

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9010230165 DOC.DATE: 90/10/11 NOTARIZED: NO DOCKET #  
 FACIL:50-316 Donald C. Cook Nuclear Power Plant, Unit 2, Indiana & 05000316  
 AUTH.NAME AUTHOR AFFILIATION  
 DROSTE,J.B. Indiana Michigan Power Co. (formerly Indiana & Michigan Ele  
 BLIND,A.A. Indiana Michigan Power Co. (formerly Indiana & Michigan Ele  
 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 90-007-01:on 900717,Containment Type B & C leakage  
 exceeds LCO value due to degradation of IVSS.

DISTRIBUTION CODE: IE22T COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 4  
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

### NOTES:

|           | RECIPIENT<br>ID CODE/NAME | COPIES<br>LTTR ENCL | RECIPIENT<br>ID CODE/NAME | COPIES<br>LTTR ENCL |
|-----------|---------------------------|---------------------|---------------------------|---------------------|
|           | PD3-1 LA                  | 1 1                 | PD3-1 PD                  | 1 1                 |
|           | COLBURN,T.                | 1 1                 |                           |                     |
| INTERNAL: | ACNW                      | 2 2                 | AEOD/DOA                  | 1 1                 |
|           | AEOD/DSP/TPAB             | 1 1                 | AEOD/ROAB/DSP             | 2 2                 |
|           | NRR/DET/ECMB 9H           | 1 1                 | NRR/DET/EMEB 7E           | 1 1                 |
|           | NRR/DLPQ/LHFB11           | 1 1                 | NRR/DLPQ/LPEB10           | 1 1                 |
|           | NRR/DREP/PRPB11           | 2 2                 | NRR/DST/SELB 8D           | 1 1                 |
|           | NRR/DST/SICB 7E           | 1 1                 | NRR/DST/SPLB8D1           | 1 1                 |
|           | NRR/DST/SRXB 8E           | 1 1                 | <del>REG FILE 02</del>    | 1 1                 |
|           | RES/DSIR/EIB              | 1 1                 | <del>RGN3 FILE 01</del>   | 1 1                 |
| EXTERNAL: | EG&G BRYCE,J.H            | 3 3                 | L ST LOBBY WARD           | 1 1                 |
|           | NRC PDR                   | 1 1                 | NSIC MAYS,G               | 1 1                 |
|           | NSIC MURPHY,G.A           | 1 1                 | NUDOCS FULL TXT           | 1 1                 |

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK,  
 ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION  
 LISTS FOR DOCUMENTS YOU DON'T NEED!

FULL TEXT CONVERSION REQUIRED  
 TOTAL NUMBER OF COPIES REQUIRED: LTTR 30 ENCL 30

Indiana Michigan  
Power Company  
Cook Nuclear Plant  
One Cook Place  
Bridgman, MI 49106  
616 465-5901



INDIANA  
MICHIGAN  
POWER

October 11, 1990

United States Nuclear Regulatory Commission  
Document Control Desk  
Rockville, Maryland 20852

Operating Licenses DPR-75  
Docket No. 50-316

Document Control Manager:

In accordance with the criteria established by 10 CFR 50.73  
entitled Licensee Event Reporting System, the following  
report is being submitted:

90-007-01

Sincerely,

*A. Alan Blind*  
A. A. Blind  
Plant Manager

AAB:srb

Attachment

C: D. H. Williams, Jr.  
A. B. Davis, Region III  
M. P. Alexich  
P. A. Barrett  
J. E. Borggren  
R. F. Kroeger  
B. Walters - Ft. Wayne  
NRC Resident Inspector  
T. Colburn, NRC  
J. G. Keppler  
M. R. Padgett  
G. Charnoff, Esq.  
Dottie Sherman, ANI Library  
D. Hahn  
INPO  
S. J. Brewer/B. P. Lauzau  
B. A. Svensson

