TABLE 3.2-B (Continued)

INSTRUMENTATION THAT INITIATES OR CONTROLS THE CORE AND CONTAINMENT COOLING SYSTEMS

Minimum No. of Operable Instrument Channels Per Trip System (1)	Trip Function	Trip Level Setting	Number of Instrument Channels Provided by Design	Remarks
1	Reactor Low Level (inside shroud)	$\geq$ + 305.5 in. above vessel zero (2/3 core height)	2 Instrument Channels	Prevents inadvertent operation of containment spray during accident condition
2	Containment High Pressure	> 2.0 psig	4 Instrument Channels	Prevents inadvertent operation of containment spray during normal operation
1	Confirmatory Low Level	$\leq$ + 170 in. indicated level (4)	2 Instrument Channels	ADS Permissive
2	High Drywell Pressure	$\leq$ 2.0 psig	4 HPCI Instrument Channels	Initiates Core Spray, LCPI and HPCI pumps. In conjunction with 450 psig reactor pressure, initiates operation of LPCI and core spray valves.
2	Reactor Low Pressure	$\geq$ 450 psig	4 Instrument Channels	Permissive for open Core Spray and LCPI Injection valves. (High drywell pressure starts LPCI and Core Spray pumps). In conjunction with triple low water level, cycles core spray and LPCI injection valves open.

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SAFETY ANALYSIS

1.0 INTRODUCTION

By letter dated October 13, 1987, we submitted an application to amend the Duane Arnold Energy Center (DAEC) Technical Specifications (TSs) appended to Facility Operating License No. DPR-49. We propose to revise a trip level setting for the Containment Spray Subsystem of the Residual Heat Removal (RHR) System such that containment spray operation is not allowed at containment pressure below 2 psig. Currently, the TSs require this trip level setting to be between 1 and 2 psig. The proposed trip level setting is requested to resolve an inconsistency between the TS's and the DAEC Final Safety Analysis Report (FSAR).

2.0 EVALUATION

Table 3.2-B of the DAEC TSs, "Instrumentation That Initiates or Controls the Core and Containment Cooling systems," currently requires the trip level setting for the Containment High Pressure instrument to be between 1 and 2 psig. The remarks associated with this trip level setting state that the purpose of the setting is to "prevent inadvertent initiation of containment spray during accident conditions." The DAEC FSAR, in its analysis of the Suppression Pool to Reactor Building vacuum relief system, assumes the trip level setting to be greater than 2 psig and further states that the design basis limiting transient for this system is the inadvertent initiation of containment spray when the containment is at the 150°F maximum normal operating temperature.

The requested changes resolve this inconsistency between the DAEC FSAR and TSs by revising the TSs to agree with the FSAR design basis.

We performed an analysis to determine the results of initiating containment spray at a pressure as low as the lower setpoint as specified by the current DAEC TSs (1 psig) during the limiting design transient. The results of this analysis show that no design limit was exceeded and therefore, no significant hazards to the public were created.

The requested changes restore the original plant margin of safety and therefore, we find the proposed changes acceptable.

Specific Changes to the DAEC TS's are:

1) The Containment High Pressure trip level setting in Table 3.2-B is revised to allow the setting to be greater than 2 psig.

2) The remarks relating to the Containment High Pressure trip level setting in Table 3.2-B are revised to state "prevents inadvertent operation of containment spray during normal operation."