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--NOTE: ABSTRACT AND TEXT ENTIRELY REWRITTEN--

On November 27 and 28, 1985, the plant was in Operational Condition 4 (Cold Shutdown). While discharging water from waste sample tanks to Lake Erie using the Circulating Water (CW) decant line, an operator discovered that the sample pump for the radiation monitor that monitors the effluent had not been placed in service. This was in violation of technical specification 3.3.3.11. The duration of the release before the monitor was pliced in service was about 14 hours. The water released from the sample tanks was analyzed before it was discharged. The analysis showed that the radioactivity of the water was below the lower limit of detectability (LLD) as defined in the plant's technical specifications (i.e., there was no radioactivity detected in the samples). A non-licensed operator had failed to place the sample pump in operation and a Nuclear Supervising Operator (NSO) failed to recognize the operator's error because they did not use the System Operating Procedure (SOP) during system lineup. The Nuclear Assistant Shift Supervisor (NASS) did not ensure that the NSO and NPPO performed the system lineup using the SOP. The NASS and NSO were counseled and issued a written record of an oral reprimand by Operation's management. A Standing Order has been issued that requires independent verification by a licensed operator of procedure steps that involve radiation monitoring of liquid effluents that are released using the CW decant line.

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NRC Form 366

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On November 27 and 28, 1985, the plant was in Operational Condition 4 (Cold Shutdown) for a maintenance and modification outage. At 1856 hours on November 27, the east decant pump of the Circulating Water (CW) system was started in preparation for discharging two waste sample tanks, Gl101A004 A and B. The process involves pumping the contents of a waste sample tank to a line where water from the Circulating Water reservoir is flowing, and the mixed flows are then discharged to Lake Erie. The waste sample tanks contain water from the liquid radwaste system after the waste has been processed. The water in the waste sample tanks that was discharged on November 27 and 28, had been processed through precoat filters and demineralizers.

The purpose of mixing the water from the sample tanks with water from the Circulating Water system reservoir is to ensure that the discharged water meets the requirements of technical specification 3.11.1.1 for radioactive liquid effluents. Monitoring of the effluent to ensure technical specification compliance is accomplished through two radiation monitors. DllN007 monitors the line from the waste sample tanks, and DllN402 mon..ors the Circulating Water reservoir decant line, which is the combined discharge line.

Grab samples were taken from both tanks and analyzed before discharging the tanks in accordance with procedure 23.718.05 "Waste Sample Tanks Processing and Disposition". The analysis showed that the radioactivity of the water in the tanks was less than the lower limit of detectability (LLD) as defined in Technical Specification Table 4.11.1.1.1-1. Therefore, no dilution water from the CW reservoir was required. However, diluting water from the CW reservoir was used because it is required by procedure to keep the decant line filled to allow proper operation of monitoring instruments.

In preparation for discharging the waste sample tanks, the Control Room Nuclear Supervising Operator (NSO) directed a Nuclear Power Plant Operator (NPPO) to perform the necessary system lineup. One of the steps in performing the system lineup is to place radiation monitor DllN402 in service by placing its sample pump in operation. The sample pump provides a sample of effluent from the CW reservoir decant line for DllN402. The NPPO failed to perform this step.

At 1936 hours on November 27, 1985, the control room commenced discharging from waste sample tank "A" without radiation monitor DllN402 in service. At 0334 hours on November 28, tank "A" was completed, and at 0410 hours discharging from tank "B" was commenced. At 0930 hours while discharging of tank "B" was in progress, the Nuclear Shift Supervisor (NSS) was notified by an operator on rounds that the sample pump for radiation monitor DllN402 was not in service. The NSS instructed the

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rounds operator to place the radiation monitor sample pump in service. Placing the sample pump in service restored the monitor to operable status, which was necessary to satisfy the Limiting Condition for Operation (LCO) of technical specification 3.3.7.11 for radioactive liquid effluent monitoring instrumentation. The NSS decided to continue discharging tank "B" on the basis that there was no detectable radioactivity in the effluent. The NSS also contacted the on-call supervisor to notify Nuclear Production management of the situation.

Just after the radiation monitor sample pump was placed in service, the "Decant Line Radiation Monitor Low Flow" alarm was received in the control room, about 0943 hours. This alarm, which indicated that a potential problem existed with flow from the decant line to radiation monitor DllN402, continued to cycle in and out and would not clear. In accordance with the Alarm Response Procedure ARP 3D57 and technical specification 3.3.7.11, about 1040 hours the NSS directed chemistry to take a grab sample of the effluent for analysis. This sample was obtained at 1120 hours. At 1135 hours discharging tank "B" was completed. At 1345 hours Chemistry reported that the results of the analysis of this grab sample also showed no detectable radioactivity (i.e., less than LLD).

