

CONTROL BLOCK:

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

CON'T

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)NAME OF PREPARER

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NRC USE ONLY

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CAUSE DESCRIPTION AND CORRECTIVE ACTIONS - 27

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	4.356 E-2	μCi/cc
Xe-131M	7.418 E-4	μCi/cc
Kr-85	9.235 E-4	μCi/cc
I-131	7.710 E-8	μCi/cc

FOR A TOTAL OF 2.405 CURIES AT 1.23 x E-3% OF TECHNICAL SPECIFICATION LIMITS FOR NOBLE GASES AND 4.10 E-6 CURIES OF IODINE 131 AT 1.85 x E-5% OF TECHNICAL SPECIFICATIONS.

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS - 27 (CONT.)

THESE RESULTS ARE BASED ON ANALYSIS PERFORMED 03-13-81 ON THE REMAINDER OF THE TANK DECAYED BACK TO 02-03-81 WHEN TANK WAS ORIGINALLY ISOLATED. 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.

THIS AEO IS BEING REVISED TO REFLECT RELEASE ACTIVITIES DECAYED BACK TO 02-03-81 AS REQUESTED BY L. HEUTER, NRC - REGION 3. THE ORIGINAL CALCULATIONS WERE BASED ON THE GRAB SAMPLE ANALYZED ON 03-13-81. THIS REVISION ALSO CORRECTS TWO TYPOGRAPHICAL ERRORS FOR THE IODINE RELEASE. THE ORIGINAL DATA SHOULD HAVE READ,  $1.51 \times 10^{-7}$  CURIES OF IODINE -131.