UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 EAST LAMAR BOULEVARD
ARLINGTON, TEXAS 76011-4511

February 5, 2019

Mr. John Dinelli
Site Vice President
Entergy Operations, Inc.
17265 River Road
Killona, LA 70057-0751

SUBJECT: WATERFORD STEAM ELECTRIC STATION, UNIT 3 – NRC INTEGRATED INSPECTION REPORT 05000382/2018004

Dear Mr. Dinelli:

On December 31, 2018, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Waterford Steam Electric Station, Unit 3. On January 15, 2019, 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.

NRC inspectors documented one finding of very low safety significance (Green) in this report. This finding involved a violation of NRC requirements. The NRC is treating this violation as non-cited violation (NCV) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest the violation or significance of the NCV, 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 IV; the Director, Office of Enforcement; and the NRC resident inspector at the Waterford Steam Electric Station, Unit 3.

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 IV; and the NRC resident inspector at the Waterford Steam Electric Station, Unit 3.

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/

Neil O'Keefe, Chief
Project Branch D
Division of Reactor Projects

Docket No. 50-382
License No. NPF-38

Enclosure:
Inspection Report 05000382/2018004
w/Attachment:
Documents Reviewed

U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Number:	05000382
License Number:	NPF-38
Report Number:	05000382/2018004
Enterprise Identifier:	I-2018-004-002
Licensee:	Entergy Operations, Inc.
Facility:	Waterford Steam Electric Station, Unit 3
Location:	Killona, Louisiana
Inspection Dates:	October 1, 2018 to December 31, 2018
Inspectors:	F. Ramírez, Senior Resident Inspector C. Speer, Resident Inspector L. Newman, Resident Inspector J. Dixon, Senior Project Engineer
Approved By:	Neil O'Keefe Chief, Project Branch D 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 Waterford Steam Electric Station, Unit 3 in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to https://www.nrc.gov/reactors/operating/oversight.html for more information. A NRC-identified is summarized in the table below.

List of Findings and Violations

Failure to Control and Document Traceability for Quality Lubricating Oil for Safety-Related Components			
Cornerstone	Significance	Cross-cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000382/2018004-01 Closed	H.1—Resources	71111.12—Maintenance Effectiveness
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion II, "Quality Assurance Program," for the licensee's failure to ensure that identification of quality items be maintained throughout fabrication, erection, installation, and use so that the item can be traced to its documentation. Specifically, UNT-005-007, "Plant Lubrication Program", which controls the identification of lubricants and hydraulic fluids for plant components, did not contain instructions for controlling and documenting the labelling, addition and storage of lubricating oil for safety-related components.			

PLANT STATUS

The plant operated at or near rated thermal power for the entire 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." [Include for integrated report: 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

71111.04—Equipment Alignment

Partial Walkdown (4 Samples)

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

(1) Auxiliary component cooling water train B while train A is out of service for heat exchanger performance test on November 1, 2018

(2) Emergency feedwater train B following maintenance on November 20, 2018

(3) Control room heating and ventilation train A following maintenance on December 2, 2018

(4) Emergency feedwater pump AB following realignment on December 22, 2018

71111.05AQ—Fire Protection Annual/Quarterly

Quarterly Inspection (4 Samples)

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

(1) Fire area RAB 8B, switchgear room B on October 20, 2018

(2) Fire Area RAB 2-001, heating ventilation and air conditioning mechanical room on October 31, 2018

(3) Fire area RAB 3, heating ventilation and air conditioning equipment room on November 26, 2018

(4) Fire area RAB 8C, switchgear room AB on November 26, 2018

71111.06—Flood Protection Measures

Internal Flooding (1 Sample)

The inspectors evaluated internal flooding mitigation protection features in internal flooding zone 5, -35 hallways and open rooms on November 15, 2018.

71111.11—Licensed Operator Requalification Program and Licensed Operator Performance

Operator Requalification (1 Sample)

The inspectors observed and evaluated simulator training scenario on shutting down the plant for a refueling outage on November 20, 2018.

