



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION III  
2443 WARRENVILLE RD. SUITE 210  
LISLE, ILLINOIS 60532-4352

May 4, 2018

Mr. Dean Curtland  
Director of Site Operations  
NextEra Energy Duane Arnold, LLC  
3277 DAEC Road  
Palo, IA 52324-9785

**SUBJECT: DUANE ARNOLD ENERGY CENTER—NRC INTEGRATED INSPECTION  
REPORT 05000331/2018001**

Dear Mr. Curtland:

On March 31, 2018, the U.S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at your Duane Arnold Energy Center. On April 4, 2018, 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.

Based on the results of this inspection, no findings or violations were identified.

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/**

Karla Stoedter, Chief  
Branch 1  
Division of Reactor Projects

Docket No. 50-331  
License No. DPR-49

Enclosure:  
Inspection Report 05000331/2018001

cc: Distribution via ListServ®

Letter to Dean Curtland from Karla Stoedter dated May 4, 2018

SUBJECT: DUANE ARNOLD ENERGY CENTER—NRC INTEGRATED INSPECTION  
REPORT 05000331/2018001

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Number: 50–331

License Number: DPR–49

Report Numbers: 05000331/2018001

Enterprise Identifier: I–2018–001–0035

Licensee: NextEra Energy Duane Arnold, LLC

Facility: Duane Arnold Energy Center

Location: Palo, IA

Dates: January 1 through March 31, 2018

Inspectors: C. Norton, Senior Resident Inspector  
J. Steffes, Resident Inspector  
R. Stone, Acting Resident Inspector  
A. Dunlap, Senior Reactor Inspector  
T. Nakanishi, Reliability and Risk Analyst  
J. Neurauter, Senior Reactor Inspector  
T. Ospino, Reactor Engineer

Approved by: K. Stoedter, Chief  
Branch 1  
Division of Reactor Projects

Enclosure

## SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated quarterly inspection at Duane Arnold Energy Center 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. NRC and self-revealed findings, violations, and additional items are summarized in the table below.

### List of Findings and Violations

No findings or violations were identified.

### Additional Tracking Items

Type	Issue Number	Title	Report Section	Status
URI	05000331/2018001-01	Failure to Perform Nondestructive Examination of Main Steam Isolation Valve 4415 Following Machining of Valve Bore	71111.15	Open

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## PLANT STATUS

Duane Arnold Energy Center began the inspection period at rated thermal power. On March 17, 2018, the licensee lowered thermal power to 74 percent of rated to perform a control rod sequence exchange. The unit was returned to steady state rated thermal power on March 19, 2018. With the exception of minor power reductions of less than 2 percent for surveillance testing and control rod line adjustments, the unit remained at 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 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 (1 Sample)

The inspectors evaluated readiness for impending adverse weather conditions for extreme cold weather on January 3, January 4, January 5, January 17, and February 6, 2108.

#### External Flooding (1 Sample)

The inspectors evaluated readiness to cope with external flooding on March 27, 2018.

### 71111.04—Equipment Alignment

#### Partial Walkdown (1 Sample)

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

(1) Control Rod Drive (CRD) system on March 2, 2018.

#### Complete Walkdown (1 Sample)

The inspectors evaluated system configurations during a complete walkdown of the Standby Liquid Control System on March 29, 2018.

#### 71111.05AQ—Fire Protection Annual/Quarterly

##### Quarterly Inspection (6 Samples)

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

- (1) Reactor Building 786 Level on February 3, 2018;
- (2) Low Level Radwaste Processing and Storage Facility Zones 21-A through 21-E, 21-N, 21-P, 21-Q, 21-R, 21-T, 21-U) & Radioactive Release (Zone 21-E) on January 27, 2018;
- (3) Control Building 757 Level on January 20, 2018;
- (4) Turbine Building 757 Level on February 3, 2018;
- (5) Machine Shop Building and Radwaste Building on February 24, 2018; and
- (6) Reactor Building 716 Level (Zones 1-AN, 1-AS, 1-C and 1-G) on March 20, 2018.

