PROPOSED CHANGE RTS-238 TO THE DUANE ARNOLD ENERGY CENTER TECHNICAL SPECIFICATIONS

The holders of license DPR-49 for the Duane Arnold Energy Center propose to amend Appendix A (Technical Specifications) to said license by deleting current pages and replacing them with the attached, new pages. The List of Affected Pages is given below.

List of Affected Pages

3.13-3
3.13-9

Summary of Changes:

The following list of proposed changes is in the order that the changes appear in the Technical Specifications.

Page	Description of Changes
3.13-3	Revised the flow and discharge pressure requirements for annual fire pump Surveillance Requirement 4.13.B.1.e.
3.13-9	Revised the Bases for Section 3.13 to include a reference to safety-related equipment and delete excessive detail regarding pump sizing criteria.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
B. Fire Suppression Water System	B. Fire Suppression Water System
1. The Fire Suppression Water System shall be OPERABLE with:	1. The Fire Suppression Water System shall be demonstrated OPERABLE:
a. The river water supply system OPERABLE.	a. By verifying that the river water supply system is OPERABLE per Specification 3.5.J.
b. Two (2) fire pumps OPERABLE and aligned to the fire suppression yard header.	b. Once every week by starting the diesel-driven fire pump and operating it for at least 30 minutes.
c. Automatic initiation logic for each fire pump.	c. Once per month by starting the motor-driven fire pump and operating it for at least 15 minutes on recirculation flow.
	d. Once per six months by a flush of the yard header.
	e. Annually by verifying that each pump develops at least 3115 gpm with a discharge pressure of at least 96 psig.
	f. Once per three years by verifying the hydraulic performance of the system by starting the motor-driven fire pump and directing flow around the yard header. Under this condition the flow and pressure requirements described in Specification 4.13.B.1.e shall be met.
	g. Once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank, obtained in accordance with ASTM-D270-65, is within the acceptable limits specified in Table 1 of ASTM-D975-74 with respect to viscosity, water content and sediment.

3.13 BASES

The Fire Protection specifications are provided in order to meet the pre-established levels of operability during a fire. Requiring a patrolling fire watch with portable fire equipment if the automatic initiation is lost will provide (as does the automatic system) for early reporting and immediate fire fighting capability in the event of a fire occurrence. The Fire Protection System is supplied by two pumps aligned to the fire header.

The fire pumps take suction from the circulating water pump pit, which is supplied water from the river via the River Water Supply (RWS) pumps. The capacity of one RWS pump will meet the maximum requirement of the Fire Suppression Water System. However, the Technical Specification for the RWS System does not allow the plant to operate with less than two RWS pumps operable (Specification 3.5.J). Therefore, the limiting conditions for operation for the water supply to the Fire Suppression Water system will be dictated by the limiting conditions for operation of the River Water Supply System.

The fire pump size is based on the largest automatic system demand for the protection of safety-related equipment plus 1000 gpm for hose streams with the shortest portion of the fire loop out of service.

The CO_2 Fire Protection System is considered operable with a minimum of 9 tons (0.9 tank) CO_2 in storage. Within an hour, a continuous fire watch in the cable spreading room will be established if CO_2 fire protection is lost in this room and will continue until CO_2 fire protection is restored.

Early reporting and immediate fire fighting capability in the event of a fire occurrence will be provided (as with the automatic system) by requiring a patrolling fire watch if the number of detectors for a given protected zone is below the minimum operable required.

EVALUATION OF CHANGE WITH RESPECT TO 10 CFR 50.92

Background:

The operability of the DAEC fire pumps is defined by the ability of each pump to provide the maximum expected water demand for the protection of safety-related equipment. The Bases for Technical Specification Section 3.13 identify the area protected by Sprinkler System #4 as that which would require the largest automatic system demand. In accordance with Branch Technical Position APCSB 9.5-1, this demand, when combined with an additional 1000 gpm for hose streams, determines the flow and discharge pressure requirements for the fire pumps.

Due to the concerns detailed in NRC Inspection Report 90-015, a thorough evaluation of fire pump capacity requirements was conducted. This evaluation included an extensive review of the bases for the flow and pressure requirements of Sprinkler System #4 as well as a detailed walkdown of the associated piping and components. Following the investigation, we concluded that the existing values for Sprinkler System #4 did not accurately reflect the current piping configuration.

In response to these findings, a modification to the Fire Protection System was promptly installed during a brief plant shutdown. This modification significantly reduced the head losses associated with Sprinkler System #4. This allows the fire pumps to supply the required flow for Sprinkler System #4 at a lower pump discharge pressure, which

is well within the operating limits of either fire pump. Thus, the required redundancy in the fire suppression water system is restored.

This proposed amendment would revise the Surveillance Requirements for the fire pumps in order to reflect the revised system configuration. Changes to the associated Bases have also been made to eliminate unnecessary detail and improve clarity.

Iowa Electric Light and Power Company, Docket No. 50-331,
Duane Arnold Energy Center, Linn County, Iowa
Date of Amendment Request: February 22, 1991
Description of Amendment Request:

The proposed License Amendment would revise Sections 3.13/4.13 of the DAEC Technical Specifications to reflect correctly the current requirements for fire pump flow rate and discharge pressure. The associated Bases will be revised to reflect these changes and eliminate unnecessary details.

Specifically the proposed change:

1) Revises the requirements for fire pump flow rate and discharge pressure stated in annual Surveillance Requirement 4.13.B.1.e.

2) Revises the Bases for fire pump performance requirements and eliminates unnecessary information.

Following approval of this proposed amendment, appropriate changes will be incorporated into the corresponding portions of the Updated FSAR.

Basis for proposed no significant hazards consideration determination:

The Commission has provided standards (10CFR 50.92(c)) for determining whether a significant hazards consideration exists. A proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

1) The proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

   The proposed values for the fire pump flow rate and discharge pressure requirements accurately reflect the pump requirements for the worst-case system demand as set forth in Branch Technical Position APCSB 9.5-1 and involve no change in the interpretation of the industry standards for these requirements.

   The proposed pump performance requirements reflect a modification to the Fire Protection System installed in January, 1991, and information gained from a thorough review of the current system configuration. This modification was installed in accordance with approved design standards and significantly reduced the head losses associated with Sprinkler System #4. This allows the fire pumps to supply the required pressure and flow rate for Sprinkler System #4 at a lower pump

discharge pressure, well within the operating limits of either fire pump.

The proposed changes to the Bases for Section 3.13 are administrative and do not involve any increase in the probability or consequences of an accident previously evaluated.

2) The proposed amendment does not create the possibility of a new or different kind of accident from any previously evaluated.

The revision to the annual fire pump Surveillance Requirements reflects the flow rate and discharge pressure necessary to supply the worst-case system demand and does not create the potential for any accidents not previously evaluated.

The proposed changes to the Bases for Section 3.13 are administrative and do not create the possibility of a new or different kind of accident from any previously evaluated.

3) The proposed amendment does not involve a significant reduction in the margin of safety.

The revision of the annual fire pump Surveillance Requirements reflects the flow rate and discharge pressure necessary to supply the worst-case system demand and does not involve a reduction in the margin of safety.

The proposed changes to the Bases for Section 3.13 are administrative and do not involve a reduction in the margin of safety.

We conclude that the proposed Amendment, having been evaluated against the requirements of 10 CFR 50.92, does not involve a significant hazards consideration.

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