01, Radiological Survey Guidelines, Revision 3
 EN-RP-108, Radiation Protection Posting, Revision 18
 EN-RP-121, Radioactive Material Control, Revision 13
 RP-AA-18, Radiological Posting and Labeling Program Description, Revision 1
 RP-AA-300, Radiological Survey Program, Revision 15
 RP-AA-376, Radiological Posting, Labeling, and Markings, Revision 9
 RP-AA-460, Controls for High and Locked High Radiation Areas, Revision 30
 RP-AA-460-002, Additional High Radiation Exposure Control, Revision 3
 RP-AA-460-003, Access to HRAS/LHRAS and Contaminated Areas in Response to a Potential
 or Actual Emergency, Revision 9
 RP-AA-504, Unconditional Release Survey Method, Revision 14
 RP-AA-503-F-01, Unconditional Release Instructions Using the Small Articles Monitor for
 Personal Items Used in the Radiologically Controlled Area and in a Contaminated Area,
 Revision 4

Issue Reports

04102384	04096595	04080866	04066877
04063769	04053351		

Miscellaneous

Source leak tests on April 10, 2017 and October 5, 2017 for the following sources:
S008, S009, S014, S021, S126, S146, S388, S390, S391, S392, S395, S396, S576, S934,
S935, S1018, S1029

71124.02Procedures

EN-RP-110, ALARA Program, Revision 14
EN-RP-110-01, ALARA Initiative Deferrals, Revision 1
EN-RP-110-03, Collective Radiation Exposure Reduction Guidelines, Revision 4
EN-RP-110-04, Radiation Protection Risk Assessment Process, Revision 7
EN-RP-110-05, ALARA Planning and Controls, Revision 3
RP-AA-400-1001, Establishing Collective Radiation Exposure Annual Business Plan Goals,
Revision 4
RP-AA-400-1004, Emergent Dose Control and Authorization, Revision 9
RP-AA-401, Operational ALARA Planning and Controls, Revision 22
RP-AA-441, Total Effective Dose Equivalent (EDE) ALARA Evaluation, Revision 8

Issue Reports

04053610
04060956
04071477

71124.03Procedures

EN-RP-131, Air Sampling, Revision 15
EN-RP-503, Selection, Issue and Use of Respiratory Protection Equipment, Revision 7
RP-AA-301, Radiological Air Sampling Program, Revision 10
RP-AA-302, Determination of Alpha Levels and Monitoring, Revision 8
RP-AA-825, Maintenance, Care and Inspection of Respiratory Protective Equipment, Revision 8
RP-RESP-08.02, Air Compressor, Bauer Unicus III, Revision 6

Issue Reports

04061257
04089450

Miscellaneous

LO Number A/R 04001198, Airborne Radioactivity Program, Respiratory Program, Personnel
Monitoring Program and Bioassay Program, October 16, 2017

71124.04Procedures

RP-AA-203-1001, Personnel Exposure Investigations, Revision 10
RP-AA-210, Dosimetry Issue, Usage, and Control, Revision 28
RP-AA-215, Calculating and Crediting Dose from Noble Gas Exposure, Revision 1
RP-AA-222, Methods for Estimating Internal Exposure from in VIVO Bioassay Data, Revision 5
RP-AA-250, External Dose Assessment from Contamination, Revision 7
RP-AA-270, Prenatal Radiation Exposure, Revision 8

Miscellaneous

NUPIC Audit No. 24229/Duke Audit No. VA16087, GEL Laboratories, October 17-21, 2016

71151

Procedure

EN-LI-114, Performance Indicator Process, Revision 7

71152

Procedures

OP-4, Circulating Water System, Revision 81

AOP-56, Intake Water Level Trouble, Revision 15

Issue Reports

03992624

04087426

Miscellaneous

EC 621217 – Removal of Existing Intake Structure Bar-Racks, Revision 21

Root Cause Report – CR-JAF-2016-00243, SCRAM Due to Lowering Screenwell Water Level