#### 71111.07—Heat Sink Performance

##### Heat Sink (Triennial) (3 Samples)

The inspectors evaluated heat exchanger/heat sink performance on the following components:

- (1) Residual Heat Removal (RHR) Pump Seal Coolers (1E220A, B, C, D), Section 02.02b;
- (2) Emergency Diesel Generator Heat Exchanger (1E053A), Section 02.02b; and
- (3) Heat Sink, Section 02.02d, Specifically Sections 02.02d.2 and 02.02d.4 were completed.

#### 71111.11—Licensed Operator Regualification Program and Licensed Operator Performance

##### Operator Regualification (1 Sample)

The inspectors observed and evaluated a licensed operator evaluated scenario on January 27, 2018.

##### Operator Performance (1 Sample)

The inspectors observed and evaluated a control rod sequence exchange on March 17–18, 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) MO 1902, 'B' torus cooling isolation valve actuator disassembly and movement on January 27, 2018; and
- (2) 'B' standby diesel generator critical maintenance management starting air emergent issue on March 27, 2018.

#### 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) 'B' Standby Gas Treatment (SBGT) System Efficiency Test on January 27, 2018;
- (2) Switchyard work; first instance, on March 12, 2018;
- (3) Switchyard work; second instance, on March 15, 2018; and
- (4) Phoenix Risk calculation for 'B' standby diesel generator critical maintenance management window on March 25, 2018.

#### 71111.15—Operability Determinations and Functionality Assessments (8 Samples)

The inspectors evaluated the following operability determinations and functionality assessments:

- (1) Condition Report (CR) 02243010; SBGT System Inlet Relief Damper on January 6, 2018;
- (2) CR 02242936; Unable to verify flow through RHR Pump Seal Water Coolers on January 13, 2018;
- (3) CR 02242192; 'A' Chiller Trip Upon Start from Low Oil Temperature on February 10, 2018;
- (4) CR 02242997; Low Discharge Pressure when starting 'B' Emergency Service Water Pump on February 10, 2018;
- (5) CR 02244854; Torus Cooling Isolation Valve Failed to Close on January 20, 2018;
- (6) CR 02252009; Missed Nondestructive Examination During Rebuild of Main Steam Isolation Valve (MSIV), CV4415 on February 24-March 3, 2018;
- (7) CR 02256369; 'B' Standby Diesel Generator Tubing Failure to V32-0109 on March 27-28, 2018; and
- (8) CR 02249636; 1VEF081 'A' LLRPSF [low level radwaste storage and processing facility] Exhaust Fan Failure on February 17, 2018.

#### 71111.18—Plant Modifications (2 Samples)

The inspectors evaluated the following temporary or permanent modifications:

- (1) Reactor Protection System test box use for main steam isolation valve logic testing; and
- (2) Reactor Protection System test box use for turbine stop valve logic testing.

#### 71111.19—Post Maintenance Testing (6 Samples)

The inspectors evaluated the following post maintenance tests:

- (1) Motor operated valve (MO) 1902, RHR (Drywell Spray) Actuator Maintenance, on February 3, 2018;
- (2) Replace Battery in RCIC [reactor core isolation cooling] RSP [remote shutdown panel] hand controller on February 10, 2018;
- (3) 'A' CRD Pump Maintenance on February 10, 2018;
- (4) 'B' Residual Heat Removal Service Water (RHRSW) Post Maintenance Testing on February 17, 2018;
- (5) 'B' RHR Valve Cycling Post Maintenance Testing on February 17, 2018; and



- (6) Post Maintenance Testing during Surveillance Test Procedure (STP) 3.5.1-02, Low-Pressure Coolant Injection Operability, on February 17, 2018.

#### 71111.22—Surveillance Testing

The inspectors evaluated the following surveillance tests:

##### Routine (5 Samples)

- (1) 'B' RHRSW Operability Test; NS160002B, on February 17, 2018;
- (2) 'B' RHRSW Leakage Inspection Walkdown; NS49003B, on February 17, 2018;
- (3) STP 3.3.1.1-17; MSIV Functional Test, on March 17, 2018;
- (4) STP 3.3.1.1-13; Turbine Control Valve End of Cycle Recirculation Pump Trip Logic And RPS Instrument Functional Test, on March 18, 2018; and
- (5) STP 3.1.7-01; Standby Liquid Control (SBLC) Pump Operability Test, on March 26, 2018.