Operator Performance (1 Sample)

The inspectors observed and evaluated control room operator response to the failure of wet cooling tower fans 5-8 during an elevated risk condition on October 11, 2018.

The inspectors observed and evaluated a high (yellow) risk evolution of swapping safety-related AB bus from train A to train B power on October 19, 2018.

The inspectors observed and evaluated observation of control room operator performance during turbine valve testing on December 7, 2018.

71111.12—Maintenance Effectiveness

Quality Control (1 Sample)

The inspectors evaluated maintenance and quality control activities associated with the following equipment performance issues:

(1) Traceability of lubricating oil in safety-related components on October 25

71111.13—Maintenance Risk Assessments and Emergent Work Control (4 Samples)

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

(1) Emergent work and risk assessment for unplanned cycling of wet cooling tower fans on October 11, 2018

(2) Planned yellow risk due to work on auxiliary component cooling water train B on November 13, 2018

(3) Risk assessment for planned work window on equipment in the transformer yard on December 17, 2018

(4) Emergent work and risk assessment for failed stroke time testing of normal outside air

intake upstream isolation valve on December 20, 2018

71111.15—Operability Determinations and Functionality Assessments (4 Samples)

The inspectors evaluated the following operability determinations and functionality assessments:

(1) Operability of low pressure safety injection system following leak rate failure of the auto vent system valve on October 24, 2018

(2) Operability of dry cooling tower fans trains A and B after fan 14B's drain plug was found damaged on November 19, 2018

(3) Operability of main steam isolation valve 1 with low nitrogen accumulator pressure on December 11, 2018

(4) Operability of the high pressure injection system due to potential single failure of a safety-related electrical bus on December 18, 2018

71111.19—Post Maintenance Testing (2 Samples)

The inspectors evaluated the following post-maintenance tests:

(1) Steam generator 1 main steam atmospheric dump valve following replacement of volume boosters on October 9, 2018

(2) Emergency diesel generator B following replacement of low pressure safety injection pump sequencer relay on October 22, 2018

71111.22—Surveillance Testing

The inspectors evaluated the following surveillance tests:

Routine (3 Samples)

(1) Auxiliary component cooling water pump A operability run on October 4, 2018
(2) Component cooling water make up pump B operability run on October 15, 2018
(3) Emergency feedwater pump B operability run on December 19, 2018

Containment Isolation Valve (1 Sample)

(1) Atmospheric dump valve A and B stroke test on October 19, 2018

OTHER ACTIVITIES – BASELINE

71151—Performance Indicator Verification (2 Samples)

The inspectors verified licensee performance indicators submittals listed below:

(1) BI01: Reactor Coolant System (RCS) Specific Activity Sample (10/01/2017–09/30/2018)

(2) BI02: RCS Leak Rate Sample (10/01/2017–09/30/2018)

71152—Problem Identification and Resolution

Semiannual Trend Review (1 Sample)

The inspectors reviewed the licensee's corrective action program for trends in operability determinations that might be indicative of a more significant safety issue. The inspectors made an observation related to technical specification surveillances and operability determinations that is documented in the Inspection Results section below.

Annual Follow-up of Selected Issues (1 Sample)

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

(1) Emergency feedwater pump AB turbine lubrication oil filtration system on December 31, 2018

The inspectors made an observation related to the filtration of lubrication oil for safety-related components that is documented in the Inspection Results section below.

