



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE RD. SUITE 210
LISLE, IL 60532-4352

March 4, 2015

Mr. Thomas A. Vehec
Vice President
NextEra Energy Duane Arnold, LLC
3277 DAEC Road
Palo, IA 52324-9785

SUBJECT: ANNUAL ASSESSMENT LETTER FOR DUANE ARNOLD ENERGY CENTER
(REPORT 05000331/2014001)

Dear Mr. Vehec:

On February 11, 2014, the U.S. Nuclear Regulatory Commission (NRC) staff completed its end-of-cycle performance review of Duane Arnold Energy Center. The NRC reviewed the most recent quarterly performance indicators in addition to inspection results and enforcement actions from January 1, 2014 through December 31, 2014. This letter informs you of the NRC's assessment of your facility during this period and its plans for future inspections at your facility.

The NRC determined that the performance at Duane Arnold Energy Center during the most recent quarter was within the Licensee Response Column of the NRC's Reactor Oversight Process (ROP) Action Matrix because all inspection findings had very low (i.e., Green) safety significance, and all PIs indicated that your performance was within the nominal, expected range (i.e., Green).

As described in our Assessment Follow-up Letter issued on December 18, 2013 (ADAMS Accession Number ML13353A487), Duane Arnold Energy Center transitioned from the Licensee Response Column to the Regulatory Response Column of the ROP Action Matrix in the third quarter of 2013 due to a White finding related to the inadequate standby diesel generator lube oil heat exchanger maintenance. Subsequently, the NRC issued another Assessment Follow-up Letter on February 11, 2014 (ADAMS Accession Number ML14042A065), for a White finding related to the failure to perform an operability evaluation for a degraded reactor core isolation cooling turbine speed indicator. Due to the two White findings in the Mitigating Systems cornerstone, Duane Arnold Energy Center transitioned to the Degraded Cornerstone Column of the ROP Action Matrix in the third quarter of 2013.

The NRC completed a supplemental inspection per Inspection Procedure 95002 for the two White findings on July 21, 2014, as documented in our letter to you dated August 29, 2014 (ADAMS Accession Number ML14241A689). As a result, Duane Arnold Energy Center returned to the Licensee Response Column of the ROP Action Matrix as of the date of that letter. Therefore, the NRC plans to conduct ROP baseline inspections at your facility.

Although plant performance was within the Licensee Response Column of the Action Matrix, the NRC has not yet finalized the significance of the torus coating delamination issue as described in NRC Inspection Report 05000331/2014011 sent to you on February 19, 2015 (ADAMS Accession Number ML15050A653). The final significance determination may affect the NRC's assessment of plant performance and the enclosed inspection plan.

The NRC identifies substantive cross-cutting issues (SCCIs) to communicate a concern with the licensee's performance in a cross-cutting area and to encourage the licensee to take appropriate actions before more significant performance issues emerge. The NRC identified a cross-cutting theme in the Problem Identification and Resolution area. Specifically, the NRC identified four inspection findings for the 2014 assessment period with a cross-cutting aspect of P.2, Evaluation. You determined that this P.2 theme appeared to be a manifestation of the longstanding problem with using a consistent process for decision making that had never been effectively addressed. The root cause evaluation was thorough and the corrective actions appeared to be robust. Therefore, the NRC will continue to monitor your staff's effort and progress in addressing this P.2 theme until the theme criterion is no longer met. The NRC determined that a substantive cross-cutting issue (SCCI) associated with P.2 does not exist because the NRC does not have a concern with your staff's scope of effort and progress in addressing the cross-cutting theme.

The NRC also identified a cross-cutting theme in the Human Performance cross-cutting area. Specifically, the NRC identified four inspection findings for the 2014 assessment period with a cross-cutting aspect of H.13, Consistent Process. At the 2012 mid-cycle assessment, the NRC identified a cross-cutting theme in H.13 [This aspect was designated as H.1(a) prior to 2014.]. A substantive cross-cutting issue was not assigned primarily since you were still in the process of evaluating and developing corrective actions. As part of the H.13 theme in mid-2012, you implemented several corrective actions that were not particularly permanent and robust. Throughout 2013, the NRC continued to observe your staff making operability and corrective action program decisions based on informal processes instead of what your procedures required. Although the number of findings identified with this cross-cutting aspect had dropped below the threshold for opening a SCCI in 2013, the NRC continued to express concerns that actions taken might not have been fully internalized and that the sustainability of the corrective actions was questionable. As mentioned above, during the assessment period you determined that four findings received with a cross-cutting aspect of P.2 Evaluations were rooted in a longstanding problem with using a consistent process for decision making. Following this cause evaluation, you received additional findings associated with a cross-cutting aspect of H.13, Consistent Process eventually obtaining four such findings during the assessment period. Therefore, the NRC determined that an SCCI exists because the NRC has a concern with your staff's scope of effort and progress in addressing the cross-cutting theme associated with H.13.

