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AUTH.NAME AUTHOR AFFILIATION
RISCHLING,J.L. Indiana & Michigan Electric Co.
RECIP.NAME RECIPIENT AFFILIATION
Region 3, Chicago, Office of the Director

SUBJECT: LER 81-001/04L-0:on 810313 & 0224,unplanned & unsampled radioactive gases found released.Caused by excessive leakage from reciprocating charging pump stuffing box & leaking isolated gas decay tank valves..

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	A/D SFTY ASSE 12	1	1	ACC EVAL BR 14	1	1
	AEOD	3	3	AEOD/DMU	3	3
	ASLBP/J.HARD	1	1	AUX SYS BR 15	1	1
	CHEM ENG BR 16	1	1	CONT SYS BR 17	1	1
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American Electric Power System
INDIANA & MICHIGAN ELECTRIC COMPANY
DONALD C. COOK NUCLEAR PLANT
P.O. Box 458, Bridgman, Michigan 49106
(616) 465-5901

April 10, 1981

Mr. J.G. Keppler, Regional Director
Office of Inspection and Enforcement
United States Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Operating License DPR-58
Docket No. 50-315

Dear Mr. Keppler:

Pursuant to the requirements of the Appendix B Technical Specifications the following report/s are submitted:

RO 81-001/04L-0.

Sincerely,

D.V. Shaller
Plant Manager

/bab

cc: J.E. Dolan
R.S. Hunter
R.W. Jurgensen
R.F. Kroeger
R. Kilburn
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Directorate of Licensing

APR 16 1981

NRC FORM 366 (7-77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

CONTROL BLOCK: (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

Line	Field	Value
01	LICENSEE CODE (2)	M I D C C 1
01	LICENSE NUMBER (3)	0 0 0 0 0 0 0 0 0 0 0
01	LICENSE TYPE (4)	4 1 1 1 1
01	CAT (5)	
01 (CON'T)	REPORT SOURCE (6)	L
01 (CON'T)	DOCKET NUMBER (7)	0 5 0 0 0 3 1 5
01 (CON'T)	EVENT DATE (8)	0 3 1 3 8 1
01 (CON'T)	REPORT DATE (9)	0 4 1 0 8 1

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 DURING NORMAL OPERATION, TWO EVENTS OCCURRED RESULTING IN UNPLANNED, UNSAMPLED
03 RADIOACTIVE GASEOUS RELEASES. A RELEASE ON 02-24-81 WAS CAUSED BY EXCESSIVE LEAKAGE
04 FROM THE STUFFING BOX OF THE UNIT - 1 RECIPROCATING CHARGING PUMP. ANOTHER RELEASE
05 ON 03-13-81 WAS CAUSED BY LEAKING ISOLATION VALVES OF AN ISOLATED GAS DECAY TANK.
06 THESE RELEASES OCCURRED WITHOUT THE SAMPLING AND ANALYTICAL REQUIREMENTS OF
07 APPENDIX-B T.S. 2.4.4 E AND TABLE 2.4-2.
08

Line 09	SYSTEM CODE (11)	CAUSE CODE (12)	CAUSE SUBCODE (13)	COMPONENT CODE (14)	COMP. SUBCODE (15)	VALVE SUBCODE (16)
	M B	E	X	V A L V E S	D	D

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	8 1	—	0 0 1	/	0 4	L	—	0

ACTION TAKEN (18)	FUTURE ACTION (19)	EFFECT ON PLANT (20)	SHUTDOWN METHOD (21)	HOURS (22)	ATTACHMENT SUBMITTED (23)	NPRD-4 FORM SUB. (24)	PRIME COMP. SUPPLIER (25)	COMPONENT MANUFACTURER (26)
A	Z	Z	Z	0 0 0 0	Y	Y	A	G 2 5 7

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 (SEE ATTACHED SUPPLEMENT)
11
12
13
14

Line	FACILITY STATUS (28)	% POWER (29)	OTHER STATUS (30)	METHOD OF DISCOVERY (31)	DISCOVERY DESCRIPTION (32)
15	E	1 0 0	NA	A	CHEMICAL PERSONNEL OBSERVATION

Line	ACTIVITY RELEASED (33)	CONTENT OF RELEASE (34)	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
16	G	N	1.0411 Ci-Xe-133	D. C. COOK PLANT VENT STACK

PERSONNEL EXPOSURES

Line	NUMBER (37)	TYPE (38)	DESCRIPTION (39)
17	0 0 0	Z	NA

PERSONNEL INJURIES

Line	NUMBER (40)	DESCRIPTION (41)
18	0 0 0	NA

LOSS OF OR DAMAGE TO FACILITY (43)

