

March 2, 2006

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

SUBJECT: ANNUAL ASSESSMENT LETTER - DUANE ARNOLD ENERGY CENTER  
(REPORT 05000331/2006001)

Dear Mr. Van Middlesworth:

On February 9, 2006, the NRC staff completed its performance review of the Duane Arnold Energy Center. Our technical staff reviewed performance indicators (PIs) for the most recent quarter and inspection results for the period from January 1 through December 31, 2005. The purpose of this letter is to inform you of our assessment of your safety performance during this period and our plans for future inspections at your facility.

This performance review and enclosed inspection plan do not include physical protection information. A separate letter designated and marked as "Exempt from Public Disclosure in accordance with 10 CFR 2.390" will include the physical protection review and resultant inspection plan.

Overall, the Duane Arnold Energy Center operated in a manner that preserved public health and safety and fully met all cornerstone objectives. Plant performance for the most recent quarter, as well as for the first three quarters of the assessment cycle, was within the Licensee Response Column of the NRC's Action Matrix, based on all inspection findings being classified as having very low safety significance (Green) and all PIs indicating performance at a level requiring no additional NRC oversight (Green). Therefore, we plan to conduct only reactor oversight process baseline inspections at your facility.

In our mid-cycle assessment letter dated August 30, 2005, (ML052420426), we advised you of a substantive cross-cutting issue in the area of human performance, involving inadequate procedure use and adherence. Our inspection staff identified four Green findings where human performance was not adequate during the 2005 assessment period. Two of these were previously evaluated as part of the findings considered during the mid-cycle assessment, while two are new. In response to the identification of human performance deficiencies, you have developed a Corrective Action Plan for Human Performance and have begun execution of that plan.

During the last half of the assessment period, we conducted an inspection sample utilizing Inspection Procedure (IP) 71152, Problem Identification and Resolution Inspection, to assess your progress in addressing human performance deficiencies. This inspection found that each of the individual performance errors was entered into your corrective action program and you have completed root cause analyses on a department by department basis for certain human performance issues. However, additional corrective actions were scheduled for implementation, including an effectiveness review to assess the adequacy of your corrective actions to address numerous human performance issues.

After the completion of your effectiveness review, we will perform an inspection using IP 71152 to assess the progress you have made in the area of human performance. If sufficient progress has been made, the results of this inspection will be evaluated at the next assessment cycle to determine if the substantive human performance cross-cutting issue can be closed.

Because of the status of your corrective actions, the NRC remains concerned with human performance at the Duane Arnold Energy Center. To address our concerns, we request that you discuss this substantive cross-cutting issue during the end-of-cycle meeting and that you provide a written response to the NRC within 30 days of the date of this letter. In your response, please detail the corrective actions taken, the effectiveness of implemented corrective actions, and any additional corrective actions needed to address issues having human performance as a significant causal factor or contributing cause.

The enclosed inspection plan details the inspections, less those related to physical protection scheduled through September 30, 2007. Significant inspections planned for this year include a Component Design Bases Inspection in March 2006, and a Triennial Fire Protection Inspection in September 2006. The inspection plan is provided to allow for the resolution of any scheduling conflicts and personnel availability issues well in advance of inspector arrival onsite. Routine resident inspections are not listed due to their ongoing and continuous nature. The inspections in the last 9 months of the inspection plan are tentative and may be revised at the mid-cycle review.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made 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).

G. Van Middlesworth

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If circumstances arise which cause us to change this inspection plan, we will contact you to discuss the change as soon as possible. Please contact me at (630) 829-9629 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

***/RA/***

Bruce Burgess, Chief  
Reactor Projects Branch 2  
Division of Reactor Projects

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

Enclosure: Duane Arnold Energy Center Inspection/Activity Plan

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**Duane Arnold**  
**Inspection / Activity Plan**  
**03/01/2006 - 09/30/2007**

Unit Number	Inspection Activity	Title	No. of Staff on Site	Planned Dates		Inspection Type
				Start	End	
	<b>CDBI</b>	<b>- COMPONENT DESIGN BASES INSPECTION</b>	<b>6</b>			
1	IP 7111121	Component Design Bases Inspection		03/20/2006	04/21/2006	Baseline Inspections
	<b>BI</b>	<b>- RAD INSTRUMENTATION</b>	<b>1</b>			
1	IP 7112103	Radiation Monitoring Instrumentation and Protective Equipment		08/21/2006	08/25/2006	Baseline Inspections
	<b>71111.11</b>	<b>- LIC OPERATOR REQUAL PROGRAM EVALUATION</b>	<b>2</b>			
1	IP 7111111B	Licensed Operator Requalification Program		09/11/2006	09/15/2006	Baseline Inspections
	<b>FPI</b>	<b>- TRIENNIAL FIRE PROTECTION INSPECTION</b>	<b>3</b>			
1	IP 7111105T	Fire Protection [Triennial]		09/11/2006	09/29/2006	Baseline Inspections
	<b>71114</b>	<b>- BIENNIAL EP EXERCISE</b>	<b>1</b>			
1	IP 7111401	Exercise Evaluation		10/16/2006	10/20/2006	Baseline Inspections
1	IP 71151	Performance Indicator Verification		10/16/2006	10/20/2006	Baseline Inspections
	<b>BI</b>	<b>- ACCESS CONTROL AND PI VERIF</b>	<b>1</b>			
1	IP 7112101	Access Control to Radiologically Significant Areas		11/06/2006	11/17/2006	Baseline Inspections
1	IP 7112102	ALARA Planning and Controls		11/06/2006	11/17/2006	Baseline Inspections
1	IP 71151	Performance Indicator Verification		11/06/2006	11/17/2006	Baseline Inspections
	<b>7112102</b>	<b>- ACCESS CONTROL &amp; ALARA (OUTAGE)</b>	<b>1</b>			
1	IP 7112101	Access Control to Radiologically Significant Areas		02/05/2007	02/16/2007	Baseline Inspections
1	IP 7112102	ALARA Planning and Controls		02/05/2007	02/16/2007	Baseline Inspections
	<b>PI&amp;R</b>	<b>- PI&amp;R BIENNIAL</b>	<b>3</b>			
1	IP 71152B	Identification and Resolution of Problems		04/02/2007	04/20/2007	Baseline Inspections
	<b>HEATSINK</b>	<b>- HEAT SINK INSPECTION</b>	<b>1</b>			
1	IP 7111107B	Heat Sink Performance		04/23/2007	04/27/2007	Baseline Inspections
	<b>7112202</b>	<b>- RADWASTE &amp; TRANSPORTATION</b>	<b>1</b>			
1	IP 7112202	Radioactive Material Processing and Transportation		04/30/2007	05/04/2007	Baseline Inspections
	<b>7112203</b>	<b>- REMP</b>	<b>3</b>			
1	IP 7112203	Radiological Environmental Monitoring Program (REMP) And Radioactive Material Control P		07/23/2007	07/27/2007	Baseline Inspections
	<b>MAINRULE</b>	<b>- MAINTENANCE RULE INSPECTION</b>	<b>1</b>			
1	IP 7111112B	Maintenance Effectiveness		08/06/2007	08/10/2007	Baseline Inspections
	<b>MOD5059</b>	<b>- MODIFICATIONS/50.59 INSPECTION</b>	<b>2</b>			
1	IP 7111102	Evaluation of Changes, Tests, or Experiments		09/10/2007	09/28/2007	Baseline Inspections
1	IP 7111117B	Permanent Plant Modifications		09/10/2007	09/28/2007	Baseline Inspections

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