



May 29, 2009

NG-09-0413  
10 CFR 50.55a

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Duane Arnold Energy Center  
Docket 50-331  
License No. DPR-49

Inservice Inspection Report

In accordance with the Code of Federal Regulations, Title 10, Part 50.55a, NextEra Energy Duane Arnold, LLC, f/k/a FPL Energy Duane Arnold, LLC (hereafter, NextEra), submits the attached Inservice Inspection (ISI) Summary Report for the Duane Arnold Energy Center (DAEC). This report has been prepared in accordance with Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, 2001 Edition with addenda through 2003, and ASME Code Case N-532-4, as approved in Regulatory Guide 1.147. This report includes the examinations performed at the DAEC during Cycle 21 operations and Refueling Outage No. 21 (RFO21) of the fourth 10-year ISI interval.

This letter contains no new commitments nor revises any previous commitments.

If you have any questions, please contact Steve Catron at (319) 851-7234.

A handwritten signature in black ink, appearing to read "Richard L. Anderson".

Richard L. Anderson  
Vice President, Duane Arnold Energy Center  
NextEra Energy Duane Arnold, LLC

Enclosure

cc: Administrator, Region III, USNRC  
Project Manager, DAEC, USNRC  
Resident Inspector, DAEC, USNRC

Handwritten initials in black ink, "A047" stacked above "NRR".

**ENCLOSURE  
TO NG-09-0413**

**FOURTH TEN YEAR INSERVICE INSPECTION SUMMARY REPORT**

**NextEra Energy Duane Arnold, LLC  
Duane Arnold Energy Center**

Inservice Inspection  
Summary Report  
For  
RFO21

Duane Arnold Energy Center  
3277 DAEC Rd  
Palo, IA 52324

Date of Commercial Service  
February 1, 1975

# INDEX

Summary .....	Section 1
OAR-1 Form, Owners Activity Report.....	Section 2
Table 1 .....	Section 3
Table 2 .....	Section 4

## Section 1

## Summary

The Duane Arnold Energy Center, Fourth Ten-Year Inservice Inspection (ISI) Plan was developed to comply with 10 CFR 50.55a(g), which implements, by reference, the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, 2001 Edition with 2003 Addenda.

The following summary report is being submitted pursuant to the reporting requirements of ASME Section XI as amended by ASME Code Case N-532-4.

This summary report contains the Form OAR-1 Owner's Activity Report and Tables 1 and 2 of the Code Case for Duane Arnold Energy Center during Cycle 21 and Refueling Outage No. 21 (RFO21). No indications were found that required evaluation for continued service. RFO21 is the second and last outage of the first period in the fourth inspection interval, and includes Repair/Replacement Activities from March 18, 2007 (the last submittal) to March 4, 2009.

## Section 2

### OAR-1 Form Owner's Activity Report

## FORM OAR-1 OWNER'S ACTIVITY REPORT

Report Number NG-09-0413

Plant Duane Arnold Energy Center, 3277 DAEC Road, Palo, IA 52324

Unit No. 1 Commercial Service Date February 1, 1975 Refueling Outage No. RFO-21

Current Inspection Interval Fourth Interval

Current Inspection period First period

Edition and Addenda of Section XI applicable to the inspection plan 2001 Edition with 2003 Addenda

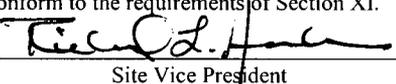
Date and revision of inspection plan January 22, 2009 Rev. 4

Edition and Addenda of Section XI applicable to repairs and replacements, if different than the inspection plan \_\_\_\_\_

Code Cases used: N-460, N-532-4, N-552, N-686, N-702,

## CERTIFICATE OF CONFORMANCE

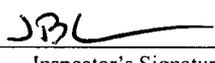
I certify that (a) the statements made in this Owner's Activity Report are correct; (b) and the examinations and tests met the Inspection Plan as required by the ASME Code, Section XI; and (c) the repair/replacement activities and evaluations supporting the completion of RFO21 conform to the requirements of Section XI.

Signed  Date May 29, 2009  
Site Vice President

## CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Iowa and employed by HSBCT of Hartford Connecticut have inspected the items described in this Owner's Activity Report, and state that, to the best of my knowledge and belief, the Owner has performed all activities represented by this report in accordance with the requirements of Section XI.