INSPECTION RESULTS

Failure to Control and Document Traceability for Quality Lubricating Oil for Safety-Related Components			
Cornerstone	Significance	Cross-cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000382/2018004-01 Closed	H.1—Resources	71111.12—Maintenance Effectiveness
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion II, "Quality Assurance Program," for the licensee's failure to ensure that identification of quality items be maintained throughout fabrication, erection, installation, and use so that the item can be traced to its documentation. Specifically, procedure UNT-005-007, "Plant Lubrication Program", which controls the identification of lubricants and hydraulic fluids for plant components, did not contain instructions for controlling and documenting the labelling, addition and storage of lubricating oil for safety-related components.			
Description: As part of a maintenance effectiveness quality control inspection, the inspectors reviewed Waterford's processes for adding lubrication oil to safety-related components. At Waterford, lubrication oil is commercially procured and later quality dedicated in accordance with licensee procedure EN-DC-306, "Acceptance of Commercial-Grade Items/Services in Safety-Related Applications," Revision 7. The now-quality oil is then placed in a 55-gallon drum, labeled as quality material and stored in the lubrication oil storage area. When lubrication oil is needed for equipment in the plant, Operations personnel fill small oil containers (about 1 gallon in size) from the 55-gallon drums and then transport it inside the plant where it's added to the plant component. The unused oil remaining in the small oil container is stored in oil storage lockers			

throughout the plant which are used by Operations and Maintenance personnel. Operations personnel would continue to use the oil in that small container until it was depleted and then refill from the 55-gallon drums in the lubrication storage area as necessary without being able to verify the oil was quality oil.

The inspectors noted that no work orders or any other tracking method were used to document the issuing of safety-related oil during this process. The licensee's oil lubrication program didn't require the source information from the 55-gallon drum to be annotated for historical documentation. Information such as batch or lot numbers, part numbers, expiration dates, age, purchase order information, trace number or other information that would help trace the oil to its source was not recorded as it was added to a particular component, thereby losing the ability to trace the oil added to a particular safety-related component.

Procedure UNT-005-007 directs the person adding oil to record all component lubricant consumption on the component's Plant Lube Manual (PLM) Lube Info Sheet. It also directs the performer to document the amount of oil added on attachment 7.2. The procedure only allows Operations personnel to add oil during off normal hours when a low level could cause equipment damage. However, the inspectors identified that the oil added to safety-related components is not documented per attachment 7.2, and is mostly added to plant equipment by Operations personnel. Instead, Operations personnel generated condition reports to document the addition of oil to equipment. The inspectors noted that the information contained in the condition reports mainly included the oil type and the quantity that was added to the safety-related component. However, the information did not have sufficient detail to document and trace the source of the oil or demonstrate that quality oil was added. Further, interviews with plant staff indicated Operations personnel routinely replenished oil containers in the Operations oil lockers, creating the potential for mixed oil (quality and non-quality or two different types of oil). In addition, the lockers were storing small containers with both quality and non-quality oil. This failure to segregate the oil types could have caused the inadvertent addition of non-quality oil to safety-related components.

The Licensee Quality Assurance Program Manual, Revision 34, states that identification of each item is maintained throughout fabrication, erection, installation, and use so that the item can be traced to its documentation. The Quality Assurance Program Manual further states that traceability is maintained to an extent consistent with the item's importance to safety. The licensee's program to control the addition of lubrication oil to safety-related plant components, which was written to satisfy the Quality Assurance Program Manual requirements, was governed by licensee Procedure UNT-005-007, "Plant Lubrication Program," Revision 304.

The inspectors concluded that, as a result of the programmatic deficiencies described above, the licensee did not control and document the oil additions from dedication until plant use to confirm they added the correct oil to safety-related components, could not determine the age of the oil added to ensure shelf-life requirements were met, and could not consistently trend oil types and amounts added to safety-related components. Additionally, because containers with unused quality oil were not segregated from non-quality oil in the lockers, they were at risk of inadvertently adding non-quality oil to safety-related components. As a result they did not meet the requirements of the Quality Assurance Program Manual.

There were no cases identified by the inspectors where the incorrect oil had been added to a safety-related component.

Corrective Actions: The licensee entered this issue in to corrective action program and implemented fleet procedure EN-DC-303, "Lubrication Program." Future corrective actions include ensuring that the control and documentation traceability requirements are addressed in the new fleet procedure.

Corrective Action References: Condition Reports CR-HQN-2018-02301, CR-WF3-2018-05303, and CR-WF3-2018-05885.