Line	TYPE (42)	DESCRIPTION
19	Z	NA

PUBLICITY

Line	ISSUED (44)	DESCRIPTION (45)	NRC USE ONLY
20	N	NA	

NAME OF PREPARER J. L. Rischling PHONE: 616-465-5901

GPO 917-926

ATTACHMENT TO LER #81-001/04L-0

SUPPLEMENT TO CAUSE DESCRIPTION

INVESTIGATION REVEALED THAT AT 2330 ON 02-23-81 R-26 (VENT RADIOGAS MONITOR) BEGAN INCREASING AND AT 0310 ON 02-24-81 A HIGH ALARM WAS RECEIVED ON R-26. IT WAS DETERMINED THAT THE CAUSE OF THE ALARM WAS THE LEAKAGE FROM THE RECIPROCATING CHARGING PUMP. THE PUMP WAS TAKEN OUT OF SERVICE AT 0308 DUE TO EXCESSIVE LEAKAGE AT THE STUFFING BOX. THE RECORDER INDICATES THAT R-26 STARTED DECREASING AFTER THE RECIPROCATING CHARGING PUMP WAS REMOVED FROM SERVICE. THE STUFFING BOX OF THE CHARGING PUMP DRAINS TO THE CLEAN SUMP TANK WHICH IS VENTED TO THE AUXILIARY BUILDING VENTILATION SYSTEM.

RELEASE CALCULATIONS

RELEASE KNOWN TO BE FRESH GAS, 1.041 Ci OF Xe-133 WAS RELEASED AT A RATE OF 7.23 E-5 Ci PER SECOND. THIS IS .1215% OF THE NOBLE GAS TECHNICAL SPECIFICATION LIMITS. THE MAXIMUM RELEASE RATE WAS DETERMINED TO BE 7.348 E-4 Ci PER SECOND OR 1.235% OF THE NOBLE GAS TECHNICAL SPECIFICATION LIMIT.

THIS EVENT WAS DETERMINED TO BE REPORTABLE ON 03-23-81, FOLLOWING A REVIEW OF THE INVESTIGATION REPORT AND DISCUSSION WITH THE NRC RESIDENT INSPECTOR.

THE SECOND UNPLANNED RELEASE OCCURRED WHEN NO. 3 GAS DECAY TANK (GDT) WAS ISOLATED FOR GAS DECAY PURPOSES ON 02-03-81 AT 97 PSIG. ON 03-13-81 TANK PRESSURE WAS FOUND TO BE 53 PSIG. THE REMAINDER OF THIS GDT WAS RELEASED ON 03-13-81 TO ALLOW FOR THE REPAIR OF THE ISOLATION VALVES, MANUFACTURED BY GRINNEL-DRAWING NO. WREF-3-CS. THE VALVE DIAPHRAMS WERE REPLACED AND THE GDT WAS RETURNED TO SERVICE. EXAMINATION OF THE DIAPHRAMS WHICH

WERE REMOVED, REVEALED INDENTATIONS, WHICH MAY HAVE PROVIDED A LEAKAGE PATH FOR THE GAS. THIS GAS DECAY TANK WAS ONE OF TWO RECENTLY INSTALLED FOR RFC 12-2196.

RELEASE CALCULATIONS

Xe-133	2.73 E-4	µCi/cc
Xe-131M	7.84 E-5	µCi/cc
Kr-85	9.17 E-4	µCi/cc
I-133	2.82 E-9	µCi/cc

FOR A TOTAL OF 6.74 x E-2 TOTAL CURIES AT 5.12 x E-5% OF TECHNICAL SPECIFICATION LIMITS FOR NOBLE GASSES AND 1.51 x E-4 CURIES OF IODINE 133 AT 6.86 x E-7% OF TECHNICAL SPECIFICATIONS.

THESE RESULTS ARE BASED ON ANALYSIS PERFORMED 3-13-81 ON THE REMAINDER OF THE TANK. SINCE IT HAD BEEN "ISOLATED" IT IS ASSUMED ONLY OUTLEAKAGE OCCURRED AND NO INLEAKAGE INTO THE TANK. AN ADDITIONAL LEAK TEST WAS ALSO PERFORMED ON THE OTHER GDT RECENTLY INSTALLED, TO INSURE SIMILAR PROBLEMS DID NOT EXIST WITH THE ISOLATION VALVES. IN THE FUTURE, SIMILAR UNPLANNED RELEASES SHOULD BE DETECTED QUICKLY AS OPERATIONS DEPARTMENT HAS MODIFIED PLANT PROCEDURES REQUIRING A CLEARANCE TAG ON THE GDT'S WHEN EACH IS ISOLATED FOR DECAY PURPOSES, AND THE PRESSURE INDICATION FOR THE ISOLATED TANK IS MARKED SUCH THAT ANY DECREASE IN GDT PRESSURE IS EASILY IDENTIFIABLE.

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