



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

June 15, 2010

Mr. Christopher R. Costanzo
Vice President
NextEra Energy Duane Arnold, LLC
3277 DAEC Road
Palo, IA 52324-9785

SUBJECT: DUANE ARNOLD ENERGY CENTER BASELINE EMERGENCY
PREPAREDNESS BIENNIAL EXERCISE INSPECTION REPORT
5000331/2010502(DRS)

Dear Mr. Costanzo:

On May 21, 2010, the U. S. Nuclear Regulatory Commission (NRC) completed a Baseline Emergency Preparedness Biennial Exercise inspection at your Duane Arnold Energy Center. The enclosed report documents the inspection results, which were discussed on May 21, 2010, with D. Curtland and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, no NRC-identified and no self-revealed findings of very low safety significance were identified.

In accordance with 10 CFR 2.390 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 (PARS) component of NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA by Robert Jickling for/

Hironori Peterson, Chief
Operations Branch
Division of Reactor Safety

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

Enclosure: Inspection Report 05000331/2010502
w/Attachment: Supplemental Information

cc w/encl: Distribution via ListServ

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 50-331

License No: DPR-49

Report No: 05000331/2010502(DRS)

Licensee: FPL Energy Duane Arnold, LLC

Facility: Duane Arnold Energy Center

Location: Palo, IA

Dates: May 17 through 21, 2010

Inspectors: Robert Jickling, Senior Emergency Preparedness Inspector
James McGhee, Senior Resident Inspector
Charles Zoia, Operations Engineer

Observers: Robert Kahler, NSIR Branch Chief
Rhex Edwards, Reactor Engineer

Approved by: Hironori Peterson, Chief
Operations Branch
Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000331/2010502; 05/17/2010 – 05/21/2010; Duane Arnold Energy Center;
Baseline Emergency Preparedness Biennial Exercise Inspection.

This report covers a one week period of announced baseline inspection by two regional inspectors and one resident inspector. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealed Findings

Cornerstone: Emergency Preparedness

No findings of significance were identified.

B. Licensee-Identified Violations

No violations of significance were identified.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstone: Emergency Preparedness

1EP1 Exercise Evaluation (71114.01)

.1 Exercise Evaluation

a. Inspection Scope

The inspectors reviewed the May 19, 2010, biennial emergency preparedness exercise's objectives and scenario to ensure that the exercise would acceptably test major elements of the licensee's emergency plan and to verify that the exercise's simulated problems provided an acceptable framework to support demonstration of the licensee's capability to implement its plan. The inspectors also reviewed records of other drills and exercises conducted in 2008, 2009, and 2010, to verify that those drills' scenarios were sufficiently different from the scenario used in the May 19, 2010 exercise.

The inspectors evaluated the licensee's exercise performance, focusing on the risk significant activities of emergency classification, notification, and protective action decision making, implementation of accident mitigation strategies, and correction of past exercise weaknesses in the following emergency response facilities:

- Control Room Simulator (CRS);
- Technical Support Center (TSC);
- Emergency Operations Facility (EOF); and
- Joint Information Center (JIC)

The inspectors also assessed the licensee's recognition of abnormal plant conditions, transfer of responsibilities between facilities, internal communications, interfaces with offsite officials, readiness of emergency facilities and related equipment, and overall implementation of the licensee's emergency plan.

The inspectors attended post-exercise critiques in the CRS, TSC, EOF, and JIC to evaluate the licensee's initial self-assessment of its exercise performance. The inspectors later met with the licensee's lead exercise evaluators and managers to obtain the licensee's findings and assessments of its exercise participants' performances. These self-assessments were then compared with the inspectors' independent observations and assessments to assess the licensee's ability to adequately critique its exercise performance. Documents reviewed are listed in the Attachment to this report.

This exercise evaluation inspection constituted one sample as defined in Inspection Procedure (IP) 71114.01-05.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification (71151)

.1 Drill/Exercise Performance

a. Inspection Scope

The inspectors sampled licensee submittals for the Drill/Exercise Performance PI for the period from the first quarter 2009 through first quarter 2010. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, were used. The inspectors reviewed the licensee's records associated with the performance indicator to verify that the licensee accurately reported the indicator in accordance with relevant procedures and the NEI guidance. Specifically, the inspectors reviewed licensee records and processes including procedural guidance on assessing opportunities for the PI; assessments of PI opportunities during pre-designated control room simulator training sessions, and performance during other drills. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one drill/exercise performance sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.2 Emergency Response Organization Drill Participation