9010230165 901011  
FDR AUOCC 05000316  
S PDC

*LE22*  
*11*

EXPIRES: 4/30/92

## LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

|                                                                                                                        |        |                                                                                                              |                |                   |                 |                  |                 |           |                |                                      |   |                               |                  |                                                              |     |      |   |   |   |   |   |   |   |  |
|------------------------------------------------------------------------------------------------------------------------|--------|--------------------------------------------------------------------------------------------------------------|----------------|-------------------|-----------------|------------------|-----------------|-----------|----------------|--------------------------------------|---|-------------------------------|------------------|--------------------------------------------------------------|-----|------|---|---|---|---|---|---|---|--|
| FACILITY NAME (1)<br>D. C. COOK NUCLEAR PLANT, UNIT 2                                                                  |        |                                                                                                              |                |                   |                 |                  |                 |           |                | DOCKET NUMBER (2)<br>0 5 0 0 0 3 1 6 |   |                               |                  | PAGE (3)<br>1 OF 3                                           |     |      |   |   |   |   |   |   |   |  |
| TITLE (4) CONTAINMENT TYPE B AND C LEAKAGE EXCEEDS L.C.O. VALUE DUE TO DEGRADATION OF ISOLATION VALVE SEATING SERVICES |        |                                                                                                              |                |                   |                 |                  |                 |           |                |                                      |   |                               |                  |                                                              |     |      |   |   |   |   |   |   |   |  |
| EVENT DATE (5)                                                                                                         |        |                                                                                                              | LER NUMBER (6) |                   |                 |                  | REPORT DATE (7) |           |                | OTHER FACILITIES INVOLVED (8)        |   |                               |                  |                                                              |     |      |   |   |   |   |   |   |   |  |
| MONTH                                                                                                                  | DAY    | YEAR                                                                                                         | YEAR           | SEQUENTIAL NUMBER | REVISION NUMBER | MONTH            | DAY             | YEAR      | FACILITY NAMES |                                      |   |                               | DOCKET NUMBER(S) |                                                              |     |      |   |   |   |   |   |   |   |  |
| 0                                                                                                                      | 7      | 1                                                                                                            | 7              | 9                 | 0               | 9                | 0               | 0         | 0              | 7                                    | 0 | 1                             | 1                | 0                                                            | 1   | 1    | 9 | 0 | 0 | 5 | 0 | 0 | 0 |  |
| OPERATING MODE (9)                                                                                                     |        | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11) |                |                   |                 |                  |                 |           |                |                                      |   |                               |                  |                                                              |     |      |   |   |   |   |   |   |   |  |
| 5                                                                                                                      |        | 20.402(b)                                                                                                    |                |                   |                 | 20.405(c)        |                 |           |                | 50.73(a)(2)(iv)                      |   |                               |                  | 73.71(b)                                                     |     |      |   |   |   |   |   |   |   |  |
| POWER LEVEL (10)                                                                                                       |        | 20.405(a)(1)(i)                                                                                              |                |                   |                 | 50.36(c)(1)      |                 |           |                | 50.73(a)(2)(v)                       |   |                               |                  | 73.71(c)                                                     |     |      |   |   |   |   |   |   |   |  |
| 0 0 0                                                                                                                  |        | 20.405(a)(1)(ii)                                                                                             |                |                   |                 | 50.36(c)(2)      |                 |           |                | 50.73(a)(2)(vii)                     |   |                               |                  | OTHER (Specify in Abstract below and in Text, NRC Form 366A) |     |      |   |   |   |   |   |   |   |  |
|                                                                                                                        |        | 20.405(a)(1)(iii)                                                                                            |                |                   |                 | X 50.73(a)(2)(i) |                 |           |                | 50.73(a)(2)(viii)(A)                 |   |                               |                  |                                                              |     |      |   |   |   |   |   |   |   |  |
|                                                                                                                        |        | 20.405(a)(1)(iv)                                                                                             |                |                   |                 | 50.73(a)(2)(ii)  |                 |           |                | 50.73(a)(2)(viii)(B)                 |   |                               |                  |                                                              |     |      |   |   |   |   |   |   |   |  |
|                                                                                                                        |        | 20.405(a)(1)(v)                                                                                              |                |                   |                 | 50.73(a)(2)(iii) |                 |           |                | 50.73(a)(2)(x)                       |   |                               |                  |                                                              |     |      |   |   |   |   |   |   |   |  |
| LICENSEE CONTACT FOR THIS LER (12)                                                                                     |        |                                                                                                              |                |                   |                 |                  |                 |           |                |                                      |   |                               |                  |                                                              |     |      |   |   |   |   |   |   |   |  |
| NAME<br>J.B. DROSTE - PLANT ENGINEERING SUPERINTENDENT                                                                 |        |                                                                                                              |                |                   |                 |                  |                 |           |                | TELEPHONE NUMBER                     |   |                               |                  |                                                              |     |      |   |   |   |   |   |   |   |  |
|                                                                                                                        |        |                                                                                                              |                |                   |                 |                  |                 |           |                | AREA CODE<br>6 1 6 4 6 5 - 5 9 0 1   |   |                               |                  |                                                              |     |      |   |   |   |   |   |   |   |  |
| COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)                                             |        |                                                                                                              |                |                   |                 |                  |                 |           |                |                                      |   |                               |                  |                                                              |     |      |   |   |   |   |   |   |   |  |
| CAUSE                                                                                                                  | SYSTEM | COMPONENT                                                                                                    | MANUFACTURER   | REPORTABLE TO NRC |                 | CAUSE            | SYSTEM          | COMPONENT | MANUFACTURER   | REPORTABLE TO NRC                    |   |                               |                  |                                                              |     |      |   |   |   |   |   |   |   |  |
| X                                                                                                                      | B      | D                                                                                                            | I              | S                 | V               | C                | 4               | 1         | 8              | Y                                    |   |                               |                  |                                                              |     |      |   |   |   |   |   |   |   |  |
|                                                                                                                        |        |                                                                                                              |                |                   |                 |                  |                 |           |                |                                      |   |                               |                  |                                                              |     |      |   |   |   |   |   |   |   |  |
| SUPPLEMENTAL REPORT EXPECTED (14)                                                                                      |        |                                                                                                              |                |                   |                 |                  |                 |           |                |                                      |   | EXPECTED SUBMISSION DATE (15) |                  | MONTH                                                        | DAY | YEAR |   |   |   |   |   |   |   |  |
| YES (If yes, complete EXPECTED SUBMISSION DATE)                                                                        |        |                                                                                                              |                |                   |                 |                  |                 |           |                |                                      |   | X NO                          |                  |                                                              |     |      |   |   |   |   |   |   |   |  |

