

November 20, 2002

Mr. Mark Peifer  
Site Vice-President  
Duane Arnold Energy Center  
Nuclear Management Company, LLC  
3277 DAEC Road  
Palo, IA 52324

SUBJECT: DUANE ARNOLD ENERGY CENTER NOTIFICATION OF AN NRC TRIENNIAL  
FIRE PROTECTION BASELINE INSPECTION 50-331/03-02

Dear Mr. Peifer:

On January 27, 2003, the NRC will begin a triennial fire protection baseline inspection at the Duane Arnold Energy Center. This inspection will be performed in accordance with the NRC baseline Inspection Procedure 71111.05.

The schedule for the inspection is as follows:

- Information gathering visit - January 14 - 16, 2003
- On-site inspection activity - January 27 - 31 and February 10 - 14, 2003

The purpose of the information gathering visit is: (1) to obtain information and documentation needed to support the inspection; (2) to become familiar with the Duane Arnold Energy Center fire protection programs, fire protection features, post-fire safe shutdown capabilities and plant layout; and (3) to arrange administrative details such as office space, availability of knowledgeable office personnel and to ensure unescorted site access privileges.

Experience has shown that the baseline fire protection inspections are extremely resource intensive both for the NRC inspectors and the licensee staff. In order to minimize the inspection impact on the site and to ensure a productive inspection for both sides, we have enclosed a request for documents needed for the inspection. These documents have been divided into four groups. The first group lists information necessary to aid the inspection team in choosing specific focus areas for the inspection. It is requested that this information be provided to the lead inspector via mail or electronically no later than January 6, 2003. The second group lists information necessary to ensure that the inspection team is adequately prepared for the inspection. This information should be available on-site no later than January 14, 2003. The third group of requested documents are those items that the team will review, or need access to, during the inspection. Please have this information available by the first day of the on-site portion of the inspection, January 27, 2003. The fourth group lists information necessary to aid the inspection team in tracking issues identified as a result of the inspection. It is requested that this information be provided to the lead inspector as the

information is generated during the inspection. It is important that all of these documents are up to date and complete in order to minimize the number of additional documents requested during the preparation and/or the onsite portions of the inspection.

The lead inspector for this inspection is Ronald A. Langstaff. We understand that our regulatory contact for this inspection is Mr. John Karrick of your organization. If there are any questions about the inspection or the material requested, please contact the lead inspector at (630) 829-9747 or via e-mail at [ral4@nrc.gov](mailto:ral4@nrc.gov).

In accordance with 10 CFR 2.790 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). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

***/RA by Zelig Falevits Acting for/***

Ronald N. Gardner, Chief  
Electrical Engineering Branch  
Division of Reactor Safety

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

Enclosure: Fire Protection Inspection Document Request

cc w/encl: E. Protsch, Executive Vice President -  
Energy Delivery, Alliant;  
President, IES Utilities, Inc.  
Robert G. Anderson, Plant Manager  
State Liaison Officer  
Chairperson, Iowa Utilities Board  
The Honorable Charles W. Larson, Jr.  
Iowa State Representative

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Chairperson, Iowa Utilities Board  
The Honorable Charles W. Larson, Jr.  
Iowa State Representative

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## INITIAL DOCUMENT REQUEST

### FIRE PROTECTION INSPECTION DOCUMENT REQUEST

**Inspection Report:** 50-331/03-02

**Inspection Dates:** January 14 -16, 2003 (Information Gathering)  
January 27 - 31, 2003 (On-site Inspection Activity)  
February 10 - 14, 2003 (On-site Inspection Activity)

**Inspection Procedures:** IP 71111.05, "Fire Protection"

**Inspectors:** Lead Inspector: R. Langstaff  
Team Members: D. Schrum  
Contractor

#### ***Information Requested Prior to the Information Gathering Visit***

The following information is requested by January 6, 2003. If you have any questions regarding this information, please call the team leader as soon as possible. All information may be sent electronically (to R. Langstaff, e-mail address [ral4@nrc.gov](mailto:ral4@nrc.gov)) or provided on compact disc.

- (1) The reactor plant's Individual Plant Examination for External Events (IPEEE) for fire, results of any post-IPEEE reviews for fire, and listings of actions taken/plant modifications conducted in response to IPEEE information for fire. Alternatively, probabilistic risk analyses for fire and associated information, if it exists and is more recent than the IPEEE.
- (2) A list of fire areas requiring alternative shutdown capability, i.e., those areas for which 10 CFR Part 50, Appendix R, Section III.G requirements are satisfied under Section III.G.3.

#### ***Information Requested During the Information Gathering Visit (January 14 - 16, 2003)***

This information is requested to be available on-site during the information gathering visit.

