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Al Kaplan

VICE PRESIDENT
NUCLEAR GROUP

February 8, 1988
PY-CEI/NRR-0757 L

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Perry Nuclear Power Plant
Docket No. 50-440
ECCS Actuation With Injection
Into The Reactor Coolant System
Special Report - NP-41-04

Dear Sir:

Attached is a Special Report concerning an Emergency Core Cooling System (ECCS) actuation with injection into the Unit 1 reactor vessel. This report satisfies the conditions of Perry Technical Specifications 3.5.1 and 6.9.2.

Please feel free to contact me should you have any further questions.

Very truly yours,

Al Kaplan
Vice President
Nuclear Group

AK:njc

Attachment

cc: T. Colburn
K. Connaughton
USNRC Region III
Director, Office of Resource Management

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Special Report

ECCS Actuation With Injection Into The Reactor Coolant System

On November 16, 1987 at 0535, the High Pressure Core Spray (HPCS) system automatically actuated and injected to the reactor vessel (RPV) due to the RPV water level reaching Level 2 (+129.8 inches above Top of Active Fuel). Injection continued until RPV Level 8 (+219.5 inches above TAF) was reached at 0538.

This ECCS actuation was part of a planned sequence of events for the successful performance of Startup Test Instruction (STI)-B21-025B, "Full Reactor Isolation". This test was performed to determine the reactor transient behavior that results from the simultaneous full closure of all Main Steam Isolation Valves. Proper automatic response for the Feedwater, Reactor Core Isolation Cooling, Reactor Recirculation, HPCS, and pressure relief (Safety Relief Valves) systems was verified. RPV Level 2 was reached due to void collapse, and the minimum water level during the event was approximately 112 inches above TAF. HPCS operated as designed achieving a system flow of 3910 gpm with RPV pressure at 942 psig twenty-seven seconds after initiation.

This was the fourth HPCS injection cycle to date and the injection nozzle usage factor is currently less than 0.70.