The SCCI will remain open until: (1) the number of findings with a cross-cutting aspect of H.13 is less than four; (2) the corrective actions taken to mitigate the cross-cutting theme are proven effective; and, (3) sustained performance improvement is observed in the H.13 aspect of the human performance area. The NRC will monitor your staff's effort and progress in addressing

the SCCI by performing a follow-up problem identification and resolution inspection sample before our mid-cycle assessment later this year. You should plan on discussing your corrective actions to address this issue at the public end-of-cycle meeting.

The enclosed inspection plan lists the inspections scheduled through June 30, 2016. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed during the last nine months of the inspection plan are tentative and may be revised at the end-of-cycle performance review. The NRC provides the inspection plan to allow for the resolution of any scheduling conflicts and personnel availability issues. The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant any changes. This inspection plan does not include security-related inspections, which will be sent via separate, non-publicly available correspondence.

The NRC also plans to conduct an inspection related to your operation of an independent spent fuel storage installation, using Inspection Procedure 60855.1, "Operation of an Independent Spent Fuel Storage Installation at Operating Plants."

Additionally, an NRC audit of licensee efforts towards compliance with Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," and Order EA-12-051, "Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation" is ongoing for various sites. The audit includes an onsite visit for the NRC staff to evaluate mitigating strategies as described in the licensee submittals, and to receive and review information relative to associated open items. This onsite audit will occur prior to the first unit at the site achieving compliance with the Orders and the audit will aid NRC staff in developing a final Safety Evaluation for the site. The date of the audit at your site has not been determined at this time. A site-specific audit plan for the visit will be provided in advance to allow sufficient time for preparations.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

T. Vehec

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Please contact Gregory Roach at 630-829-9731 with any questions you may have regarding this letter.

Sincerely,

/RA/

Cynthia D. Pederson
Regional Administrator

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

Enclosure:
Duane Arnold Energy Center
Inspection/Activity Plan

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T. Vehec

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Duane Arnold
Inspection / Activity Plan
03/01/2015 - 06/30/2016

Unit Number	Planned Dates		Inspection Activity	Title	No. of Staff on Site
	Start	End			
			PI&R - BIENNIAL PI&R INSPECTION		4
1	04/13/2015	05/01/2015	IP 71152B	Problem Identification and Resolution	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	03/02/2015	03/06/2015	IP 71124.02	Occupational ALARA Planning and Controls	
			OL PREP - INIT EXAM/APRIL 2015		3
1	03/16/2015	03/20/2015	W90329	OL - INITIAL EXAM - 2015 MAR-APR - DUANE ARNOLD	
			OL EXAM - INIT EXAM/APRIL 2015		3
1	04/06/2015	04/17/2015	W90329	OL - INITIAL EXAM - 2015 MAR-APR - DUANE ARNOLD	
			STRIKE - STRIKE PREPS INSPECTIONS (AS NEEDED)		3
1	05/01/2015	05/31/2015	IP 92709	Licensee Strike Contingency Plans	
			STRIKE - ONGOING STRIKE INSPECTION (AS NEEDED)		3
1	05/31/2015	06/30/2015	IP 92711	Continued Implementation Of Strike Plans During An Extended Strike	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	06/22/2015	06/26/2015	IP 71124.02	Occupational ALARA Planning and Controls	
1	06/22/2015	06/26/2015	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	07/20/2015	07/24/2015	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1	07/20/2015	07/24/2015	IP 71151	Performance Indicator Verification	
			HEATSINK - TRIENNIAL HEAT SINK INSPECTION		2
1	08/24/2015	08/28/2015	IP 7111107T	Heat Sink Performance	
			ISFSI - ISFSI OPERATION AT AN OPERATING REACTOR		2
1	10/01/2015	10/31/2015	IP 60855.1	Operation of an Independent Spent Fuel Storage Installation at Operating Plants	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	11/02/2015	11/06/2015	IP 71124.05	Radiation Monitoring Instrumentation	
			ENG BI - TRIENNIAL MODS AND 50.59 INSPECTION		3
1	01/11/2016	01/29/2016	IP 7111117T	Evaluations of Changes, Tests, and Experiments and Permanent Plant Modifications	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	01/25/2016	01/29/2016	IP 71124.05	Radiation Monitoring Instrumentation	
			BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
1	04/11/2016	04/15/2016	IP 71124.02	Occupational ALARA Planning and Controls	

This report does not include INPO and OUTAGE activities.
This report shows only on-site and announced inspection procedures.