##### In-service (2 Samples)

- (1) STP 3.5.1-02B; 'B' Low Pressure Coolant Injection (LPCI) System Operability Test, on February 17, 2018; and
- (2) Main Turbine Stop and Combined Intermediate Valves Test, on March 17, 2018.

##### Containment Isolation Valve (1 Sample)

- (1) STP 3.6.4-01B; Secondary Containment Isolation Damper Closing Time Test Channel B, on February 24, 2018.

#### 71114.06—Drill Evaluation

##### Emergency Planning Drill (1 Sample)

The inspectors evaluated licensed operator emergency planning performance during requalification training, on January 27, 2018.

### **OTHER ACTIVITIES – BASELINE**

#### 71151—Performance Indicator Verification (3 Samples)

The inspectors verified licensee performance indicators submittals listed below:

- (1) IE01: Unplanned Scrams per 7000 Critical Hours—1 Sample; January 1, 2017 through December 31, 2017;
- (2) IE03: Unplanned Power Changes per 7000 Critical Hours—1 Sample; January 1, 2017 through December 31, 2017; and
- (3) IE04: Unplanned Scrams with Complications (USwC)—1 Sample; January 1, 2017 through December 31, 2017.

## 71153—Follow-Up of Events and Notices of Enforcement Discretion

### Events (1 Sample)

(1) 'B' channel half SCRAM on January 13, 2018.

## **INSPECTION RESULTS**

### 71111.15—Operability Determinations and Functionality Assessments

Unresolved Item (Open)	Failure to Perform a Nondestructive Examination (NDE) of Main Steam Line Isolation Valve (MSIV) CV 4415 Following Machining of Valve Bore URI 05000331/2018-01	71111.15 — Operability Determinations and Functional Assessments
<p><u>Description:</u></p> <p>On February 28, 2018, while the licensee was planning contingency work order packages for possible MSIV repairs during the upcoming refuel outage (RFO) 26, a self-revealing failure to perform an NDE of MSIV CV 4415 during RFO 25 was identified.</p> <p>During RFO 25, inboard MSIV CV 4415 failed local leak rate testing. The valve was disassembled; the valve bore was machined, and the valve was reassembled. Subsequently, the valve passed local leak rate testing. However, the licensee failed to perform post-machining NDE of the valve bore as required by plant design.</p> <p>The MSIV was purchased and installed in accordance with USAS B 31.1.0. The General Requirements of USAS B31.1.0, Part 107, "Valves," states that "(a) Valves complying with the standards and specifications listed in Table 126.1 may be used within the specified pressure-temperature ratings, (b) Valves not complying with Paragraph (a) above shall be of a design, or equal to the design, which the manufacturer recommends for the service as stipulated in Paragraph 102.2.2." Purchase Specification General Electric Spec. No. 21A9230, Revision 2, requires in Part 6.2.4, "Castings for pressure-containing parts shall be 100 percent examined by radiography and all accessible surfaces, including machined surfaces, shall be examined by either liquid penetrant or magnetic particle methods following heat treatment. Re-examination of repaired areas shall be by the above techniques following heat treatment." Contrary to the above, the licensee failed to perform either liquid penetrant or magnetic particle testing following machining of the valve bore.</p> <p>The inspectors determined that the failure to perform design required NDE was a performance deficiency. However, the inspectors cannot assess whether the performance deficiency is more than minor until they review the NDE results.</p>		
<p>Planned Closure Actions: The inspectors will review the results of the NDE after it is performed during RFO 26 and determine the significance of the violation.</p> <p>Licensee Action: The licensee will perform an NDE of the MSIV bore during RFO 26.</p> <p>Corrective Action Reference: CR 02251009; Missed NDE During Rebuild Of MSIV CV4415.</p>		

