

INDIANA & MICHIGAN ELECTRIC COMPANY

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BOWLING GREEN STATION
NEW YORK, N. Y. 10004

July 23, 1982

AEP:NRC:0712

Donald C. Cook Nuclear Plant Unit Nos. 1 and 2
Docket Nos. 5J-315 and 50-316
License Nos. DPR-58 and DPR-74
IE Inspection Reports No. 50-315/82-10
and No. 50-316/82-10

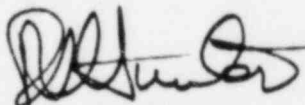
Mr. James G. Keppler, Regional Administrator
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region III
799 Roosevelt Rd.
Glen Ellyn, Illinois 60137

Dear Mr. Keppler:

The Attachment to this letter provides our response to the Notice of Violation contained in IE Inspection Reports No. 50-315/82-10 and No. 50-316/82-10.

This document has been prepared following Corporate Procedures which incorporate a reasonable set of controls to insure its accuracy and completeness prior to the signature by the undersigned.

Very truly yours,



R. S. Hunter
Vice President

/md

cc: John E. Dolan - Columbus
M. P. Alexich
R. W. Jurgensen
W. G. Smith, Jr. - Bridgman
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G. Charnoff
Joe Williams, Jr.
NRC Resident Inspection at Cook Plant - Bridgman

ATTACHMENT TO AEP:NRC:0712

Item 1

10 CFR 50.72 requires notification of the NRC Operations Center within one hour of any accidental, unplanned, or uncontrolled radioactive release. Contrary to that, an unplanned, uncontrolled release occurred on April 2, 1982, resulting in the evacuation of the Auxiliary Building at 0723 EST. Notification of the NRC Operations Center was not made until 1040 on April 2, 1982.

Response to Item 1

On April 1, 1982 a sludge cleaning operation was being conducted on the Clean and Dirty Waste Holdup Tanks. Some of the sludge had also entered the Dirty Sump Tank. The sludge removal operation, being conducted by maintenance personnel, required that the drains entering the Dirty Sump Tank be diverted to floor drains through a hose connected to a cleanout connection. This had resulted in declaring the 573' elevation of the Auxiliary Building a high airborne radiation area during a period of time on April 1, 1982.

At 1745 hours on April 1, 1982, the manway covers on the Dirty Sump Tank were reinstalled. An attempt was made to return the Dirty and Clean Sump Tank Pumps to service but they would not operate properly since they were still plugged. At 2315 hours on April 1, 1982 all CAMs in the Auxiliary Building showed a step increase. Radiation Protection and Operations reviewed the increase in gaseous activity shown by the CAMs in the Auxiliary Building and by the Unit Vent Monitors (R-25 and R-26), and associated the increase with the closure of the Dirty Sump Tank and subsequent overflow of the tank. At 0720 hours on April 2, 1982, the Shift Supervisor evacuated the Auxiliary Building as a precautionary measure on the recommendations of Radiation Protection personnel due to the increasing airborne activity. It was felt at this time that the problem was associated with the Dirty Sump Tank overflowing and the associated maintenance activities and attempts were made to verify this. These attempts included airborne activity readings taken by Radiation Protection personnel and a precautionary search for possible leakage conducted by Operations personnel.

The charging pump rooms were sampled and found to have elevated airborne activity levels. At 0955 hours it was decided to shift from the East to the West Centrifugal Charging Pumps due to the observation of increased seal leakage on the East Pump. When the pump was shifted it was noted that a decrease occurred in the Auxiliary Building effluent release rate. At this time it was determined that an unplanned radioactive release had occurred and was thought to be caused by the East Centrifugal Charging Pump. Subsequently after East Centrifugal Charging Pump isolation, the effluent release rate was again observed to increase. At this point it was determined that we had a release of unknown origin. A search was undertaken to determine the source of this release in accordance with the Plant procedures governing

this activity. The source of this release was ultimately found to be a reactor coolant filter drain valve diaphragm rupture.

10 CFR.50.72(a)(8) requires that "any accidental, unplanned or uncontrolled radioactive release (normal or expected release from maintenance or other operational activities are not included.)" be reported to NRC Operations Center within one hour. However, prior to the pump shift described above, it was believed that the radioactive release resulted from maintenance activities; and for this type of maintenance the radiation releases experienced were expected. At 1040 hours on April 2, 1982, within one hour of the determination that an unplanned release had occurred which was thought to be caused by the East Centrifugal Charging Pump, the NRC was notified in accordance with 10 CFR 50.72.

Therefore, we respectfully request that the notice of violation as stated in the Inspection Reports be withdrawn.

Item 2

The licensee conducted tests and/or experiments on the Unit 2 CVCS Boron make up system from on or about April 19, 1982 through April 22, 1982 when attempting to locate a recirculation flow blockage. These efforts were conducted without written procedures and without a written safety evaluation while the unit operated at 100% power.

