American Electric Power System
INDIANA & MICHIGAN ELECTRIC COMPANY
DONALD C. COOK NUCLEAR PLANT
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April 8, 1981

Mr. J. G. Keppler, Regional Director
Office of Inspection and Enforcement
United States Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Operating License DPR-74
Docket No. 50-316

Dear Mr. Keppler:

This letter is to inform you of an incident which occurred at the Indiana and Michigan Electric Company's Donald C. Cook Nuclear Plant on March 31, 1981 which was reported to Mr. E. Swanson of the NRC on the date of the occurrence and to your office in a letter dated March 31, 1981.

During a scheduled eighteen month surveillance of the Unit 2 Spray Additive Tank level magnetrol it was noted that the tank was only approximately one quarter full. Actual level measurements verified 1654 gallons of sodium hydroxide in the tank. This is in violation of Technical Specification 3.6.2.2 which requires a minimum volume of 4000 gallons. As previously stated at the time of discovery the low level alarm contacts were wired backwards precluding the low level alarm from annunciating.

Technical Specification verification of level had been performed by noting the absence of the low level alarm which is set to approximately 4190 gallons. A review of this surveillance requirement during an audit conducted by the American Electric Power Service Corporation Nuclear Safety and Design Review Committee had identified this as a potential problem. A change was to be initiated to satisfy the surveillance requirement by an actual level determination using tygon hose. This change was never completed and surveillance remained as previously stated.

Investigation and review of all plant log books and data sheets indicate the sodium hydroxide left the Spray Additive Tank and entered the waste disposal system on or about December 21, 1979. Significant elevation of the waste evaporator concentrates pH occurred during this time with no manual caustic additions. The low level alarm on the Spray Additive Tank was found to be wired backwards on March 31, 1981. At the previous surveillance, September 29, 1979 the tank level was not low and the low level alarm was wired properly. Heavy construction activity in the Spray Additive Tank Room is

suspected to have resulted in the determination of the level alarm wiring with a subsequent reconnection according to the wiring drawings. This prevented the loss of the sodium hydroxide to be detected by the tank's low level alarm.

The 1654 gallons of 32 percent sodium hydroxide leaves a volume of 1155 available for injection as the low-low level alarm cutout leaves 499 gallons in the tank. Calculations by the American Electric Power Service Corporation Chemical Section indicate this would result in a final sump pH sump of 7.75.

As a result, the loss of Coolant Accident Iodine removal capability has been re-evaluated accounting for the as found tank condition. This evaluation shows that the containment spray system would have had an adequate amount of spray additive (NaOH) to minimize containment iodine and evolution of iodine from the sump water in the event of a design basis accident. The FSAR analyses were performed using very conservative assumptions for the spray additive tank and resulted in our present Technical Specification limitations. Therefore, this event would not have any adverse effect on the health and safety of the public.

Completed plant actions to prevent reoccurrence include the revision of all applicable plant procedures to incorporate the actual level verification via tygon hose, the writing of a request for change (RFC) to correct wiring errors in the plant electrical drawings and the locking and chaining shut of the tank drain valves as per Operations STP 35 "Valve Position Logging". Annunciator response procedures and sampling procedures will be reviewed with the appropriate plant personnel by April 30, 1981.

Sodium hydroxide was received on-site and the Unit 2 Spray Additive Tank volume verified to be above Technical Specification minimum volume on April 4, 1981.

Sincerely,

D. V. Shaller
Plant Manager

/pjv

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