a. Inspection Scope

The inspectors sampled licensee submittals for the Emergency Response Organization (ERO) Drill Participation PI for the period from the first quarter 2009 through first quarter 2010. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, were used. The inspectors reviewed the licensee's records associated with the PI to verify that the licensee accurately reported the indicator in accordance with relevant procedures and the NEI guidance. Specifically, the inspectors reviewed licensee records and processes including procedural guidance on assessing opportunities for the PI; performance during the 2009 and 2010 exercises and drills; and revisions of the roster of personnel assigned to key emergency response organization positions. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one ERO drill participation sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.3 Alert and Notification System

a. Inspection Scope

The inspectors sampled licensee submittals for the Alert and Notification System (ANS) PI for the period from the first quarter 2009 through first quarter 2010. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, were used. The inspectors reviewed the licensee's records associated with the PI to verify that the licensee accurately reported the indicator in accordance with relevant procedures and the NEI guidance. Specifically, the inspectors reviewed licensee records and processes including procedural guidance on assessing opportunities for the PI and results of periodic scheduled ANS operability tests. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one alert and notification system sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

4OA6 Management Meetings

.1 Exit Meeting Summary

On May 21, 2010, the inspectors presented the inspection results to Mr. D. Curtland, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

D. Curtland, Plant Manager
R. Anderson, Business Unit Manager
S. Catron, Licensing Manager
R. Cole, Performance Improvement Manager
B. Eckes, Nuclear Oversight Manager
S. Funk, Radiation Effluents Coordinator
K. Furman, Safety Manager
P. Hansen, NOMS Manager
B. Kindred, Security Manager
K. Kleinheinz, Engineering Director
C. Moser, Technical Training Supervisor
D. Mothena, Corporate Functional Area Emergency Preparedness Manager
B. Murrell, Licensing Engineer Analyst
B. Porter, Radiation Protection/Chemistry Manager
G. Rushworth, Assistant Operations Manager

Nuclear Regulatory Commission

R. Orlikowski, Senior Resident Inspector
R. Baker, Resident Inspector
R. Murray, Resident Inspector

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened, Closed, and Discussed

None

LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety, but rather, that selected sections of portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

1EP1 Exercise Evaluation

Duane Arnold Energy Center May 19, 2010, Evaluated Exercise Manual;
March 11, 2010

Evaluated Exercise Documents and Records; May 19, 2010

Two-Year Listing of Drill and Exercise CAPs; October 22, 2008 – May 19, 2010

Two Years of Drill and Exercise Scenario Timelines; October 22, 2008 – May 19, 2010

CR 391545; Exercise JIC Provided Outdated Radiation Release Information and State Protective Action Decisions; May 20, 2010

CR 391475; Exercise Slow to Update Release Change Information; May 20, 2010

CR 391377; Exercise GE Threshold Different Than Scenario; May 19, 2010

CR 391367; Exercise Discrepancy on Field Team Information; May 19, 2010

CR 391364; Exercise Offsite Protective Actions Different than PARs; May 19, 2010

CR 391357; Exercise Fuel Damage Assessment Procedure Issues; May 19, 2010

CR 391356; Exercise Habitability Challenges in the TSC; May 19, 2010

CR 319344; Exercise TSC Issues with Release Diagnosis; May 19, 2010

CR 391317; Exercise TSC Provided Poor Backup to Control Room; May 19, 2010

CR 391285; Exercise Plant Page Issues for ERO Notification; May 19, 2010

CR 391251; Exercise Field Team Radio Problems in the EOF; May 19, 2010

4OA1 Performance Indicator Verification

Monthly Data Elements for NRC ERO Drill Participation; June 2009 - March 2010

Monthly Data Elements for NRC ERO Drill/Exercise Performance;
April 2009 - March 2010

Monthly Data Elements for NRC Alert and Notification System Reliability;
April 2009 - March 2010

Monthly Siren Availability Report Records; April 2009 - March 2010

LIST OF ACRONYMS USED

ADAMS	Agency-wide Documents Access and Management System
ANS	Alert and Notification System
CAP	Corrective Action Program
CFR	Code of Federal Regulations
CR	Condition Report
CRS	Control Room Simulator
DRS	Division of Reactor Safety
EOF	Emergency Operations Facility
EP	Emergency Preparedness
ERO	Emergency Response Organization
GE	General Emergency
IMC	Inspection Manual Chapter
IP	Inspection Procedure
JIC	Joint Information Center
KI	Potassium Iodide
NEI	Nuclear Energy Institute
NRC	U. S. Nuclear Regulatory Commission
OSC	Operations Support Center
PAR	Protective Action Recommendation
PARS	Publicly Available Records
PI	Performance Indicator
SDP	Significance Determination Process
TI	Temporary Instruction
TSC	Technical Support Center

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Letter to Mr. Christopher R. Costanzo from Mr. Hironori Peterson, dated June 15, 2010.

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PREPAREDNESS BIENNIAL EXERCISE INSPECTION 05000331/2010502

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