



A unit of American Electric Power

Indiana Michigan Power  
Cook Nuclear Plant  
One Cook Place  
Bridgman, MI 49106  
IndianaMichiganPower.com

July 11, 2017

AEP-NRC-2017-41  
10 CFR 50.4

Docket Nos.: 50-315  
50-316

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555-0001

Donald C. Cook Nuclear Plant Units 1 and 2  
FOLLOW UP NOTIFICATION OF PH NON-COMPLIANCE FOR TURBINE ROOM SUMP

References:

1. Letter from M. K. Scarpello, Indiana Michigan Power Company, to Nuclear Regulatory Commission, "Notification of PH Non-Compliance for Turbine Room Sump," dated May 25, 2017 (AEP-NRC-2017-35).
2. Letter from J. H. Harner, Indiana Michigan Power Company, to J. Sanders, Michigan Department of Environmental Quality, "Donald C. Cook Nuclear Plant Groundwater Permit GW 1810102," dated June 23, 2017.

By Reference 1, Indiana Michigan Power Company (I&M), the licensee for Donald C. Cook Nuclear Plant (CNP) Units 1 and 2, submitted to the Nuclear Regulatory Commission (NRC), a notification of pH non-compliance for Outfall 00D (Turbine Room Sump).

On April 2, 2017, a discharge occurred from Outfall 00D that was below the minimum pH permit limit of 6.5. Approximately 26,000 gallons of water were discharged to the on-site absorption pond with a pH value between 6.4 and 6.1. The next discharge, which occurred on April 3, 2017, had returned within proper pH limits.

By Reference 2, I&M submitted to MDEQ a follow up to Reference 1. Internal evaluation of the cause for the pH lower limit to be exceeded identified that the actuator showed that it was worn/dirty, causing it to malfunction when an alarm signal was provided. This would have allowed the discharge valve to remain open with the pH of the discharge outside of the alarm limits. The valve actuator has been cycled/cleaned and verified to be operational. The replacement of the discharge isolation valve switch (as stated in Reference 1) did not occur, as the evaluation identified it was not malfunctioning.

The exceedance occurred for approximately 13 minutes. The outfall pH was resampled on the next pump out and had returned to within permit limits. Two follow up samples of downgradient wells were taken and indicated pH was within normal values. CNP has not observed any environmental impact from the discharge.

ADD  
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Reference 2 is provided, as an enclosure to this letter, in accordance with CNP's Environmental Protection Plan, Section 5.4.2, "Non- Routine Reports."

This letter contains no new or revised commitments. Should you have any questions please contact Jon H. Harner, Environmental Manager, at (269) 465-5901, extension 2102.

Sincerely,



Michael K. Scarpello  
Regulatory Affairs Manager

Enclosure: Letter from J. H. Harner, Indiana Michigan Power Company, to J. Sanders, Michigan Department of Environmental Quality, "Donald C. Cook Nuclear Plant Groundwater Permit GW 1810102," dated June 23, 2017.

KMH/dmb

c: R. J. Ancona - MPSC  
J. K. Rankin, NRC Washington D.C.  
NRC Resident Inspector, w/o enclosure  
C. D. Pederson - NRC Region III  
A.J. Williamson - AEP Ft. Wayne

ENCLOSURE TO AEP-NRC-2017-41

Letter from J. H. Harner, Indiana Michigan Power Company, to J. Sanders, Michigan Department of Environmental Quality, "Donald C. Cook Nuclear Plant Groundwater Permit GW 1810102," dated June 23, 2017.



Indiana Michigan Power  
Cook-Nuclear Plant  
One Cook Place  
Bridgman, MI 49106  
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Mr. Jerrod Sanders – District Supervisor  
Michigan Department of Environmental Quality  
Surface Water Quality Division  
7953 Adobe Road  
Kalamazoo, MI 49009-5026

June 23, 2017

Subject: Donald C. Cook Nuclear Plant  
Groundwater Permit GW 1810102

Dear Mr. Sanders

This letter is a follow-up letter to our previous notification dated May 10, 2017. The lower limit for pH for Outfall 00D (Turbine Room Sump) was exceeded during a pump-out on April 2, 2017. Approximately 26000 gallons of pH range 6.1 – 6.4 was discharged to the on site absorption pond:

As required by Part I.11.c, the on-line pH meter data recorded a pH value of 7.1 on April 3, 2017 at 0221 hrs during the next discharge period.

The following is a summary of an internal evaluation of the cause for the pH lower limit to be exceeded:

The TRS (Outfall 00D) effluent is continuously monitored by an on line pH meter. Alarms are set for low pH at 7.0, and High pH at 8.5. When the pH meter alarms, a signal is sent to a valve controller that will send a signal to the discharge valve to shut off the flow. An alarm is also sent to the control rooms, and subsequently the sump recirculation alarm light illuminates at the make-up plant panel.

On May 5, 2017, TRS pH data was downloaded for preparation of the monthly Discharge Monitoring report. It was noted that there was a period of time where the pH of the discharge was below the limit of 6.5, and during the following pump out the pH had returned to 7.1.

Cause investigation showed that both the calibration checks for the pH meter and the alarm function was satisfactory before and after the exceedance.

A review of the automatic pump outs showed that it was a routine pump out due to a level signal, so this was not due to a human performance issue as a manual pump out.

Interviews with operations personnel concluded that manual operation of the discharge valve is not a common occurrence.

Inspection of the valve actuator showed that it was worn/dirty, causing it to malfunction when an alarm signal was provided. This would have allowed the discharge valve to remain open with the pH of the discharge outside of the alarm limits. The valve actuator has been cycled/cleaned and verified to be operational.

The exceedance occurred for approximately 13 minutes; the outfall pH was resampled on the next pump out and had returned to 7.1 pH (within permit limits). Two follow up samples of downgradient wells were taken and indicate normal values.

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Date/time	Monitoring point	pH Results
4/4/2017@0940	Well EW-1A	7.28
4/4/2017@1052	Well EW-12	7.83
5/10/2017@0900	Well EW-1A	6.94
5/10/2017@1030	Well EW-12	7.73

We inspect the on-site absorption pond on a weekly basis and have not observed any environmental impact from this discharge. Based on the dilution of the effluent by a 6 million gallon settling pond, and additional groundwater dilution, there is no impact to the surrounding groundwater from this event. With this notification we have met parts a through d of the permit requirements.

If you have any questions, please contact me at (269) 465-5901, ext. 2102.

Sincerely,



Jon H. Harner  
Environmental Manager

c: Ms Christina Bauer - MDEQ Kalamazoo  
Ms Laurelin Martin - MDEQ Kalamazoo  
USNRC per app. B TS.

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bc: J. P. Gebbie  
J. D. Ross  
J. H. Harner  
B. D. Newton  
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M. K. Scarpello  
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MDEQ File