## 71153—Follow-Up of Events and Notices of Enforcement Discretion

Observation – ‘B’ Channel Half SCRAM	71153—Follow-Up of Events and Notices of Enforcement Discretion
<p>On January 10, 2018, the inspectors evaluated the licensee’s response to a ‘B’ Channel half SCRAM condition. The half SCRAM was caused by the failure of Average Power Range Monitor (APRM) ‘B’. The inspectors determined the operators appropriately implemented pertinent procedures and Technical Specification requirements which allowed the operators to bypass APRM ‘B’ and reset the half SCRAM.</p> <p>The licensee performed simple troubleshooting and determined the power supply for APRM ‘B’ had failed. The power supply had recently been replaced. The inspectors determined the licensee had replaced the power supply in accordance with NextEra procedures and that the APRM power supply failure was not within the licensee’s ability to foresee and prevent. The licensee entered this minor issue into their corrective action program as CR 02243984; E/S 265 No Voltage Output.</p> <p>The inspectors discussed the corrective actions and associated evaluations with licensee personnel.</p>	

## **EXIT MEETINGS AND DEBRIEFS**

The inspectors confirmed that proprietary information was controlled to protect from public disclosure. No proprietary information was documented in this report.

- On March 16, 2018, the inspectors presented the ultimate heat sink triennial inspection results to Mr. M. Davis, Licensing Manager, and other members of the licensee staff.
- On April 4, 2018, the inspectors presented the quarterly integrated inspection results to Mr. D. Curtland, and other members of the licensee staff.

## **DOCUMENTS REVIEWED**

### 71111.01—Adverse Weather Protection

- Operations Shift Manager (OSM) Logs – January 3, 2018
- OSM Logs – January 4, 2018
- OSM Logs – January 5, 2018
- OSM Logs – January 17, 2018
- OSM Logs – February 6, 2018
- Abnormal Operating Procedure (AOP) 903; Adverse Weather; Revision 59
- AOP 902; Flood; Revision 62

### 71111.04—Equipment Alignment

- Operating Instruction (OI) 255A2; CRD System; Revision 7
- OI 255A3; CRD System HCU; Revision 3
- P&ID of Standby Liquid Control (SLBC) System; BECH-M126; Revision 26

- OI 153A2; SLBC System Valve Lineup; Revision 6

#### 71111.05AQ—Fire Protection Annual/Quarterly

- Pre-Fire Plan (PFP) -LL-757; PFP-LLRPSF; Revision 3
- PFP-CB-757; Pre-Fire Plan Control Building El. 757; Revision 4
- PFP-TB-757; Pre-Fire Plan Turbine Building El. 757; Revision 4
- PFP-RB-786; Pre-Fire Plan Reactor Building El. 786; Revision 6
- PFP-RB-716; Pre-Fire Plan Reactor Building El. 716; Revision 3
- PFP-RW-757; Pre-Fire Plan Radwaste Building; Revision 0

