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 50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana & 05000316

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SUBJECT: Forwards Safety Insp Repts 50-315/88-28 & 50-316/88-32 on
 881212-890316 & notice of violation.

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MAY 1 1989

Docket No. 50-315
Docket No. 50-316

Indiana Michigan Power Company
ATTN: Mr. Milton P. Alexich
Vice President
Nuclear Operations Division
1 Riverside Plaza
Columbus, OH 43216

Gentlemen:

This refers to the special safety inspection conducted by Mr. J. M. Jacobson and others of this office during the period December 12, 1988 through March 16, 1989, of activities at D.C. Cook Nuclear Power Station, Units 1 and 2, authorized by NRC Operating Licenses No. DPR-58 and No. DPR-74 and to the discussion of our findings with Mr. D. Williams, Jr. and others at the conclusion of the inspection.

The purpose of this inspection was to assess the extent and significance of a SALP identified weakness in the area of design control. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations, and interviews with personnel.

From a positive perspective, the engineering staff was considered well trained and technically competent. Additionally, craft personnel at the plant were considered highly qualified and were able to compensate for certain weaknesses identified in the design process. Self assessment programs have identified problem areas as well as potential improvements which resulted in a design basis reconstitution effort and the reorganization of the engineering department.

On the other hand, the quality of documentation associated with certain modification packages was considered inadequate. The design interfaces between the Columbus engineering staff and site engineering were not well defined. Furthermore, the adequacy of the overall design control process appears to be questionable. Several examples of problems identified are:

- ° Two examples were found where the design organization incorrectly specified the location of new pipe supports. In one case, a support on the Chemical and Volume Control System was specified and installed on the wrong piping system. In the other case, a support for the Chemical and Volume Control Crosstie was specified and installed approximately four feet away from the location used in the piping analysis.

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- Fillet welds for socket welded fittings and branch connection weld joint details were not specified by the design organization. As a result, welders had to determine weld sizes and joint configurations in order to meet Code requirements.
- Numerous calculation discrepancies and inadequacies were identified, including mathematical errors. Load directions were transposed and inaccurately transcribed. Support components were not evaluated. Loads induced into the support were not used to evaluate interconnected components. Support evaluations did not consider the worst case load combination and anchor bolt evaluations did not account for prying action.

While these discrepancies are attributable to modification work that was performed in the recent past, problems disclosed during both the modification process and the Inservice Inspection Program for piping supports indicate that there may be original construction or IE Bulletin 79-14 concerns as well. The bases for these concerns are the following items found during this inspection.

- Small bore piping for the reactor coolant pump seal leakoff lines was found inadequately supported to the extent that not only were the design stress allowables exceeded but the seal leakoff line was considered inoperable due to the large overstress condition.
- Support components on the Chemical and Volume Control System had to be replaced with stronger members even though the new evaluations utilized loads that were one-third of the original design loads.
- As-built support configurations on the pressurizer spray lines were not in conformance with original design and modifications were required.

Taken individually, the safety significance of the above problems is small. However, when taken as a whole and considered in conjunction with findings in Inspection Reports No. 50-315/88003; 50-316/88004 and No. 50-316/88012, a generic concern for design adequacy and design control exists. It should be stressed that these concerns are generic in nature and any corrective actions taken should include but not be limited to the specific examples outlined in this report.

During this inspection, certain of your activities appeared to be in violation of NRC requirements, as specified in the enclosed Notice. A written response is required. As noted above, please address the generic implications and your basis for concluding the acceptability of past practices.

We also request that you respond to the unresolved items identified in Paragraphs 3.b.(16), 3.b.(17), 3.b.(18), 3.b.(19), 3.b.(20), 4 and 6 of the attached Inspection Report. In responding, we request that you address what actions will be taken to determine the extent of the deficiencies in the associated programs.



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Indiana Michigan Power Company

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In accordance with 10 CFR 2.790 of the Commission's regulations, a copy of this letter, the enclosures, and your response to this letter will be placed in the NRC Public Document Room.

The responses directed by this letter and the accompanying Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL 96-511.

We will gladly discuss any questions you have concerning this inspection.

Sincerely,

ORIGINAL SIGNED BY W. D. SHAFER (FOR)

Hubert J. Miller, Director
Division of Reactor Safety

Enclosures:

- 1. Notice of Violation
- 2. Inspection Reports
No. 50-315/88028(DRS);
No. 50-316/88032(DRS)

cc w/enclosures:

W. G. Smith, Jr., Plant Manager
DCD/DCB (RIDS)
Licensing Fee Management Branch
Resident Inspector, RIII
Ronald Callen, Michigan
Public Service Commission
EIS Coordinator, USEPA
Region 5 Office
Michigan Department of
Public Health

yes
RIII
JMS
Jacobson/lms/lc
4/28/89

yes
RIII
WJ
Liu
4/28/89

yes
RIII
Jay
Gavula
4/27/89

yes
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SW
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