



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

September 2, 2014

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

SUBJECT: MID-CYCLE ASSESSMENT LETTER FOR DUANE ARNOLD ENERGY CENTER

Dear Mr. Vehec:

On August 6, 2014, the U.S. Nuclear Regulatory Commission (NRC) staff completed its mid-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 July 1, 2013 through June 30, 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 Degraded Cornerstone column of the NRC's Reactor Oversight Process (ROP) Action Matrix based on two inspection findings being classified as having low to moderate safety significance (i.e., White) in the Mitigating Systems Cornerstone and all performance indicators were within the nominal, expected range (i.e., Green). The two inspection findings were related to inadequate standby diesel generator lube oil heat exchanger maintenance and the failure to perform an operability evaluation for a degraded reactor core isolation cooling turbine speed indicator.

As described in our Assessment Follow-up Letter issued on December 18, 2013 (ADAMS Accession No. 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 the 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 No. ML14042A065) for the 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 No. 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. Note that the two findings are still considered as Action Matrix inputs for the remainder of the third quarter, 2014 in accordance with Inspection Manual Chapter 0305.

Therefore, the NRC plans to conduct ROP baseline inspections at your facility. In addition, 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."

As a result of the Safety Culture Common Language Initiative, the terminology and coding of cross-cutting aspects were revised. All cross-cutting aspects identified during inspections conducted in calendar year 2014 reflect this revision to Inspection Manual Chapter (IMC) 0310. Cross-cutting aspects identified in 2013 using the 2013 terminology were converted to the latest revision in accordance with the cross-reference in IMC 0310 during the mid-cycle assessment review and evaluated for cross-cutting themes and potential substantive cross-cutting issues in accordance with IMC 0305.

The enclosed inspection plan lists the inspections scheduled through December 31, 2015. 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.

In response to the accident at Fukushima, the Commission issued Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," which requires licensees to develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities following a beyond-design-basis external event. Additionally, the Commission issued Order EA-12-051, "Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation," which requires licensees to have a reliable means of remotely monitoring wide-range Spent Fuel Pool levels to support effective prioritization of event mitigation and recovery actions in the event of a beyond-design-basis external event. The NRC is conducting audits of licensee efforts towards compliance with these Orders. This audit includes an onsite component in order for the NRC to evaluate licensee plans for complying with the Orders, as described in site-specific submittals, and to receive and review information relative to associated open items. This onsite activity will occur in the months prior to a declaration of compliance for the first unit at each site, and will aid staff in development of an ultimate Safety Evaluation for the site. The date for the onsite component at your site is being coordinated with your staff. A site-specific audit plan for the visit will be provided in advance to allow sufficient time for preparations.

T. Vehec

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In accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records System (PARS) component of 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).

Please contact Christine Lipa at 630-829-9703 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

/RA/

Cynthia D. Pederson
Regional Administrator

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

Enclosure:
Duane Arnold Energy Center
Inspection/Activity Plan

cc w/encl: Distribution via LISTSERV®

T. Vehec

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Sincerely,

/RA/

Cynthia D. Pederson
Regional Administrator

Docket No. 50-331
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Duane Arnold Energy Center
Inspection/Activity Plan

cc w/encl: Distribution via LISTSERV®

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| DATE | 08/25/14 | 08/25/14 | 08/22/14 | 08/26/14 |

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Duane Arnold
Inspection / Activity Plan
09/01/2014 - 12/31/2015

| Unit Number | Planned Dates | | Inspection Activity | Title | No. of Staff on Site |
|-------------|---------------|------------|--|--|----------------------|
| | Start | End | | | |
| | | | BI ISI - INSERVICE INSPECTION | | 1 |
| 1 | 10/03/2014 | 11/15/2014 | IP 7111108G | Inservice Inspection Activities - BWR | |
| | | | BI RP - RADIATION PROTECTION BASELINE INSPECTION | | 1 |
| 1 | 09/08/2014 | 09/12/2014 | IP 71124.07 | Radiological Environmental Monitoring Program | |
| | | | BI RP - RADIATION PROTECTION BASELINE INSPECTION | | 2 |
| 1 | 10/27/2014 | 10/31/2014 | IP 71124.01 | Radiological Hazard Assessment and Exposure Controls | |
| 1 | 10/27/2014 | 10/31/2014 | IP 71124.03 | In-Plant Airborne Radioactivity Control and Mitigation | |
| 1 | 10/27/2014 | 10/31/2014 | IP 71124.04 | Occupational Dose Assessment | |
| 1 | 10/27/2014 | 10/31/2014 | IP 71151 | Performance Indicator Verification | |
| | | | BI FIRE - FIRE PROTECTION INSPECTION AND BAG TRIP | | 3 |
| 1 | 01/12/2015 | 02/13/2015 | IP 7111105x | Fire Protection - NFPA 805 (Triennial) | |
| | | | 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 | |
| | | | BL EPR - EP ROUTINE INSPECTION / PI VERIFICATION | | 2 |
| 1 | 03/16/2015 | 03/20/2015 | IP 7111402 | Alert and Notification System Testing | |
| 1 | 03/16/2015 | 03/20/2015 | IP 7111403 | Emergency Preparedness Organization Staffing and Augmentation System | |
| 1 | 03/16/2015 | 03/20/2015 | IP 7111405 | Correction of Emergency Preparedness Weaknesses and Deficiencies | |
| 1 | 03/16/2015 | 03/20/2015 | IP 71151 | Performance Indicator Verification | |
| | | | 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 71124.03 | In-Plant Airborne Radioactivity Control and Mitigation | |
| 1 | 06/22/2015 | 06/26/2015 | IP 71124.04 | Occupational Dose Assessment | |
| | | | BI RP - RADIATION PROTECTION BASELINE INSPECTION | | 1 |
| 1 | 07/20/2015 | 07/24/2015 | IP 71124.01 | Radiological Hazard Assessment and Exposure Controls | |

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

Duane Arnold
Inspection / Activity Plan
09/01/2014 - 12/31/2015

| Unit Number | Planned Dates | | Inspection Activity | Title | No. of Staff on Site |
|-------------|---------------|------------|---|---|----------------------|
| | Start | End | | | |
| | | | BI RP - RADIATION PROTECTION BASELINE INSPECTION | | 1 |
| 1 | 07/20/2015 | 07/24/2015 | IP 71151 | Performance Indicator Verification | |
| | | | 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 HS - TRIENNIAL HEAT SINK INSPECTION | | 2 |
| 1 | 10/26/2015 | 10/30/2015 | IP 7111107T | Heat Sink Performance | |
| | | | BI RP - RADIATION PROTECTION BASELINE INSPECTION | | 1 |
| 1 | 11/02/2015 | 11/06/2015 | IP 71124.05 | Radiation Monitoring Instrumentation | |

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