#### 71111.07—Heat Sink Performance

- 2016 Bathymetric Survey and Channel Stability Analysis; December 28, 2016
- 2017 Summer Bathymetric Survey and Channel Stability Analysis; September 5, 2017
- Borg-Warner Bulletin 1861; Light Weight High Pressure Heat Exchangers for Mechanical Seal Injection Cooling and Sample Cooling; March 1986
- CAL-M06-012; Required Water Depth at River Water Intake; Revision 0
- CAL-M93-078; Emergency Service Water (ESW) RHRSW Pit Pumpdown Times; Revision 1
- CAL-M05-027; Emergency Diesel Generator Heat Exchanger Heat Transfer Calculation; Revision 4
- CAL-M10-010; RHR Pump Seal Water Cooler Performance; Revision 0
- EC 285373; Equivalent Design Package: Fabricate Replacement Dollar Plates; February 15, 2016
- FPLE 102-DAEC-01; Curtis-Wright Report: DAEC Final Eddy Current Inspection Report for EDG 1E053A; October 20, 2015
- AOP 410; Loss of River Water Supply; Revision 30
- GENERA-F010-01; Procedure: Mechanical Inspection; Revision 70
- I.LI-R979-01; Rickly Hydrological Co., Model R114-B-56-E Sounding Reel; Revision 2
- M015-145; Data Sheet for Emergency Diesel Generator Lube Oil Cooler; Revision 2
- M015-146; Data Sheet for Emergency Diesel Generator Jacket Water Cooler; Revision 2
- M015-147; Data Sheet for Emergency Diesel Generator Inter Cooler Water Cooler; Revision 2
- NG-006C; Sand/Silt Levels, Bryozoa Growth, Concrete and Piping Inspection Stilling Basin, RHRSW & ESW Pits in the Pumphouse; Revision 3
- NS540002A; Surveillance Test Procedure: 'A' Emergency Service Water Operability Test; Revision 40
- NS540003A; Surveillance Test Procedure: 'A' Emergency Service Water Operability Test and Comprehensive Pump Test; Revision 29
- NS540003B; Surveillance Test Procedure: 'B' Emergency Service Water Operability Test and Comprehensive Pump Test; Revision 29
- OI 515; RHRSW/ESW Systems Chlorination Dechlorination; Revision 128
- PCP FORM 334; RHRSW/ESW Sample Point; Revision 4
- PCP 9.5; Chlorination/Halogenation Of Circulating Water, GSW, and RHRSW/ESW; Revision 45
- PCP 1.75; Open Cooling Water Strategic Chemistry; Revision 0
- STP NS100106; High Sand Bed Elevation/Low River Water Depth; Revision 0
- STP 3.7.2-02; River Water Depth; Revision 11
- STP 3.0.0-01; Instrument Checks; Revision 163
- CR 02140289; LLI-01 Unable to be Completed as Written; June 24, 2016

- CR 02235027; Self-Assessment for 2018 Triennial NRC Ultimate Heat Sink Inspection; January 18, 2018
- CR 02254445; 2018 NRC UHS Eddy Current Exam Prog Manual Has Inconsistency; March 15, 2018
- CR 02254389; 2018 NRC RHR Pump Seal Water Cooler Performance Calculation; March 15, 2018
- CR 2025781; 'B' Core Spray, 2A205 Conduit Inspection Results; February 16, 2015
- CR 2040615; Change Out 'B' SBDG Jacket Water at Next Opportunity; April 15, 2015
- CR 2085932; 'A' EDG CMM 2015: Heat Exchanger End Plate Inspections; October 26, 2015
- CR 2174232; Develop Contingency Work Order for 1E053A Floating Head Adjustment; January 19, 2017
- CR 2242936; Unable to Verify Flow Through RHR Pump Seal Water Coolers; May 8, 2018
- CR 2242946; STP NS540003A: 'A' SW Operability Valve Adjustments; January 4, 2018
- CR 2244850; 2018 UHS SA: Improper Documentation of Incomplete STP Step; February 16, 2018
- CE 0344500; Evaluate the ESW/RHRSW/RWS Pumps per the NRC Bulletin 88-04 Requirements
- WO 40507744; 'B' Forebay Results; June 14, 2017
- WO 40507755; 'B' RWS Pit Dive Results; June 15, 2017
- WO 40507747; 'A' RWS Pit Results; July 26, 2017
- WO 40507756; 'B' RWS Pit Results; August 15, 2017
- WO 40507748; 'A' RWS Pit Results; August 23, 2017
- WO 40507742; 'A' RWS Forebay Dive Results; September 6, 2017
- WO 40507752; Stilling Basin Results; August 17, 2017
- WO 40428150; Stilling Basin Dive Results; August 18, 2016
- WO 40496903; Perform Walkdown Inspections – Intake structure; August 23, 2017
- WO 40508978; Maintenance Rule Structural Monitoring – Pump House; October 24, 2016
- WO 40396442; LI 2900 Calibration; June 23, 2016
- WO 40498996; LI 2901 Calibration; November 9, 2016
- WO 40256007; TE2900 Calibration; July 31, 2013
- WO 40221618-01; 1G031/ENG: 2-Year Mechanical Inspection; September 24, 2013
- WO 40354514-01; 1G031/ENG: 2-Year Mechanical Inspection; October 30, 2015
- WO 40506630-23; 1G031/ENG: 2-Year Mechanical Inspection; November 20, 2017
- WO 40269622-01; 1E220A: Disassemble Clean and Inspect and Reassemble; August 5, 2014
- WO 40414694-01; 1E220A: Disassemble Clean and Inspect and Reassemble; December 21, 2016
- WO 40284683-01; 1E220B: Disassemble Clean and Inspect and Reassemble; August 12, 2014
- WO 40435570-01; 1E220B: Disassemble Clean and Inspect and Reassemble; December 27, 2016
- WO 40273309-01; 1E220C: Disassemble Clean and Inspect and Reassemble; August 5, 2014
- WO 40418930-01; 1E220C: Disassemble Clean and Inspect and Reassemble; December 27, 2016
- WO 40285529-01; 1E220D: Disassemble Clean and Inspect and Reassemble; February 10, 2015
- WO 40435573-01; 1E220D: Disassemble Clean and Inspect and Reassemble; March 29, 2017
- WO 40507044-01; Surveillance Test Procedure NS540002-A: 'A' Emergency Service Water Operability Test; September 28, 2017