Response to Item 2

The reason for this citation appears to be a disagreement in the definition of the words "test" and "experiment". We believe that defining a maintenance activity, the unplugging of the boric acid recirculation lines, as a test or experiment does not meet the commonly accepted usage of the words "test" and "experiment". Technical Specification 6.8.1 requires written procedures for surveillance and test activities of safety related equipment. However, since this activity is not considered a test or experiment, a written procedure is not necessary. For the same reason a PNSRC review of this activity was not considered necessary.

This item appears again in Violation 3.c of the Appendix to the Inspection Reports. The response to Violation 3.c is a more detailed explanation than that presented here.

We respectfully request that for the reasons stated above and those presented in the response to Violation 3.c, the item of violation be withdrawn.

Item 3.a

While Unit 2 was operated at 100% power, a surveillance required by Technical Specification 4.5.4.1a was not accomplished according to procedure 2-OHP 4030.STP.030. The Boron Injection Tank (BIT) sample drawn on April 15, 1982, was not in accordance with normal sampling practices (no recirculation flow) and this had the potential of degrading the operability of the BIT.

Reponse to Item 3.a

The primary reason for this citation to be cited is apparently a misinterpretation on the part of the NRC, of procedure 2-OHP 4030.STP.030. The objective of procedure 2-OHP 4030.STP.030 is to specify a system for recording plant instrument channel readings that are required by Technical Specifications. Section 8.4 of this procedure states that if a Technical Specification limit is reached, the Technical Specification must be consulted for appropriate action. In addition, a note under that step requires the operator to check redundant instrumentation or to make local checks to ascertain if a parameter is out of limit. Recording of the Boron Injection Tank flow from instrument 2-IFA-250 was intended to show that the Boron Injection Tank was full and in compliance with Technical Specification 4.5.4.1a as the Boron Injection Tank does not have installed level instrumentation. Verifying recirculation flow through the Boron Injection Tank had been selected as a preferred method of determining that the Boron Injection Tank contained the specified volume of boric acid. The difficulties in determining Boron Injection Tank level using a single non-safety grade flow transmitter had been recognized by the Plant. A Technical Specification clarification (No. 21) "Verification of Minimum Contained Volume in the Boron Injection Tank" had been written and approved by the PNSRC (Meeting No. 841 held on April 29, 1980) for inclusion in the Technical Specifications to provide direction to the operators in determining compliance with the surveillance requirements in the event of instrument malfunctions or other problems in the recirculation path. The Boron Injection Tank Flow Meter, 2-IFA-250, was out of service from April 8, 1982 to April 21, 1982. During this period, the requirement to verify the Boron Injection Tank full, occurred on April 8, 1982, April 13, 1982, and April 18, 1982. The operator, in accordance with STP.030, fulfilled these surveillance requirements of Technical Specification 4.5.4.1a by accomplishing the actions required by STP.030, that is, by consulting the Technical Specifications and making local checks, as specified in the clarification to the Technical Specifications, to ascertain that the parameter was within limits.

Laboratory procedure 12 THP 6020.LAB.037, Table I, page 29 of 35, lists two sample points for the Boron Injection Tank utilizing either ISX-200 (inlet) or ISX-203 (outlet). These are further detailed in steps 4.21.1 and 4.21.2. No mention is made of using one sample point in preference to the other. There is no requirement for the Boron Injection Tank to be on recirculation at the time of sample. It has been normal practice to obtain the sample at ISX-203 as sample point ISX-200 is physically inconvenient to use since it is only a few inches from the floor. All samples taken during the time in question

were at the sample points directly specified in approved plant procedures and in accordance with the sampling requirements established in these procedures. The operability of the BIT was not degraded by these samples. We believe proper purging of the sample line assured that a representative sample of the BIT effluent was taken for analysis despite the fact that the BIT was not on recirculation. Sampling requires flushing of only one or two gallons of concentrated boric acid solution and this small volume could not, even if replaced with demineralized water, dilute the Boron Injection Tank out of specification limits. A calculation has shown that with the concentration existing at the time of the event it would take approximately 50 gallons of boric acid solution being drained directly from the Boron Injection Tank and replaced with demineralized water to dilute the Boron Injection Tank boron concentration to below 20,000 ppm. The volume of fluid removed from the system due to purging prior to sampling is insignificant in that the fluid removed from the Boron Injection Tank would be replaced with fluid from the outlet piping of the Boron Injection Tank, maintaining the required volume in the Boron Injection Tank.

As explained in the above discussion, the operability of the Boron Injection Tank was not degraded during this activity. Therefore we respectfully request that this portion of the violation be withdrawn.

Item 3.b

While Unit 2 was operated at 100% power, a chemical addition was made on April 22, 1982, without knowledge of the actual concentration of the BIT utilizing a higher concentration of boron than specified in procedure 12-OHP 4021.007.001.