- (1) The current version of the Fire Protection Program and Fire Hazards Analysis.
- (2) Listing of plant fire protection licensing basis documents.
- (3) The NRC Safety Evaluation Reports (SERs) and actual copies of the 50.59 reviews which form the licensing basis for the reactor plant's post-fire safe shutdown configuration.
- (4) A list of Generic Letter 86-10 evaluations.
- (5) A list of applicable codes and standards related to the design of plant fire protection features. The list should include National Fire Protection Association (NFPA) code versions committed to (i.e., the NFPA codes of record).
- (6) A list of plant deviations from code commitments.

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- (7) Post-fire safe shutdown systems and separation analysis.
- (8) Post-fire safe shutdown analyses.
- (9) Piping and instrumentation (flow) diagrams showing the components used to achieve and maintain hot standby and cold shutdown for fires outside the control room and those components used for those areas requiring alternative shutdown capability.
- (10) Plant layout and equipment drawings which identify the physical plant locations of hot standby and cold shutdown equipment for selected fire zones/areas (to be determined during information gathering visit).
- (11) Plant layout drawings which identify plant fire area delineation, areas protected by automatic fire suppression and detection, and the locations of fire protection equipment for selected fire zones/areas (to be determined during information gathering visit).
- (12) Listing of open and closed fire protection condition reports (problem identification forms and their resolution reports) for the past three years.
- (13) Listing of fire impairments for the previous year.
- (14) Pre-fire plans for selected fire zones/areas (to be determined during information gathering visit).
- (15) Plant operating procedures which would be used and describe shutdown for a postulated fire in selected fire zones/areas (to be determined during information gathering visit).
- (16) A listing of the protection methodologies identified under 10 CFR Part 50, Appendix R, Section III.G used to achieve compliance for selected fire zones/areas (to be determined during information gathering visit). That is, please specify whether 3-hour rated fire barriers (Section III.G.2.a), 20-foot separation along with detection and suppression (Section III.G.2.b), 1-hour rated fire barriers with detection and suppression (Section III.G.2.c), or alternative shutdown capability (Section III.G.3) is used for each selected fire zone/area.
- (17) One-line schematic drawings of the electrical distribution system for 4160 volts - alternating current (VAC) down to 480 VAC.
- (18) One-line schematic drawings of the electrical distribution system for 250 volts - direct current (VDC) and 125 VDC systems as applicable.
- (18) A listing of abbreviations/designators for plant systems.
- (19) Organization charts of site personnel down to the level of fire protection staff personnel.

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- (20) A phone list for on-site licensee personnel.

In addition, during the information gathering visit, it is requested that licensee staff be available for the following:

- (1) Informal discussion on plant procedures operators would use in the event of fire and under what conditions would the plant be shutdown using alternative shutdown methodology.
- (2) Informal discussion on the plant's safe shutdown cable routing database and the plant-wide cable routing database, as applicable.
- (3) A tour of alternative shutdown and risk significant fire areas.

### ***Information Requested to be Available on First Day of Inspection (January 27, 2003)***

- (1) Operator training for shutdown procedures in the event of fire.
- (2) Plant layout drawings which identify the general location of the post-fire emergency lighting units.
- (3) Current versions of the fire protection program implementing procedures (e.g., administrative controls, surveillance testing, fire brigade).
- (4) List of maintenance and surveillance testing procedures for alternative shutdown capability and fire barriers, detectors, pumps and suppression systems.
- (5) Coordination calculations and/or justifications that verify fuse/breaker coordination for selected fire zones/areas (to be determined during information gathering visit) that are fed off of the same electrical buses as components in the protected safe shutdown train.
- (6) List of maintenance procedures which routinely verify fuse breaker coordination in accordance with the post-fire safe shutdown coordination analysis.
- (7) Procedures/instructions that control the configuration of the reactor plant's fire protection program, features, and post-fire safe shutdown methodology and system design.
- (8) Procedures/instructions that govern the implementation of plant modifications, maintenance, and special operations, and their impact on fire protection.
- (9) Significant fire protection and post-fire safe shutdown related design change package descriptions (including their associated 10 CFR 50.59 evaluations) and Generic Letter (GL) 86-10 evaluations.
- (10) Gaseous suppression system pre-operational testing, if applicable, for selected fire zones/areas (to be determined during information gathering visit).

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- (11) Hydraulic calculations and supporting test data which demonstrate operability for water suppression systems, if applicable, for selected fire zones/areas (to be determined during information gathering visit).
- (12) Alternating current (AC) coordination calculations for 4160 VAC down to 480 VAC electrical systems.
- (13) The three most recent fire protection Quality Assurance (QA) audits and/or fire protection self-assessments.

### ***Information Requested to Be Provided Throughout the Inspection***

- (1) Copies of any corrective action documents generated as a result of the team's questions or queries during this inspection.
- (2) Copies of the list of questions submitted by the team members and the status/resolution of the information requested (provide daily during the inspection to each team member).