PROPOSED CHANGE RTS-173A 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. A List of Affected Pages is provided below.

List of Affected Pages

iiia
3.13-4
3.13-7
3.13-8
3.13-8a*
3.13-10 *new page

Page	Summary of Change
iiia	Revise "Fire Barrier Penetration Fire Seals" to "Fire Rated Assemblies." This change is one of a change in nomenclature to appropriately reflect the addition of fire doors, raceway wrap and structural steel to the technical specifications.
3.13-4	Modify Specification 3.13.B.3 to require a patrolling fire watch in the interim period when the fire suppression water system is inoperable and prior to the establishing of a backup fire suppression water system. Clarification is also provided for Specification 3.13.B.3.c to eliminate redundancy with the reporting requirements of 10 CFR 50.73(a)(2)(i)(A). Revise Specification 3.13.B.3.d to provide clarification regarding the required action should a fire watch patrol or backup suppression water system not be established. Revise Specification 3.13.B.4 for clarity.
3.13-7	Establish a requirement for an interim fire watch until an additional hose can be routed from an operable hose station to the unprotected area.
3.13-8	Replace the heading "Fire Barrier Penetration Fire Seals" with "Fire Rated Assemblies" and add LCOs for fire doors. Revise surveillance frequency for penetration seals to 35% per operating cycle. Add surveillance requirements for fire doors.
3.13-8a	Establish new surveillance requirements and LCOs for structural steel fireproofing and raceway wrap. Provide interim compensatory measures if penetration seals, fire doors, raceway wrap and structural steel fireproofing are not functional as required in the accompanying LCO.
3.13-10	Revise the bases to include inspection of fire doors, raceway wrap and structural steel fireproofing.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
	h. At least once per 18 months, during shutdown, by verifying the diesel starts from ambient conditions on the auto-start signal and operates for $\geq$ 30 minutes while loaded with the fire pump.
	i. At least once per 31 days by verifying that the diesel day tank contains fuel for two hours operation.
	j. At least once per month by verifying that each valve in the flow path is in its correct position.
2. When only one pump is OPERABLE, restore the second fire pump to OPERABLE status within 7 days or prepare and submit a Special Report to the Commission pursuant to Specification 6.11 within the next 30 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system.	2. When it is determined that only one pump is OPERABLE, that pump shall be demonstrated OPERABLE immediately and daily thereafter until Specification 3.13.B.1 can be met.
3. If the Fire Suppression Water System is not OPERABLE:	
a. Within one hour establish an hourly fire watch patrol in all power block buildings and maintain it until a backup fire suppression water system is established.	
b. Establish a backup fire suppression water system within 24 hours.	
c. If neither fire pump is OPERABLE within 24 hours, submit a Special Report to the Commission pursuant to Specification 6.11 within 30 days outlining the cause of the inoperability and the plans for restoring the system to OPERABLE status.	
d. If Specifications 3.13.B.3.a or 3.13.B.3.b cannot be met, place the reactor in HOT STANDBY within the next six (6) hours and in COLD SHUTDOWN within the following thirty (30) hours.	
4. When maintenance on the circulating water/fire pump pit is being performed, the following conditions shall be met:	
a. The River Water Supply System will be maintained such that the fire water supply can be restored within one hour; and	
b. An hourly fire watch patrol will be established in all power block buildings.	

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
E. Fire Hose Stations	E. Fire Hose Stations
1. The fire hose stations in the following locations shall be operable whenever safety-related equipment in the areas protected by the fire hose stations is required to be operable. (See Table 3.13-2)	1. Each fire hose station shall be verified to be operable: a. At least once every three months by visual inspection of the station to assure all equipment is available and the pressure in the standpipe is within limits, and that all valves in the flowpath to the hose station are open. b. At least once per 12 months by removing the hose for inspection and repacking and replacing all gaskets in the couplings that are degraded. c. At least once per three years partially open hose station valves to verify valve operability and no blockage. d. At least once per three years conduct a hose hydrostatic test at a pressure 50 psig greater than the maximum pressure available at that hose station.
2. With a hose station inoperable, restore the hose station to operable status within 1 hour or, establish a fire watch with portable extinguishing equipment until an additional hose can be routed from an operable hose station to the unprotected area.	

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
F. Fire Rated Assemblies	F. Fire Rated Assemblies
1. All fire barrier penetration seals protecting safety-related areas shall be intact.	1. Fire barrier penetration seals shall be verified to be functional by: a. A visual inspection of approximately 35% of the fire barrier penetration seals once per operating cycle, with 100% of the fire barrier penetration seals visually inspected within a period of five years. b. A visual inspection of a fire barrier penetration seal following maintenance to verify that it has been returned to its original condition.
2. All fire doors protecting safety related areas shall be functional.	2. Fire doors shall be verified to be functional: a. At least once per operating cycle via visual inspection to verify integrity and assure no blockage exists. b. Prior to restoring a fire door to functional status following repairs or maintenance to verify it has been returned to its original condition.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
3. Fire protection raceway wrap and structural steel fireproofing shall be intact.	3. Fire protection raceway wrap and structural steel fireproofing shall be verified to be functional by: a. A visual inspection of approximately 35% of the fire protection raceway wrap and structural steel fireproofing at least once per operating cycle with 100% of the fire protection raceway wrap and structural steel fireproofing visually inspected within a period of five years. b. Returning the fire protection raceway wrap and structural steel fireproofing to its original condition following repairs or maintenance.
4. If Specification 3.13.F.1, 3.13.F.2, or 3.13.F.3 cannot be met: a. A continuous fire watch shall be established within 1 hour on at least one side of the affected area, or b. Verify the OPERABILITY of fire detectors on at least one side of the non-functional fire barrier and establish an hourly fire watch patrol or, c. Verify the OPERABILITY of fire detectors in the affected fire zone and establish an hourly fire watch patrol.	