Performance Assessment:

Performance Deficiency: The licensee's failure to control and document traceability of quality lubricating oil for safety-related applications as required by the Quality Assurance Program Manual, Revision 34, was a performance deficiency.

Screening: The performance deficiency was more than minor, and therefore a finding, because if left uncorrected, it had the potential to lead to a more significant safety concern. Specifically, the programmatic failure to control and document the transfer of safety related oil from the point of dedication as quality material to oil containers and then into plant equipment leaves the licensee at risk of adding incorrect oil to equipment which could affect the availability and reliability of safety related systems. This performance deficiency is also similar to Example J of Appendix E to Inspection Manual Chapter 0612, because significant programmatic deficiencies were identified with the issue that could lead to errors if uncorrected.

Significance: Using Inspection Manual Chapter 0609, Attachment 4, "Initial Characterization of Findings," and Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," dated June 19, 2012, the inspectors determined that the finding was of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours.

Cross-cutting Aspect: The finding had a cross-cutting aspect in the area of human performance associated with resources because licensee leadership failed to ensure that personnel, equipment, procedures, and other resources were available and adequate to support nuclear safety [H.1]. Specifically, the licensee's plant lubrication program did not provide sufficient detailed instructions to ensure adequate control and traceability of lubricating oil for safety-related components.

Enforcement:

Violation: Title 10 of the Code of Federal Regulations, Part 50, Appendix B, Criterion II, "Quality Assurance Program," requires in part that the applicant shall establish a quality assurance program which complies with the requirements of Appendix B. The licensee established the Entergy Quality Assurance Program Manual, Revision 34, to meet this requirement. The Entergy Quality Assurance Program Manual, Section B.6, requires that identification of each item be maintained throughout fabrication, erection, installation, and use so that the item can be traced to its documentation. Procedure UNT-005-007, "Plant Lubrication Program," Revision

304, intended to meet this requirement for lubricating oil, controls the identification of lubricants and hydraulic fluids for plant safety-related components.

Contrary to the above, prior to November 2018, the licensee failed to ensure the identification of each quality item be maintained through installation and use so that the item can be traced to its documentation. Specifically, for lubricants and hydraulic fluids for plant safety-related components, the licensee (1) failed to control oil by batch or lot from dedication until plant use, (2) failed to adequately and consistently mark containers with source information at the point of issue and (3) failed to record the source information in maintenance records after adding it to safety-related components.

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

Observation Semiannual Trend Review	71152 – Problem Identification and Resolution

The inspectors identified a potential adverse trend involving operability determinations and technical specification surveillances. Technical Specification 4.0.1 requires that "failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the LCO." The inspectors reviewed multiple instances where the licensee identified degraded equipment conditions, but did not consider the impact the conditions would have on the ability to surveillances required by technical specifications in the associated operability determination.

- Condition Reports CR-WF3-2018-00983 – The licensee identified that Technical Specification 4.0.1 was not appropriately applied to several instances of containment area radiation monitors being inoperable. The radiation monitors were required to perform technical specification surveillances associated with containment isolation valves CAP 103 (Containment Purge Inlet Inside Annulus), CAP-104 (Containment Purge Inlet Inside Containment), and CAR-200B (Containment Atmospheric Release Exhaust Header 'B' Pressure Control Inlet). The licensee did not declare the associated equipment inoperable despite the inability to successfully complete the required technical specification surveillance. The licensee reported these conditions to the NRC as LER 2018-001-00. The NRC documented an associated licensee identified violation in Inspection Report 05000382/2018002.

- Condition Reports CR-WF3-2018-02007 – During the extent-of-cause review for CR-WF3-2018-00983, the licensee identified that Technical Specification 4.0.1 was not appropriately applied to several instances of control room outside air intake radiation monitors being inoperable. The radiation monitors were required to perform technical specification surveillances on the control room emergency filtration system, but the licensee did not declare the associated trains of control room emergency filtration system inoperable despite the inability to successfully complete the required technical specification surveillances. The licensee reported these conditions to the NRC as LERs 2018-002-00 and 2018-002-01.