By signing this certificate neither the inspector nor his employer makes any warranty, expressed or implied, concerning the repair/replacements activities and evaluation described in this report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

 Commissions NB 12329 ANI, 1496 IA  
Inspector's Signature National Board, State, Province, and Endorsements

Date 5-29-09

### Section 3

#### Table 1

Items with Flaws or Relevant Condition that Required Evaluation for Continued Service

Examination Category and Item Number	Item Description	Evaluation Description
None		

## Section 4

### Table 2

#### Abstract of Repair/Replacement Activities Required for Continued Service

Table 2

*Abstract of Repair/Replacement Activities Required for Continued Service*

Code Class	Item Description	Description of Work	Date Completed	Repair / Replacement Plan number
1	MO4423 (MAIN STEAM LINE DRAIN INBOARD ISOLATION)	Replace Valve	3/31/09	1137199
1	MO4424 (MAIN STEAM LINE DRAIN OUTBOARD ISOLATION)	Replace Valve	3/31/09	1137201
1	PSV4400 (MAIN STEAM LINE A ADS RELIEF VALVE)	Replace Pilot with Spare Pilot	3/04/09	1139923
1	PSV4401 (MAIN STEAM LINE A ADS RELIEF VALVE)	Replace Pilot with Spare Pilot	3/04/09	1139924
1	PSV4402 (MAIN STEAM LINE B ADS RELIEF VALVE)	Replace Pilot with Spare Pilot	3/04/09	1139925
1	PSV4405 (MAIN STEAM LINE C ADS RELIEF VALVE)	Replace Pilot with Spare Pilot	3/04/09	1139928
1	PSV4406 (MAIN STEAM LINE D ADS RELIEF VALVE)	Replace Pilot with Spare Pilot	3/04/09	1139929
1	PSV4407 (MAIN STEAM LINE D LLS RELIEF VALVE)	Replace Pilot with Spare Pilot	3/04/09	1139930
1	DCA-012-SS-006B (RICI Steam Supply Header Elbow Tap Snubber)	Replaced snubber load pin	2/26/09	1142021
2	1S220(14-11) (SCRAM ACCUMULATOR)	Replace HCU Accumulator	3/2/09	1143905
1	PSV4402 (MAIN STEAM LINE B ADS RELIEF VALVE)	Replace PSV with Spare Body	5/26/09	1144312
2	XS2618A (SBLC SQUIB VALVE)	Replace Squib Valve Explosive Assembly	3/2/09	1144361
2	GBB-003-SS-238 (RHR LOOP B LPCI INJECT HEADER SNUBBER)	Snubber replaced due to seal life expiration	2/24/09	1144420
1	1P201B ("B" Reactor Recirc Pump)	Mechanical seal replacement	3/16/09	1144552
3	HBD-67-SA-41 & 43	Removed two seismic anchors	2/13/09	1144669
3	HBD-67-SA-44 & 46	Removed two seismic anchors	2/2/09	1144670
1	DBA002 Drains from Main Steam Line (Hanger H-1)	Modified Hanger H-1	4/17/09	1144673
1	DBA002 Drains from Main Steam Line (Hanger H-2)	Modified Hanger H-2	3/31/09	1144674
1	CRD 1R215 (10-35)	Install rebuilt CRD with new Cap Screws	3/16/09	1145702
1	CRD 1R215 (10-39)	Install rebuilt CRD with new Cap Screws	3/11/09	1145703