Only hose stations and sprinkler/spray systems protecting safety related systems are required to be operable per the requirements of this Technical Specification. All other hose stations and sprinkler/spray systems are maintained per the regular plant maintenance and inspection procedures.

4.13 BASES

Periodic testing of the Fire Protection System will provide positive indication of its operability. If only one of the pumps supplying the Fire Protection System is operable, the pump that is operable will be checked immediately and daily thereafter to demonstrate operability. If the CO_2 System becomes inoperable in the cable spreading room, a continous fire watch will be established within an hour.

Wet fire header flushing, spray header inspection for blockage, and nozzle inspection for blockage will prevent, detect, and remove buildup of sludge or other material to ensure continued operability.

Semiannual tests of heat and smoke detectors are in accordance with the NFPA code.

One detector in zones 1 or 3 (control auxiliary panel room) may be inoperable without making that fire detection zone inoperable due to the number of adjacent detectors in these zones providing coverage. All the fire detection equipment in zones 15 to 16 (essential switchgear rooms), zones 13, 14 and 17 (battery rooms), zones 21 and 22 (diesel-generator rooms) and zone 2 (control auxiliary panel room) are considered essential for adequate fire detection in these areas and are therefore all required to be operable. Up to three detectors for each zone in the cable spreading room (zones 5, 6, 7 and 8) can be inoperable without making that zone inoperable, as long as there are no adjacent detectors which are also inoperable. Adjacent detectors will provide coverage.

Smoke detectors will be tested "in-place" using inert gas applied by a pyrotronics type applicator which is accepted throughout the industrial fire protection industry for testing products of combustion detectors or by use of the MSA chemical smoke generators.

Circuits checks by initiation of end of the line or end of the branch detectors will more thoroughly test the parallel circuits than testing on a rotating detector basis. This test is not a detector test, but is a test to simulate the effect of electrical supervision as defined in the NFPA Code 72 A-18, Article 240.

Inspection of fire doors at least once per operating cycle will verify their integrity and thus their ability to maintain the integrity of the associated fire barrier and prevent fire propagation outside of the affected fire zone.

Inspection of fire protection raceway wrap and structural steel fireproofing will verify their ability to perform their intended design function which is to mitigate the effects of a fire in the affected fire zone.

EVALUATION OF CHANGE WITH RESPECT TO 10 CFR 50.92

Summary

The purpose of this proposed Technical Specification (TS) change request, RTS-173A, is to incorporate appropriate surveillance requirements for fire doors, raceway wrap and structural steel fireproofing into the Duane Arnold Energy Center (DAEC) Technical Specifications. Also, a new provision has been added which requires that a fire watch patrol be established in all power block buildings whenever the Fire Suppression Water System is not operable. The fire watch patrol will remain in effect until a backup fire suppression system is established. It is noted that this proposed TS change request meets or exceeds the requirements of 10 CFR Part 50, Appendix R.

In accordance with the requirements of 10 CFR 50.92, the enclosed application is judged to involve no significant hazards based upon the following information:

(1) Does the proposed license amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: The addition of new surveillance requirements and limiting conditions for operation (LCOs) for fire doors, raceway wrap and structural steel fireproofing will not increase the probability or consequences of an accident. The proposed surveillance requirements and limiting conditions for operation (LCOs) will be effective in assuring that, in case of fire, the fire doors, raceway cables and structural steel will perform their intended design function which is to maintain the integrity of the associated fire barrier and prevent fire propagation outside of the affected fire zone.

Adding a new requirement which establishes a fire watch patrol in all power block buildings until a backup fire suppression water system is available provides a measure of protection and conservatism which does not increase the probability or consequences of an accident.

(2) Does the proposed license amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: The addition of the proposed requirements for surveillance and associated limiting conditions for operation (LCO) will not create a new or different kind of accident from those evaluated in Chapter 15 of the DAEC Updated Final Safety Analysis Report. Inspection of fire doors, raceway wrap and structural steel fireproofing will assure that, should a fire occur, these fire protection features will decrease the probability of fire propagation outside of the affected fire zone. Containing a postulated fire will decrease the possibility of spurious operation of safety-related equipment due to electrical short circuits.

Adding a new requirement which establishes a fire watch patrol in all power block buildings until a backup fire suppression water system is available provides a measure of protection and conservatism which does not create the possibility or a new or different kind of accident.

(3) Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No. The proposed surveillance and associated LCO requirements increase the margin of plant safety by assuring the integrity of fire doors, raceway wrap and structural steel fireproofing. Periodic inspection of the fire protection features will assure that a postulated fire will be contained within the affected fire zone.

Adding a new requirement which establishes a fire watch patrol in all power block buildings until a backup fire suppression water system is available provides a measure of protection and conservatism which does not involve a significant reduction in the plant's margin of safety.

In the April 6, 1983 Federal Register, the NRC published examples of amendments that are not likely to involve a significant hazards concern. Examples i and ii of that list state:

> A purely administrative change to technical specifications: for example, a change to achieve consistency throughout the technical specifications, correction of an error, or a change in nomenclature.
>
> A change that constitutes an additional limitation, restriction, or control not presently included in the technical specifications: for example, a more stringent surveillance requirement.

Iowa Electric believes this proposed license amendment does not involve a significant hazards concern as it clearly fits within the scope of the above examples.