- Condition Reports CR-WF3-2016-06410, CR-WF3-2016-00170, and CR-WF3-2017-04552 – The licensee identified the differential pressure monitoring

points associated with the controlled ventilation area system were degraded. The differential pressure monitoring points were required to perform technical specification surveillances for the system, but their degradation and impact on the licensee's ability to successfully complete the surveillances was not considered during the operability determination. Following inspector questioning, the licensee ultimately determined that the technical specification surveillances could successfully be performed using alternate monitoring points that were available to assess the same parameter but were not previously evaluated or approved for this use. Based on this new evaluation, the licensee concluded that the associated equipment remained operable.

- Condition Report CR-WF3-2018-03124 – The licensee found an emergency feedwater flow loop instrument out of tolerance. The instrument is required to perform technical specification surveillances for the system, but the degradation and impact on the licensee's ability to successfully complete the surveillances was not considered during the operability determination. Following inspector questioning, the licensee performed an engineering evaluation that demonstrated that the technical specification surveillances could successfully be performed with the as-found instrument conditions and so the associated equipment remained operable.

The inspectors raised their concerns with licensee personnel about the apparent trend of not considering the impact of degraded conditions on the ability to perform technical specification surveillances during operability determinations to ensure compliance with Technical Specification 4.0.1. The licensee initiated CR-WF3-2018-05569 to document the concerns and evaluate any additional guidance or training is needed to ensure that Technical Specification 4.0.1 is applied appropriately.

Observation Annual Follow-up of Selected Issues	71152 – Problem Identification and Resolution

The inspectors reviewed the licensee's process to provide quality lubrication oil to the emergency feedwater system AB pump turbine. The inspection focused on the licensee's method for filtering the oil used to lubricate the emergency feedwater AB pump turbine governor. The inspectors noted that the lubrication oil was commercially procured and later quality dedicated in accordance with licensee Procedure EN-DC-306, "Acceptance of Commercial-Grade Items/Services in Safety-Related Applications," Revision 7. The now-quality oil was then placed in the lubrication storage area, labeled as quality, kept separate from the commercial-grade version, and issued as needed to refill the pump's turbine and governor. The inspectors identified several process deficiencies, which are discussed below:

- The inspectors noted that oil filtration to specific particulate size was not listed as a critical characteristic used in the commercial-grade dedication process. The emergency feedwater system Terry Steam Turbine vendor manual, licensee Procedure MM-006-026, "EFW Turbine Maintenance Procedure," Revision 8, and Plant Lube Manual, all specify the need to pre-filter the Terry Turbine oil to less than five microns.

- The inspectors noted that the licensee filters the oil, but does not use a quality-related filtration rig, does not control how often the filter is changed, and does not perform an analysis after filtration to ensure the particulate specification is met.

- The inspectors also noticed that the licensee does not have a consistent quality process to ensure that the oil being added to the pump turbine meets filtration requirements. The requirement to filter to less than five microns is listed in the document sources listed above, however, there is no established procedures or work instructions to govern this activity.

In response to inspector concerns, the licensee collected and analyzed oil samples of the Terry Turbine's oil, and confirmed that the oil currently in the pump's turbine was meeting the particulate specification requirements. In addition, the inspectors did not identify any instances where oil with out-of-specification particulate content had been added to safety-related components. Title 10 CFR 50, Appendix B, Criterion III, "Design Control," requires in part, that applicable regulatory requirements and the design basis, as defined in §50.2 and as specified in the license application, for those structures, systems, and components to which this appendix applies, are correctly translated into specifications, drawings, procedures, and instructions. However, since there was no safety impact to any safety-related systems, the inspectors considered the failure to correctly translate applicable regulatory requirements and the design basis for emergency feedwater system as a minor violation.

This issue was entered into the licensee's corrective action program as CR-WF3-2018-06323.

EXIT MEETINGS AND DEBRIEFS

On January 15, 2019, the inspectors presented the quarterly resident inspector inspection results to Mr. John Dinelli, Site Vice President, and other members of the licensee staff. The inspectors verified no proprietary information was retained or documented in this report.