Technical specification 3.3.7.11 requires the CW Reservoir Decant Line monitor D11N402 to be operable at all times. With D11N402 inoperable, the Limiting Condition for Operation allows effluent releases from the CW reservoir decant line to continue for up to 30 days provided that grab samples are collected every 8 hours and analyzed within the following 4 hours. Otherwise the effluent release must be suspended. To comply with the LCO action, the sample pump should have been started making the radiation monitor operable before discharging either tank "A" or "B". With the monitor inoperable, a grab sample should have been taken before discharging tank "A" was completed at 0334 hours and analyzed by 0736 hours on November 28. Neither action was taken for tank "A", which is a violation of technical specification 3.3.7.11.

The sample pump was started about 0930 hours which restored the operability of monitor DllN402 while tank "B" was being discharged. However, after the sample pump low flow alarm was received about 0943 hours, a grab sample was taken and analyzed within the time interval given in technical specification 3.3.7.11.

The Nuclear Assistant Shift Supervisor (NASS) did not ensure that the Control Room NSO and the non-licensed NPPO performed the system lineup using the System Operating Procedure (SOP) 23.626. The Control Room NSO and the NPPO were aware of the requirement to perform system lineups using the SOP, but did not meet that requirement in this case. The NASS and NSO were counseled and issued a written record of an oral reprimand

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by Operation's management. Also, a Standing Order has been issued that requires independent verification by a licensed operator of procedure steps that involve radiation monitoring of liquid effluents that are released using the Circulating Water decant line. This order will stand until the appropriate procedures can be revised.

A contributing factor in this event was a change made to the logic of the low sample flow alarm prior to the event. As it is presently configured and was on November 27 and 28, the alarm logic is actuated on low flow to the radiation monitor only when the sample pump switch is in the ON position, and the alarm is disabled when the switch is in the OFF position. This was done to alleviate nuisance alarms when the sample pump switch was in OFF. Thus before the change was made, control room operators were cognizant of when the sample pump was off because of the The change was made to the alarm without making the corresponding alarm. change to the ARP and operations surveillance procedure 24.000.02. The ARP and operations surveillance procedure have since been modified to reflect the current configuration. A revision to Engineering Design Package (EDP 3473) is being processed. The EDP will change the alarm logic to enable the alarm only when the decant pump switch is in the ON position. This will alert the control room of low sample flow to the radiation monitor whenever the decant pumps are running (decant pump switch ON), regardless of the status of the sample pump switch.

As noted above, before discharging the sample tanks, Chemistry performed the required analysis to determine the dilution water flowrate. Because there was no detectable radioactivity in the water, no dilution water from the CW reservoir was actually required to meet technical specification 3.11.1.1 limits for radioactive liquid effluents. Liquid Radwaste Effluent Line radiation monitor Dl1N007 and CW Reservoir Decant Line flow recorder N71R802 were operational during the entire release. These instruments indicated that the effluent released from the plant was within allowable limits at all times. In addition, Dl1N007 has the capabilty to automatically terminate a release from the waste sample tanks whenever trip setpoint limits are exceeded. Based on no detectable activity in the water released and because of the operation of the radiation monitor and flow recorder, there are no safety consequences of the event. Robert S. Lenart Plant Manager



Fermi-2 6400 North Dixle Highway Newport, Michigan 48166 (313) 586-5201

January 16, 1986 NP86024



Nuclear Operations

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

Gentlemen:

- Reference: Fermi 2 NRC Docket No. 50-341 NRC Operating License No. NPF-43
- Subject: Transmittal of Licensee Event Report 85-080-01

Please find enclosed LER No. 85-080-01, dated January 16, 1986, for a reportable event which occurred on November 28, 1985. This supplement is being submitted as committed in our original transmittal of this LER NP860003, January 2, 1986. The entire abstract and text have been rewritten. As indicated below, a copy of this LER is being sent to the Administrator Region III.

If you have any questions, please contact us.

Sincerely,

U.M. hunter forse

R. S. Lenart Plant Manager

Enclosure: NRC Forms 366, 366A

cc: P.M. Byron M.D. Lynch

> Regional Administrator USNRC Region III 799 Roosevelt Rd. Glen Ellyn, IL 60137

Director/Coordinator Monroe City-County Office of Civil Preparedness 965 South Raisinville Road Monroe, MI 48161

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