Response to Item 3.b

On April 22, 1982, a chemical addition was made without knowledge of the actual concentration of the Boron Injection Tank, utilizing a higher concentration of boron than specified in procedure 12-OHP 4021.007.001. We agree that the written procedure was not followed during this activity. The stated objective of the procedure was to mix a boric acid solution of 20,000 to 22,500 ppm boric acid in the Boric Acid Batch Tank. A step in the procedure required the addition of 2 1/3 barrels of boric acid to the Boric Acid Batch Tank. The resulting boric acid solution is pumped into the Boric Acid Storage Tank (BAST). The recirculation flow between the BAST and the Boron Injection Tank (BIT) regulates the BIT's boric acid concentration. The review indicated that this procedure was impractical in that it did not allow timely adjustments in the BIT concentration. A calculation has shown that it would take in excess of one hour to raise the BIT concentration from 19,500 ppm to 20,000 ppm.

Procedure 12-OHP 4021.007.001 "Boric Acid Preparation and Transfer", was revised on May 12, 1982 to allow the flexibility required in adjusting Boric Acid Storage Tank concentration, to include data required to control the mixing and addition of boric acid to the BAST and to avoid undesired changes in Boric Acid Storage Tank concentration.

Item 3.c

While Unit 2 was operated at 100% power, no written or approved procedures were utilized to control the maintenance testing and experimentation conducted on the BIT recirculation system nor were appropriate records of this activity maintained.

Response to Item 3.c

The work performed by the Maintenance Department personnel on the Unit 2 C.V.C.S. Boron Make-Up System during the period of April 19 through April 22, 1982 did not constitute testing and experimentation. The work involved a routine maintenance repair effort to locate and remove the blockage in the recirculation flow line. The work was conducted in accordance with good maintenance practices in coordination with the Operations Department and under the close supervision of maintenance supervisors who were responsible for the job. The work was controlled by the Job Order system, PMI-2298, the Clearance Permit System 12-PMP 2110.CPS.001, and approved plant drawings. The personnel performing the task were well qualified for performing tasks of this nature, that is, locating and removing blockages in small diameter piping. This activity was well within the skill level of the maintenance mechanics assigned. ANSI N18.7 states, "skills normally possessed by qualified maintenance personnel may not require detailed step-by-step delineations in a written procedure." Performance of the work was documented in accordance with the approved Job Order control system on Emergency Job Order 11803. We also believe that Technical Specification 6.8.1 does not require the "Maintaining" of appropriate records of this activity.

For the reasons stated above, we respectfully request that this portion of the violation be withdrawn.

While we do not believe that written or approved procedures are necessary for this type of maintenance work, we do believe that better control and coordination could be applied to this type of activity. On May 5, 1982, the Operations Superintendent issued Operating Memo 82-52 delineating administrative controls to be exercised in the performance of similar activities. A review of administration controls is being conducted in conjunction with revisions to the Clearance Permit System. This review will insure administrative control of maintenance activities to provide safe continued operation of the plant and coordination between departments to insure proper testing and return to service.

Item 4

Donald C. Cook's procedures for equipment control, PMI 2110 "Clearance Permit System" states in part. "When any Technical Specification identified equipment is to be removed from service or returned to service we will require independent verification of correct tagging and isolating or clearing..." Contrary to that, the Unit 2 East Centrifugal Charging Pump was inoperable (breaker open, valved out) from April 2 through April 5, 1982, without the appropriate equipment controls.

Response to Item 4

The stated objectives of procedure PMI 2110 are to establish administrative controls to be utilized in preventing unauthorized operation of equipment; the objectives state that "these controls shall be sufficient to provide safe working conditions for personnel. They shall also serve to identify equipment which must remain in a fixed position to prevent damage to the equipment or personnel injury." The quotation in the Notice of Violation is taken out of context. The entire paragraph from which it is quoted contains only references to the removal of equipment for maintenance, repair or modifications. Therefore, the quoted section of the procedure applies when equipment is being removed from service for work. In the particular case cited, the equipment was removed from service at the direction of the Shift Supervisor when it was identified as the source of leakage and to minimize any contribution to airborne activity. The removal was not made for maintenance, repair or modification. The administrative controls of this procedure were not applicable. However when the East Centrifugal Charging Pump was taken out of service for maintenance work on April 5, 1982, the appropriate clearance was obtained. When applicable, procedure PMI 2110 was followed.

For the reasons stated above we respectfully request that the item of violation be withdrawn.

While we were not in violation of the procedure's stated objectives, we do feel that better administrative controls are necessary. We intend for the controls of this procedure to be applicable to the removal of any Technical Specification specified equipment from service. A temporary change was initiated to Clearance Permit System PMI 2110 and PMP 2010.CPS.001 to specifically now require that any time the status of breakers, valves, control systems, etc...for Technical Specifications related equipment is altered in a mode in which the equipment is required, a clearance permit will be issued on the equipment unless the alteration is made under the requirements of an approved procedure which includes the provision for proper equipment alignment, realignment, and documentation of the equipment's return to operable status.