April 2, 2007

EA-07-017

Mr. Gary Van Middlesworth
Vice-President
Duane Arnold Energy Center
3277 DAEC Road
Palo, IA 52324-9785

SUBJECT: FINAL SIGNIFICANCE DETERMINATION FOR A WHITE FINDING AND NOTICE OF VIOLATION; NRC INSPECTION REPORT NO. 05000331/2007501(DRS) FOR DUANE ARNOLD ENERGY CENTER

Dear Mr. Van Middlesworth:

The purpose of this letter is to provide you the final results of our significance determination of the preliminary White finding identified in Inspection Report No. 05000331/2006009(DRS). The inspection finding was assessed using the Significance Determination Process (SDP) and was preliminarily characterized as White, a finding with low to moderate increased importance to safety that may require additional NRC inspections. This White finding involved the failure of the Duane Arnold Energy Center 2006 full-scale exercise critique to identify a weakness associated with a Risk Significant Planning Standard (RSPS) which was also a Drill and Exercise Participation (DEP) Performance Indicator (PI) failure.

At your request, a Regulatory Conference was held on March 1, 2007, to further discuss your views on this issue. The conference summary, including the presentation materials, can be found in the Agencywide Document Access and Management System (ADAMS) ML070650592. During the conference, your staff described the results of your assessment of the significance of the finding, and provided information concerning your cause evaluation and the associated corrective actions taken. Your staff also provided information regarding the scenario development process, your conclusions on crew performance, and the station's exercise critique process. Specifically, Florida Power and Light Energy Duane Arnold (FPL Energy) disagreed with the NRC's assessment that during the October 18, 2006, exercise there was a performance weakness associated with a failure to recognize simulated plant conditions which satisfied an emergency action level (EAL) entry condition, or that a performance weakness led to a delay in emergency classification once conditions for a Site Area Emergency (SAE) existed. Your position was that the SAE declaration was correct and timely based on the actual exercise conditions and indications, the plant's EALs, and industry accepted guidance for classification.

After considering the information developed during the inspection, the information presented at the Regulatory Conference on March 1, 2007, and the additional information you provided in your apparent cause evaluation dated December 21, 2006, the NRC has concluded that the inspection finding was appropriately characterized as White, an issue with low to moderate increased importance to safety, which may require additional NRC inspections.

During your presentation on March 1, 2007, you concluded that the exercise scenario incorrectly stated that the SAE classification time zero for determining timely event classification was 10:50 a.m. - the time that the torus vacuum breaker isolation valves changed position. After the NRC identified the failure to critique the delayed SAE classification at the exit meeting on October 19, 2006, you initiated an investigation, repeated the scenario on the simulator, and determined that a reactor building vent shaft radiation monitor would have alarmed at 10:57 a.m. You subsequently concluded the reactor building vent shaft radiation monitor recreated alarm time of 10:57 a.m. should have been time zero for indications being available for classifying the emergency. This was contrary to the time identified in your validated scenario manual (validated by three crews) of 10:50 a.m. when the indication lights for the torus vacuum breaker isolation valve positions changed from the closed position. Additionally, you concluded that the time at which the shift manager recognized the conditions was 11:01 a.m. You also concluded that the scenario's time zero and classification times were not consistent with the FPL Energy EAL scheme, the classification timeliness criteria in NEI 99-02, or FPL Energy's expectation for correct and timely classification. Finally, you concluded that during the exercise, the SAE classification was made correctly and timely in accordance with FPL Energy EALs. You stated in your conclusion that the torus vacuum breaker isolation valve indications available to the simulator control room operators at 10:50 a.m. did not meet the threshold for the loss of containment barrier EAL in that these indications were not conclusive to determine that a failure of both valves in one line to close and a downstream pathway to the environment existed.

The NRC agreed that the correct SAE classification was declared; however, the NRC does not agree that the SAE classification was timely. Regarding timeliness of classifying an emergency, the NRC disagrees with the station's conclusion that time zero for classification of the SAE started with the occurrence of the radiation release rate alarm at 10:57 a.m., or the recognition of the open valves by the shift manager at 11:01 a.m. Specifically, the NRC disagrees with your position that the 10:57 a.m. time for SAE classification was the first time that indications were available to classify the SAE. Indications of valves not being closed were initially indicated by the valve position lights on the control room simulator front control panels at 10:50 a.m. In addition, the NRC observed that the operators also had the opportunity to recognize the change in valve position after the Technical Support Center staff called the operators with information of increased radiation release rate monitor readings from the offgas stack and questioned the status of the stand by gas treatment system at 10:54 a.m. The NRC concluded that this provided an additional indication of a release path to the environment which

was prior to the shift manager's recognition that both valves were open in a line and a pathway to the environment existed at 11:01 a.m. The Emergency Officer's declaration of the SAE at 11:11 a.m. took 21 minutes from the time the valves were open and a release pathway to the environment existed. The NRC identified this as a performance weakness in that the operators failed to recognize that the torus to reactor building isolation valves were not closed when the operators had prior opportunities to identify the changed conditions. This performance weakness resulted in a SAE classification that exceeded 15 minutes from the time the simulated conditions existed. This conclusion is consistent with NEI 99-02. The NRC also identified that your staff incorrectly identified the classification timeliness as a DEP PI success.