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

This supplemental report is being submitted to provide additional information regarding the Type B and C Leakrate Testing initially reported on August 8, 1990.

With the Reactor Coolant System in Mode 5 (Cold Shutdown), the accumulated leakage found using the maximum pathway methodology for the Type B and C Leak Rate Tests on Containment penetrations was 0.74 Ia. This exceeded the L.C.O. value (0.60 Ia) of Technical Specification 3.6.1.2.b.

The Containment Pressure Relief Train-A Containment Isolation Valve, 2-VCR-107 (EIIS:ISV/BD), is the major contributing factor for exceeding the Technical Specification limit. 2-VCR-107 exhibited a leakage rate of 49,000 sccm. This is 60 percent of the total leakage obtained from all tested penetrations.

Other Containment Isolation Valves that exhibit leak rates in excess of Guideline acceptance criteria were repaired and retested to ensure the leak rates are within allowable limits. The final as-left Type B and C leakage rate was 0.17 Ia.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1)

DOCKET NUMBER (2)

LER NUMBER (6)

PAGE (3)

D. C. COOK NUCLEAR PLANT  
UNIT - 2

0 5 0 0 0 3 1 6

| YEAR | SEQUENTIAL<br>NUMBER | REVISION<br>NUMBER |
|------|----------------------|--------------------|
| 90   | 007                  | 01                 |

0 2 OF 0 3

TEXT (If more space is required, use additional NRC Form 368A's) (17)

Conditions Prior to Occurrence

Unit-2 in Mode 5 (Cold Shutdown)

Description of Event

This supplemental report is being submitted to provide additional information regarding the Type B and C Leakrate Testing initially reported on August 10, 1990.

With the Reactor Coolant System in Mode 5 (Cold Shutdown), the accumulated leakage found using the maximum pathway methodology for the Type B and C Leak Rate Tests on Containment penetrations was 0.74 Ia. This exceeded the L.C.O. value (0.60 Ia) of Technical Specification 3.6.1.2.b.

The Containment Pressure Relief Train-A Containment Isolation Valve, 2-VCR-107 (EIIS:ISV/BD), is the major contributing factor for exceeding the Technical Specification limit. 2-VCR-107 exhibited a leakage rate of 49,000 sccm. This is 60 percent (or .445 Ia) of the total leakage obtained from all tested penetrations.

Cause

The excessive leakage rate of 2-VCR-107 was attributed to a degraded disc seal.

Corrective Action

Valve 2-VCR-107 was rebuilt, replacing the gaskets and disc seal. Other valves that exhibited leakage in excess of guideline acceptance criteria were repaired and retested.

Analysis of Event

The penetration for the Containment Pressure Relief Line, which includes 2-VCR-107, was designed to have two valves in series and is tested during the Appendix J Type C test program. A review of the test data indicates that 0.445 Ia was attributable to valve 2-VCR-107 (49,000 sccm). Valve 2-VCR-207 is in series with 2-VCR-107 and had a leak rate of 300 sccm. If credit is taken for 2-VCR-207, which is in series with 2-VCR-107, the total as-found leakage becomes 0.301 Ia, which shows that containment isolation could have been successfully achieved under the as-found conditions.

Based on the above, we believe that this event did not represent a significant hazard to public health and safety.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1)

DOCKET NUMBER (2)

LER NUMBER (6)

PAGE (3)

D. C. COOK NUCLEAR PLANT  
UNIT - 2

0 5 0 0 0 3 1 6 9 0 - 0 0 7 - 0 1 0 3 OF 0 3

TEXT (If more space is required, use additional NRC Form 366A's) (17)

Failed Component IdentificationComponent Name: Containment Pressure Relief Train-A Containment Isolation  
Valve

Plant I.D. No: 2-VCR-107 (EIIS:ISV)

Manufacturer: Clow

Model No.: 80-9490-01

Previous Similar EventsPrevious Licensee Event Reports submitted for excessive type B&C Leak Rate  
Test results include:

050-315/79-34

050-316/79-20

050-315/81-11

050-316/79-53

050-315/81-25

050-316/81-18

050-315/82-58

050-316/83-16

050-315/83-72

050-316/84-05

050-315/85-17

050-316/86-09

050-315/87-12

050-316/89-05

050-315/89-04