- WO 40388742-01; Surveillance Test Procedure NS540003-A: 'A' Emergency Service Water Operability Test; January 4, 2016
- WO 40396676-01; Measure 1E220A(C) RHR Pump Seal Cooler Flow Rates; August 9, 2016
- WO 40507044-01; Surveillance Test Procedure NS540003-A: 'A' Emergency Service Water Operability Test; September 28, 2017
- WO 40519333-01; Surveillance Test Procedure NS540003-A: 'A' Emergency Service Water Operability Test; January 11, 2018
- WO 40243946-01; Surveillance Test Procedure NS540003-B: 'B' Emergency Service Water Operability Test; February 5, 2014
- WO 40439017-01; Surveillance Test Procedure NS540003-B: 'B' Emergency Service Water Operability Test; July 14, 2016

#### 71111.11—Licensed Operator Requalification Program and Licensed Operator Performance

- PDA OPS ESG 2018A-01E; Evaluated Scenario; Revision 0
- Reactivity Management Plan; Downpower from March 2018 Control Rod Sequence Exchange; Revision Date: March 13, 2018
- OP-020; Area Inspections; Revision 27

#### 71111.12—Maintenance Effectiveness

- WO 40518134 01; MO 1902-O: Overhaul Limitorque Operator
- CR 02256369; Tubing Failure to V32-0109

#### 71111.13—Maintenance Risk Assessments and Emergent Work Control

- STP 3.6.4.3-03B; 'B' SBT System HEPA & Charcoal Filter Efficiency Tests; Revision 15
- Duane Arnold Daily Status Report – March 12, 2018;
- Duane Arnold Daily Status Report – March 15, 2018;
- WM-AA-203-1006; Critical Maintenance Management; Revision 8
- WPG-2 On-Line Risk Management Guideline; Revision 70

#### 71111.15—Operability Determinations and Functionality Assessments

- CR 02243010; SBT Inlet Relief Damper has no Maintenance or Testing
- CR 02242936; Unable to Verify Flow Through RHR Pump Seal Water Coolers
- CR 02242192; 'A' Chiller Trip Upon Start From Low Oil Temperature
- CR 02242997; 1C06A (C-2), Low Disch Pressure , Activated on Pump Start
- CR 02244854; Valve Could not be Closed While Shutting Down Torus Cooling
- CR 02251009; [Missed Non-Destructive Examination] NDE During Rebuild of MSIV; CV4415
- General Electric Spec. No. 22A1295 AD
- General Electric Spec. No. 21A9230; Revision 2
- Power Piping; USAS B31.1.0-1967
- APED-B-21-2793-073; MSIV Drawing
- APED-B-21-2793-074; MSIV Parts List
- CR 02256369; 'B' Standby Diesel Generator Tubing Failure to V32-0109
- ASME 2007 Section XI, Division 1, IWA-4410; Welding, Brazing, Metal Removal, Fabrication, And Installation
- CR 02249636; 1VEF081 A LLRPSF Exhaust Fan Failure