DOCUMENTS REVIEWED

71111.04 — Equipment Alignment

Condition Reports			
CR-WF3-2018-06495	CR-WF3-2018-06395	CR-WF3-2018-06078	CR-WF3-2018-05008
CR-WF3-2018-04366	CR-WF3-2018-04351	CR-WF3-2018-04333	CR-WF3-2018-04274

Procedures Number	Title	Revision
OP-009-003	Emergency Feedwater	309
OP-003-014	Control Room Heating and Ventilation (HVC)	307
OP-002-001	Auxiliary Component Cooling Water	312

Drawings Number	Title	Revision
G-853 Sheet 22	HVAC Air Flow Diagram Control Room	6
G-853 Sheet 23	HVAC Air Flow Diagram Control Room	26
G-160 Sheet 5	Flow Diagram Component Closed Cooling Water System	22

71111.05 — Fire Protection

Procedures Number	Title	Revision
EN-DC-161	Control of Combustibles	18
FP-001-018	Pre-Fire Strategies, Development and Revision	304

Miscellaneous Documents Number	Title	Revision
RAB 2-001	Waterford – 3 S.E.S Prefire Strategy Elev. +46.00’ RAB (RCA) H&V Mechanical Room	13
RAB 3-001	Waterford – 3 S.E.S Prefire Strategy Elev. +46.00’ RAB HVAC Equipment Room	8
RAB 8C-001	Waterford – 3 S.E.S Prefire Strategy Switchgear Room “A/B”	11
RAB 8B, E, F-001	Waterford – 3 S.E.S Prefire Strategy Switchgear Room “B”	12

Calculations Number	Title	Revision
ECF14-008	WF3 Fire Safety Analysis – Fire Area RAB 2	1
ECF91-010	Combustible Loading Calculation for Fire Area RAB 8	3

71111.06 — Flood Protection Measures

Miscellaneous Documents Number	Title	Revision
MNQ3-5	Flooding Analysis Outside Containment	5
ECM15-004	Waterford 3 FLEX Internal Flooding Calculation	0
PRA-W3-01-002	W3 Internal Flooding Analysis	3
WF3-CS-15-00010	Waterford Steam Electric Station Unit 3 Fukushima Flood Hazard Re-evaluation Report	0

71111.11 — Licensed Operator Requalification Program and Licensed Operator Performance

Procedures Number	Title	Revision
OP-903-007	Turbine Inlet Valve Cycling Test	17

71111.12 — Maintenance Effectiveness

Condition Reports (CR)			
CR-WF3-2018-06323	CR-WF3-2018-05885	CR-HQN-2018-02301	CR-WF3-2018-05303
CR-WF3-2018-01197	CR-WF3-2018-04575	CR-WF3-2018-05580	CR-WF3-2018-06557

Work Orders	
52682377	52783397

Procedures Number	Title	Revision
UNT-005-007	Plant Lubrication Program	304
MM-006-026	EFW Turbine Maintenance Procedure	7
MM-006-026	EFW Turbine Maintenance Procedure	8
EN-MP-115	Material Issues and Returns	7
EN-DC-306	Acceptance of Commercial-Grade Items/Services in	7

Procedures Number	Title	Revision
	Safety-Related Applications	

Vendor Documents Number	Title	Revision
TD-T147.0025	Terry Steam Turbine Instruction Manual	2

71111.13 — Maintenance Risk and Emergent Work

Condition Reports			
CR-WF3-2018-07285	CR-WF3-2018-07325	CR-WF3-2018-07326	

Procedures Number	Title	Revision
EN-WM-104	On Line Risk Assessment	18
OI-037-000	Operations Risk Assessment Guideline	313

Miscellaneous Documents Number	Title	Date
	Protected Equipment List for ACC Train B	11/13/2018

