DD-90-06

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

(Thomas E. Murley, Director)

In the Matter of	
CLEVELAND ELECTRIC ILLUMINATING COMPANY, ET AL.	Docket No. 50-440
	10 CFR 2.206
(Perry Nuclear Power Plant Unit 1)	

DIRECTOR'S DECISION UNDER 10 CFR 2.206

I. INTRODUCTION

By Petition of April 6, 1990, Ms. Susan Hiatt, on behalf of Ohio Citizens for Responsible Energy, Inc., (Petitioner), requested that the U.S. Nuclear Regulatory Commission (NRC) order the shutdown of the Perry Nuclear Power Plant, Unit 1, (Perry) and issue a Notice of Violation and impose a civil penalty on Cleveland Electric Illuminating Company (licensee). By letter of May 29, 1990, the NRC acknowledged receipt of the Petition and denied Petitioner's request for immediate shutdown of Perry.

The Petitioner asserts that in November 1989, the licensee failed to return one of two redundant trains of the essential service water (ESW) system to an operable status within the time limit specified by the technical specifications, and subsequently failed to commence a shutdown of the plant as required by the technical specifications. The Petitioner asserts that Perry has been operating in this plant condition since

November 1989. The Petitioner asserts that because the licensee failed to comply with the provisions of the technical specifications, the licensee operated Perry in violation of its operating license during the period from November 1989 to April 6, 1990.

The NRC has reviewed the Petition regarding the alleged operation of the ESW system during the specified time period, and concludes that the licensee did not operate Perry in a manner contrary to that permitted by the operating license, as defined by the requirements of the technical specifications. My formal decision in this matter follows.

II. BACKGROUND

On April 3, 1990, the licensee declared an "alert" in accordance with the Perry Emergency Plan because of the declared inoperability of both loops "A" and "B" (also known as Divisions 1 and 2, respectively) of the ESW system.

While conducting a surveillance test of the Division 1 emergency diesel generator on April 3, 1990, the licensee declared that the "A" loop of the ESW system was inoperable when a manway gasket failed on the pump's discharge strainer at 12:35 a.m. The resulting water spray wet several electrical components in the immediate vicinity of the discharge strainer, including the motor control center of ESW screen wash pump "A", causing the loss of that pump. At the time of the event, screen wash pump "B" for the Division 2

ESW traveling screen was out of service for maintenance and had been out of service since November 1989. At 2:32 a.m., as a result of both screen wash pumps being inoperable, the licensee considered both traveling screens to be inoperable because of the loss of automatic backwash capability. With both of the redundant traveling screens considered inoperable, the licensee declared Divisions 1 and 2 of the ESW system inoperable as well as the systems which they supported. At 2:37 a.m., the licensee declared an "alert" in accordance with its emergency plan. At 6:01 a.m., the licensee terminated the "alert" after restoring ESW loops "A" and "B" and their support systems to operable status, and after consulting with officials of the State of Ohio and of the local county.

III. DISCUSSION

The Petition is based on the assumption that in November 1989, Division 2 of the ESW system could not perform its required safety function when its screen wash pump was removed from service, and as such, Division 2 and the systems which it supports should also have been declared inoperable. Based on this assumption, Petitioner asserted that the licensee had 72 hours to restore the Division 2 ESW system screen wash pump to service, and failing to do so, should have placed Perry, Unit 1, in hot shutdown within the next 12 hours and in cold shutdown within the following 24 hours as required by the technical specifications for the supported systems. The Petitioner

asserted that by not shutting down the plant as required, the licensee operated Perry, Unit 1, in violation of its license during the period November 1989 to April 6, 1990. As a result, Petitioner requested an immediate shutdown of Perry, Unit 1, and enforcement action against the licensee. By letter of May 29, 1990, I denied Petitioner's request for an immediate shutdown.

The staff has determined that Petitioner's assumption is incorrect regarding the inability of Division 2 of the ESW system to perform its required safety function when its screen wash pump is inoperable.

The ESW system supplies cooling water to the plant from Lake Erie and operates during hot standby, cold shutdown, and accident conditions. The ESW system is a safety-related system consisting of three independent and redundant cooling loops. Loops "A" and "B" provide cooling water to the heat exchangers of the emergency diesel generators, the emergency closed cooling system, the residual heat removal system, and the fuel pool cooling system. Loop "C" provides cooling water to the heat exchanger for the high pressure core spray (HPCS) diesel generator and to the HPCS pump room cooler. Each loop includes a full capacity pump located in the ESW pumphouse, which takes suction from a common forebay. Two parallel, independent, and redundant full capacity traveling screens located in the forebay are provided for rough filtration and debris removal. Debris that accumulates on the traveling screens is removed by water spray from their respective screen wash pumps. The ESW system pumps are not normally operating. Instead, all loops of the system are initiated manually or are initiated automatically by

loss-of-coolant accident (LOCA) signals or by the loss of power to the associated electrical bus. The ESW system is designed such that any two of the three loops can provide all necessary cooling to meet the requirements in the technical specifications during emergency and accident conditions.

The technical specifications require that each of the ESW loops be operable and that, if a loop becomes inoperable which is associated with system(s) or component(s) required to be operable, then those associated system(s) or component(s) be declared inoperable and that action required by those applicable specifications be taken.

In November 1989, at the time ESW screen wash pump "B" was taken out of service, the operability of loop "B" of the ESW system was not affected. The forebay area of the ESW pumphouse can serve the simultaneous needs of both Units 1 and 2 (although Unit 2 is currently not operational), i.e., the needs of the six ESW pumps and the respective unit's fire pumps. The two traveling screens located in the pumphouse structure are arranged in parallel; the screen wash pump designations "A" and "B" correspond to their respective traveling screen only, and do not denote their alignment to ESW loops "A" or "B." Each of the traveling screens is of sufficient size to independently supply the ESW flow requirement under emergency conditions for all six ESW pumps (i.e., ESW loops "A", "B", and "C" for Perry, Units 1 and 2). Because traveling screen "A" and its screen wash pump were still operable when ESW screen wash pump "B" was removed from service, the ability of ESW loops "A" and "B" to perform their required safety function was not

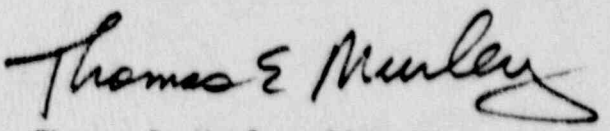
adversely affected. Hence, ESW loops "A", "B" and "C" remained operable. Consequently, there is no basis for any NRC enforcement action on the allegation of a violation of technical specifications. On August 16, 1990, the NRC did issue a Severity Level IV violation (no civil penalty) for the licensee's failure to take prompt corrective action to repair ESW screen wash pump "B", as required by 10 CFR Part 50, Appendix B, Criterion XVI.

IV. CONCLUSION

Based on the foregoing discussion, I have determined that the Petitioner's claim that the licensee violated the terms and conditions of the Perry Nuclear Power Plant, Unit 1 license, as defined by the plant technical specifications, is not supported. Thus, the Petition provides no basis for ordering the shutdown of Perry, Unit 1, or for the issuance of enforcement action. I hereby deny the Petitioner's request to suspend operation of Perry, Unit 1, and to take enforcement action against the licensee, pursuant to 10 CFR 2.206.

In accordance with 10 CFR 2.206(c) a copy of this decision will be filed with the Secretary of the Commission for the Commission's review.

FOR THE NUCLEAR REGULATORY COMMISSION



Thomas E. Murley, Director
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 25th day of September 1990