#### 71111.18—Plant Modifications

- STP 3.3.1.1-19; Functional Test of TSV Closure Input to RPS and RPT; Revision 22
- STP 3.3.1.1-17; MSIV Functional Test; Revision 12
- CR 02248146; Potential Loss of RPS Trip Capability During MSIV Testing
- CR 02248121; Potential Loss of RPS Trip Capability During TSV Testing
- DAEC UFSAR 7.2; Reactor Protection System

#### 71111.19—Post Maintenance Testing

- WO 40518134-05; Post Maintenance Test (PMT) MO 1902; 'B' RHR Loop Inboard Drywell Spray Limitorque Operator
- STP 3.5.1-02B; LPCI System Operability Test; Revision 19
- CR 02242916; Upcoming Reactor Core Isolation Coolant (RCIC) Remote Shutdown Controller PMT Insufficient
- WO 40535567-01; 'A'-CRD Pump (Conduit 1A106)
- WO 40461291-01; 4160V CRD Pump Overcurrent Relay
- WO 40526456-01; CRD Hyd Pump Motor
- WO 40531843-01; 1P209A-G: Inspect and Change Oil
- WO 40577090; RTS Task 'B' RHR/RHRWS RTS
- WO 40581586; RCIC Return to Service Testing
- STP 3.3.3.1-09 RHRB; 'B' RHR Valve Position Indicator Verification-Operating; Revision 6
- NS160002B; 'B' RHRWS Operability Test; Revision 14
- STP 3.5.1-02B; 'B' LPCI System Operability Tests; Revision 19
- STP NS490003B; 'B' RHR System Leakage Walkdown; Revision 4
- CR 02242916; Upcoming RCIC Remote Shutdown PMT Insufficient

#### 71111.22—Surveillance Testing

- NS490003B; 'B' RHR System Leakage Inspection Walkdown; Revision 4
- NS160002B; 'B' RHRWS Operability Test; Revision 14
- STP 3.5.1-02B; 'B' LPCI System Operability Tests; Revision 19
- STP 3.6.4.2-01B; Secondary Containment Isolation Damper Closing Time Test Channel 'B'; Revision 11
- CR 0225057; IV-AD-51B Failed Closing Time Requirement
- STP NS930002; Main Turbine Stop and Combined Intermediate Valves Test; Revision 12
- STP 3.3.1.1-17; MSIV Functional Test; Revision 12
- STP 3.3.1.1-13; Turbine Control Valve EOC RPT Logic And RPS Instrument Functional Test; Revision 15
- STP 3.1.7-01; SBLC Pump Operability Test; Revision 43

#### 71114.06—Drill Evaluation

- PDA OPS ESG 2018A-01E; Evaluated Scenario; Revision 0

#### 71151—Performance Indicator Verification

- NG-002L; INPO Reportable Losses Monthly Summary; Revision 2
- Operations Shift Manager Logs: January 1, 2017 through December 31, 2017

#### 71152—Problem Identification and Resolution

- OP-AA-100-1000; Conduct Of Operations; Revision 24
- MM-AA-100-1002 Scaffold Installation, Modification and Removal Requests; Revision 8
- CR 02254212; Scaffold Inspection Documentation
- WO 40509538-05; Scaffold Inspection Documentation
- Scaffold Work Plan; RCIC Outboard Torus Suction Valve Operator
- Scaffold Work Plan; RCIC Steam Exhaust to Torus Stop-Check
- Scaffold Work Plan; V87-0001, 0002 & 0003
- Scaffold Work Plan; 1VAC017B-M
- Scaffold Work Plan; Conduit 2A202; Torus Basement, North Wall

71153—Follow-Up of Events and Notices of Enforcement Discretion

- OI 878.3; Local Power Range Monitoring System; Revision 42
- TS 3.3.1.1 A
- TS 3.3.1.1 B
- TRM 3.2.2
- ER-AA-122-1001; Printed Circuit Board Life Cycle Management Plan; Revision 2
- CR 02243984; E-S9265 No Voltage Output
- OSM Logs; January 10, 2018 at 1259 through January 10, 2018 at 1406