71111.15 — Operability Determination and Functionality Assessments

Condition Reports			
CR-WF3-2018-06982	CR-WF3-2018-5973	CR-WF3-2018-5995	CR-WF3-2018-7253
CR-WF3-20187188	CR-WF3-2018-4793	CR-WF3-2018-7188	CR-WF3-2018-8014
CR-WF3-2018-3856			

Procedures Number	Title	Revision
EN-OP-104	Operability Determination Process	16

Drawings Number	Title	Revision
PD91480	Hydraulic Schematic MSIV	5
B424 Sheet E1646	Control Wiring Diagram Steam Line 1 Isolation VA 2MS-V602A	6

Drawings Number	Title	Revision
B424 Sheet 1646	Control Wiring Diagram Stm Line 1 Isolation VA 2MS-V602A Sh 1	16
B424 Sheet 1647	Control Wiring Diagram Stm Line 1 Isolation VA 2MS-V602A Sh 2	21
G-167 Sheet 2	Safety Injection System Flow Diagram	53

Miscellaneous Documents Number	Title	Revision
EC-I01-006	Determination of Secondary Systems Measurement Channel Functional Safety Significance	1
EC-M00-009	Closure Time Analysis for Main Steam Isolation Valves MS-124 A & B	1
EM-M98-004	Design Basis Review for Main Steam Isolation Valves MS-124 A & B	1
EM-M98-004	Design Basis Review for Main Steam Isolation Valves MS-124 A & B	0
EC-10516	Evaluate Widening the MSIV Operating Pressure Band/Operability Limits to Minimize the Frequency of Nitrogen Pressure Adjustments	0
EC-I00-002	Main Steam Isolation Valve Nitrogen Dome Pressure	0
EC-M97-031	Train A Safeguards Pump Room Temperature Raise	2
ER-W3-2002-0352-002	Modification to Safety Injection System	0

71111.19 — Post Maintenance Testing

Procedures Number	Title	Revision
OP-903-068	Emergency Diesel Generator and Subgroup Relay Operability Verification	322
STA-001-005	Leakage Testing of Air and Nitrogen Accumulators for Safety Relief Valves	320

71111.22 — Surveillance Testing

Procedures Number	Title	Revision
OP-903-046	Emergency Feedwater Pump Operability Check	322
STA-001-005	Leakage Testing of Air and Nitrogen Accumulators for Safety Relief Valves	320
OP-903-050	Component Cooling Water and Auxiliary Component Cooling Water Pump and Valve Operability Test	41

71151 — Performance Indicator Verification

Procedures Number	Title	Revision
EN-LI-114	Regulatory Performance Indicator Process	11

Miscellaneous Documents Number	Title	Date
W3F1-2018-004	NRC Performance Indicator (PI) Data – 4th Quarter 2017 Data	Jan 9, 2018
W3F1-2018-024	NRC Performance Indicator (PI) Data – 1st Quarter 2018 Data	Apr 12, 2018
W3F1-2018-042	NRC Performance Indicator (PI) Data – 2nd Quarter 2018 Data	Jul 13, 2018
W3F1-2018-066	NRC Performance Indicator (PI) Data – 3rd Quarter 2018 Data	Oct 21, 2018

71152 — Identification & Resolution of Problems

Condition Reports			
CR-WF3-2018-04575	CR-WF3-2018-05580	CR-WF3-2018-06557	CR-WF3-2018-05569
CR-WF3-2018-03124	CR-WF3-2018-00983	CR-WF3-2018-02007	

Procedures Number	Title	Revision
MM-006-026	EFW Turbine Maintenance Procedure	7
MM-006-026	EFW Turbine Maintenance Procedure	8
EN-DC-306	Acceptance of Commercial-Grade Items/Services in Safety-Related Applications	7

Miscellaneous Documents Number	Title	Date
	Lubriport Laboratories Inc. Oil Sample Results for EFW AB Pump Turbine	November 2018

WATERFORD STEAM ELECTRIC STATION, UNIT 3 – NRC INTEGRATED INSPECTION REPORT 05000382/2018004 DATED FEBRUARY 5, 2019

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