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L81-590 FILE: RR 2 (NP-09-81-01)

June 25, 1981

Docket No. 50-346 License No. NPF-3

Mr. James G. Keppler Regional Director, Region III Office of Inspection and Enforcement U. S. Nuclear Regulatory Commission 799 Roosevelt Road Glen Ellyn, Illinois 60137

Dear Mr. Keppler:

Enclosed are two copies of Reportable Occurrence NP-09-81-01, which are being submitted to you in accordance with Technical Specification 6.9 to provide 30 day written notification of tals occurrence.

Yours truly,

Tong O. Munay lors

Terry D. Murray Station Superintendent Davis-Besse Nuclear Power Station

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Enclosure

cc: Mr. Norman Haller, Director Office of Management Program Analysis Encl: 2

> Ohio Environmental Protection Agency Northwest District Office Encl: 1



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THE TOLEDO EDISON COMPANY

EDISON PLAZA

JUN 2 9 1981

TOLEDO, OHIO 43652

## TOLEDO EDISON COMPANY DAVIS-BESSE NUCLEAR POWER STATION UNIT ONE REPORTABLE OCCURRENCE NP-09-81-01

DATE OF EVENT: May 26, 1981

FACILITY: Davis-Besse Unit 1

IDENTIFICATION OF OCCURRENCE: Discharge temperature for station liquid effluents slightly exceeded 20°F limit above lake temperature

Conditions Prior to Occurrence: The unit was in Mode 1 with Power (MWT) = 1525 and Load (Gross MWE) = 495

Description of Occurrence: On May 26, 1981, the station learned that on December 20, 1980 at 1200 and 1900 hours and on December 21, 1980 at 1100 hours, the maximum discharge temperature differential, above ambient lake temperature, was slightly exceeded. In all cases, the limit was exceeded by only 1° to 4°F, and the differential was restored to within limits within one hour. Environmental Technical Specification 2.1.1 limits the maximum discharge temperature for station liquid effluents to 20°F above lake temperature. When the temperature is exceeded, dilution water shall be supplied from the dilution pump to the collection box to keep the discharge temperature difference within the limits specified. The dilution pump was on during these times but the limit was still slightly exceeded.

Designation of Apparent Cause of Occurrence: The cause of the occurrence is the difficulty in maintaining a balance between operating to prevent exceeding the 20°F discharge differential limit and operating to prevent damage to the cooling tower internals. During very cold weather conditions, ice will form in the cooling tower if the circulating water is not hot enough before it is sprayed into the tower To avoid ice buildup and the related damage, a bypass mode of operation is used when the circulating water temperature is less than 85°F. This diverts water directly into the basin. When the temperature of the water recovers, it is then re-directed back into the cooling tower. However, while in bypass operation, the basin temperature increases which increases the blowdown temperature. This in turn will cause the discharge temperature to increase, even with the dilution pump on, to the point where the limit is slightly exceeded. This is most likely to occur on very cold winter days during a plant startup or low power operation.

Analysis of Occurrence: There was no danger to the health and safety of the public or station personnel. The slight increase in temperature above the limit and its short duration should not cause environmental damage.

Corrective Action: In each occurrence the discharge temperature differential was restored to within limits within an hour when circulating water flow was re-directed through the cooling tower when temperatures allowed. A facility change request has been initiated to modify the environmental technical specifications to eliminate non-radiological requirements.

## TOLEDO EDISON COMPANY DAVIS-BESSE NUCLEAR POWER STATION UNIT ONE REPORTABLE OCCURRENCE NP-09-81-01

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Failure Data: Prior occurrences of the temperature limit being exceeded were reported in reports NP-09-78-03 and NP-09-80-01.

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