The NRC's overall concern with station performance stemmed from the fact that your staff failed to identify and critique an unexpected response that occurred during the exercise. In this specific case, the station would not have performed any additional evaluation or assessment of this unexpected response absent NRC identification of the finding. In addition, you inappropriately evaluated the DEP PI for classification timeliness as a success. The NRC evaluates licensee performance in the Emergency Preparedness cornerstone by PIs and inspection findings. The licensee response band is established by the PIs and your corrective action program. The data from the PIs comes from your drill and exercise critiques. If the critique program does not identify performance problems, the licensee response band comes into question. The NRC considers your ability to observe, evaluate, and critique a weakness associated with a RSPS to be critical.

You have 30 calendar days from the date of this letter to appeal the staff's determination of significance for the identified White finding. Such appeals will be considered to have merit only if they meet the criteria given in NRC Inspection Manual Chapter 0609, Attachment 2.

The NRC has determined that the failure of the licensee's full-scale exercise critique to identify a weakness associated with an RSPS is a performance deficiency and is also a violation of emergency preparedness planning standard 10 CFR 50.47(b)(14) and associated risk significant planning standard 10 CFR 50.54(b)(4), as cited in the enclosed Notice of Violation (Notice). The circumstances surrounding the violation are described in detail in Inspection Report No. 05000331/2006009(DRS). In accordance with the NRC Enforcement Policy, the Notice is considered escalated enforcement action because it is associated with a White finding.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response.

Because plant performance for this issue has been determined to be in the regulatory response band, we will use the NRC Action Matrix, to determine the most appropriate NRC response for this event. We will notify you, by separate correspondence, of that determination.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure and response will be made available electronically for public inspection in the NRC Public Document Room or from the 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). To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction.

Sincerely,

/RA/

James L. Caldwell
Regional Administrator

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

Enclosure: Notice of Violation

cc w/encl: J. Stall, Senior Vice President, Nuclear and Chief Nuclear Officer
R. Helfrich, Senior Attorney
M. Ross, Managing Attorney
W. Webster, Vice President, Nuclear Operations
M. Warner, Vice President, Nuclear Operations Support
R. Kundalkar, Vice President, Nuclear Engineering
J. Bjorseth, Site Director
D. Curtland, Plant Manager
S. Catron, Manager, Regulatory Affairs
Chief Radiological Emergency Preparedness Section, Dept. Of Homeland Security
D. McGhee, State Liaison Officer

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/RA/

James L. Caldwell
Regional Administrator

Docket No. 50-331
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J. Bjorseth, Site Director
D. Curtland, Plant Manager
S. Catron, Manager, Regulatory Affairs
Chief Radiological Emergency Preparedness Section, Dept. Of Homeland Security
D. McGhee, State Liaison Officer

*See previous concurrence
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[1]HQ concurrence received via e-mail from D. Solorio to G. Shear on March 29, 2007

Letter from J. Caldwell to G. Van Middlesworth dated April 2, 2007

SUBJECT: FINAL SIGNIFICANCE DETERMINATION FOR A WHITE FINDING AND NOTICE OF VIOLATION; NRC INSPECTION REPORT NO. 05000331/2007501(DRS) FOR DUANE ARNOLD ENERGY CENTER

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NOTICE OF VIOLATION

Florida Power and Light Energy Duane Arnold, LLC
Duane Arnold Energy Center

Docket No. 50-331
License No. DPR-49
EA-07-017

During an NRC inspection conducted from October 16, 2006, through December 5, 2006, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

Title 10 of CFR Part 50.54(q) requires, in part, that a licensee authorized to possess and operate a nuclear power reactor shall follow and maintain in effect emergency plans which meet the standards in 10 CFR 50.47(b).

Title 10 of CFR Part 50.47(b)(4) requires, in part, that a standard emergency classification and action level scheme is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by the facility licensee for determinations of minimum initial offsite response measures.

Duane Arnold Emergency Plan, Section D, Revision 25 and Emergency Plan Implementing Procedure (EPIP) Manual Appendix 1, Form EAL-01, "EAL Matrix," Revision 7, implements 10 CFR 50.54(q) and 10 CFR 50.47(b). The EAL Matrix states that for a loss of any two fission product barriers a Site Area Emergency (SAE) is to be classified. A loss of primary containment barrier is indicated under the leakage heading, when a failure of both valves in any one line to close and a downstream pathway to the environment exists.

Title 10 of CFR Part 50, Appendix E, Criterion IV.F.2.g requires, in part, that all training, including exercises, shall provide for formal critiques in order to identify weak or deficient areas that need correction. Any weaknesses or deficiencies that are identified shall be corrected.

Title 10 of CFR Part 50.47(b)(14) requires, in part, that periodic exercises are conducted to evaluate major portions of emergency response capabilities, periodic drills are conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are corrected.

Contrary to the above, on October 18, 2006, the licensee failed to identify a weakness associated with a Site Area Emergency declaration during the critique of the Biennial Evaluated Emergency Planning Exercise. Specifically, the control room simulator crew failed to recognize a change in torus-to-reactor building vacuum breaker valve positions which delayed them from recognizing the threshold for entering the SAE event classification, FS1, "Loss or Potential Loss of Any Two Barriers" had been met. This led to a delay in classification of the SAE. This performance weakness was not identified during the licensee's critique presented to the NRC on October 19, 2006.

This violation is associated with a White SDP finding.

Pursuant to the provisions of 10 CFR 2.201, Florida Power and Light Energy Duane Arnold, LLC, is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator and Enforcement Officer, Region III, and a copy to the NRC Resident Inspector at the Duane Arnold Energy Center, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation; EA-07-017" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days.

Dated this 2nd day of April 2007