## Attachment for NG-09-0413

Code Class	Item Description	Description of Work	Date Completed	Repair / Replacement Plan number
1	CRD 1R215 (14-15)	Install rebuilt CRD with new Cap Screws	3/11/09	1145704
1	CRD 1R215 (18-11)	Install rebuilt CRD with new Cap Screws	3/11/09	1145705
1	CRD 1R215 (26-19)	Install rebuilt CRD with new Cap Screws	3/11/09	1145706
1	CRD 1R215 (30-23)	Install rebuilt CRD with new Cap Screws	3/16/09	1145707
1	CRD 1R215 (34-15)	Install rebuilt CRD with new Cap Screws	3/11/09	1145708
1	CRD 1R215 (38-11)	Install rebuilt CRD with new Cap Screws	3/11/09	1145709
1	CRD 1R215 (42-19)	Install rebuilt CRD with new Cap Screws	3/11/09	1145710
1	CRD 1R215 (42-23)	Install rebuilt CRD with new Cap Screws	3/11/09	1145711
1	CRD 1R215 (26-35)	Install rebuilt CRD with new Cap Screws	3/11/09	1145714
2	1S220(02-27) (SCRAM ACCUMULATOR)	Replace HCU Accumulator	03/02/09	1146369
2	1S220(18-15) (SCRAM ACCUMULATOR)	Replace HCU Accumulator	03/02/09	1146370
1	CRD 1R215 (02-27)	Install rebuilt CRD with new Cap Screws	3/11/09	1146442
2	1S220(10-39) (SCRAM ACCUMULATOR)	Replace HCU Accumulator	03/02/09	1146443
2	GBB-016 RHR Pump Discharge Line	Installation of ¾' high point vent on 4" line	3/31/09	1146528
1	CRD 1R215 (06-19)	Install rebuilt CRD with new Cap Screws	3/11/09	1147169
2	1S220(30-23) (SCRAM ACCUMULATOR)	Replace HCU Accumulator	3/2/09	1147170
2	1S220(22-19) (SCRAM ACCUMULATOR)	Replace HCU Accumulator	3/2/09	1147171
2	HLE006 (HPCI Turbine Exhaust to Torus)	Modified 3" branch connection	03/09/09	1147376
2	GBB-003-SS-237 (RHR LOOP B LPCI INJECT HEADER SNUBBER)	Snubber replaced due to seal life expiration	2/24/09	1147622
2	HBB-029-SS-199 (B RHR HX INLET PRESSURE RELIEF LINE SNUBBER)	Snubber replaced due to seal life expiration	2/24/09	1147624
2	HBB-014-SS-317 (RCIC PUMP TORUS SUCTION HEADER SNUBBER)	Snubber replaced due to seal life expiration	2/24/09	1147625
2	HBB-014-SS-316 (RCIC PUMP TORUS SUCTION HEADER SNUBBER)	Snubber replaced due to seal life expiration	2/24/09	1147626
2	GBB-004-SS-217B (RHR HX 1E-201A DISCHARGE HEADER SNUBBER)	Snubber replaced due to seal life expiration	2/24/09	1147627

## Attachment for NG-09-0413

Code Class	Item Description	Description of Work	Date Completed	Repair / Replacement Plan number
2	GBB-004-SS-217A (RHR HX 1E-201A DISCHARGE HEADER SNUBBER)	Snubber replaced due to seal life expiration	2/24/09	1147628
2	HBB-006-SS-020 (HPCI TURBINE STM EXHAUST HEADER SNUBBER)	Snubber replaced due to seal life expiration	2/24/09	1147647
2	GBB-003-SS-236, RHR HX 1E-201B HPCI STM Supply Header Snubber	Snubber replaced due to seal life expiration	2/24/09	1147875
3	1E053A1, 1G-31 Scavenging Air	Replaced Cooler Tube Bundles and flange bolting	2/2/09	A71775
3	1E053B1, 1G-21 Scavenging Air Cooler	Replaced Cooler Tube Bundle	8/27/08	A71776
3	RHR SW Pumps 1P22A/C Discharge Strainer	Replaced strainer cover bolting on strainer 1S090A	2/7/08	A71819
2	Spring Can Hanger EBB-014-H16	Replacement of missing bolt & nut on three bolt clamp	2/2/09	A78189
3	1P117D River Water Pump	Replace with Rebuilt Spare Pump and replaced Stuffing Box Cap Screws	2/2/09	A80062
2	HCU 1S220 (30-35)	Replace HCU 1S220 (30-35) with spare (Assembled under PWO 1147172)	3/2/09	A80463
3	1E053A2, 1G-31, Lube Oil Cooler	Replaced Cooler Tube Bundles and flange bolting	2/2/09	A82248
3	1E053A3, 1G-31, Jacket Cooler	Replaced Cooler Tube Bundles and flange bolting	2/2/09	A82249
3	1E053B2, 1G-21 Lube Oil Cooler	Replaced Cooler Tube Bundle	8/27/08	A82250
3	1E053B3, 1G-21 Jacket Cooling Water Heat Exchanger	Replaced Cooler Tube Bundle	8/27/08	A82251
3	1E053B3, 1G-21 Jacket Cooling Water Heat Exchanger Expansion Bellows	Replaced Expansion Bellows on ESW return line	9/2/08	A84042
3	1G-21 Lube Oil Cooler (Heat Exchanger 1E053B2)	Replace heavy hex nuts with standard nuts to acquire full thread engagement	2/2/09	A85478
3	1E053A (1G-31 Lube Oil Cooler)	Replacing four flange joint nuts to acquire full thread engagement	2/2/09	A85603
2	HBB023 (24" Pipe Clamp on Snubber HBB-023-SS-219)	Replaced bolt & nut on snubber side of pipe clamp	2/21/09	A97228
2	EBB005 HPCI Piping	Re-rated Design Pressure	10/26/07	ECP 1797 ECN 1797-08