

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)

VERMONT YANKEE NUCLEAR POWER STATION

DOCKET NUMBER (2)

0 5 0 0 0 2 7 1 1 OF 0 4

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TITLE (4)

Unidentified Vent Path From Secondary Containment

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)	
07	17	84	84	012	01	08	16	84			050000	
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)									
N			20.402(b)			20.405(e)			50.73(a)(2)(iv)			73.71(b)
POWER LEVEL (10)			20.405(a)(1)(i)			50.38(a)(1)			50.73(a)(2)(v)			73.71(e)
01010			20.405(a)(1)(ii)			50.38(a)(2)			50.73(a)(2)(vi)			OTHER (Specify in Abstract below and in Text, NRC Form 305A)
			20.405(a)(1)(iii)			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)(ix)			

LICENSEE CONTACT FOR THIS LER (12)

NAME

James P. Pelletier, Plant Manager

TELEPHONE NUMBER

AREA CODE

0102 257-7711

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS

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)

While performing fuel moves during shutdown, VY's piping contractor prepared to perform work on the service water portion of the "1B" Reactor Building Air Conditioning (RBAC) unit. The contractor did not properly tag out the RBAC unit as required by plant procedures. This resulted in the "2" RBAC supply line inspiriting for 4 hours into the Service Water System and exhausting at the discharge structure. The shift supervisor noted the problem during a tour of the reactor building. He determined that this flow could bypass standby gas treatment and immediately 1) declared Secondary Containment potentially inoperable, 2) stopped all fuel moves and 3) properly isolated the system. Subsequent analysis showed that Operations would have been able to properly respond to a refuel accident (had it occurred during this 4 hr period) without significant release to the environment.

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TEXT (If more space is required, use additional NRC Form 386A's) (17)

Identification of Occurrence

During a tour of the reactor building, the shift supervisor inspected the 2" RBAC mechanical bypass installation MB-84-0014. He observed a significant vacuum being drawn into the line and determined then that it bypassed Secondary Containment. He immediately stopped all fuel moves and directed proper tagout of the System.

System Conditions Prior to the Occurrence

On 6/15/84, Vermont Yankee commenced its Refueling and Maintenance Outage. On 7/16/84 at approximately 1600 hours, the shift supervisor approved Mechanical Bypass 84-0014 while the Reactor Mode Switch was in the Refuel position.

To install a design change, service water supply was isolated to the RBAC's Recirc MG set lube oil coolers and the turbine building SW isolation valve was closed. During the design change review, Reactor Engineering expressed concern that summer conditions would make the refueling effort very uncomfortable. Therefore, a Mechanical Bypass was written to supply cooling water from a conveniently located fire protection hose station to a spool piece between the service water supply header and the RBAC/B unit.

Description of Occurrence

The sequence of events that caused the unidentified vent path around Secondary Containment are as follows:

- 1) At 1600 hours on July 16, 1984, the shift supervisor reviewed and approved Mechanical Bypass 84-0014, which permitted the contractor to prepare tags for tagging out equipment and to make other work preparations.
- 2) The contractor's authorized individual had been aware that other work was being performed on the Service Water System. Contrary to procedure, he assumed that the Service Water System was tagged out and did not further review the job with the senior reactor operator.
- 3) At 2330 hours, the SRO turned the shift over to the on-coming SRO and mentioned the MB Request and the lack of tags.
- 4) At approximately 2330 hours, the contractor's authorized individual started work without contacting the Control Room. He tried to vent the 2" RBAC line and noticed vacuum. He then closed the vent valve and installed the temporary PVC Piping and then opened the System. He thought the vacuum was produced by the draining of the water back down the SW pipes and had no concern because he believed service water was totally isolated and air inspiration during draining was normal.
- 5) The contractor's authorized individual called the Control Room at approximately 0200 hours on 7/17/84 and stated that they had finished gluing the PVC Piping and would make the final connection when the glue dried. In conversation with the shift supervisor, the contractor mentioned that he observed a vacuum.

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APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

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		84	012	01	03	OF 04

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

- 6) The shift supervisor acknowledged the conversation with the contractor and proceeded to investigate the situation. At 0230, he went to the Refuel Floor and noticed the aforementioned vacuum condition. He then attempted to isolate the opening with tape and was unsuccessful. The shift supervisor determined that the flow could bypass standby gas treatment and immediately declared Secondary Containment potentially inoperable, stopped refueling operation and closed SW valve 23 D at approximately 0330, after reviewing the Mechanical Bypass.

Designation of Apparent Cause of Occurrence and Corrective Action

This event resulted from personnel error. The individual who was responsible for tagging did not properly isolate the RBAC-SW System. Normal shift surveillance detected and then properly isolated the affected System. The individual responsible for the System tagout has been removed from the VY Switching and Tagging List.

Analysis of Occurrence

- 1) The event resulted because of personnel error. The person involved did not follow the rules set forth in procedure AP 0140 entitled "Vermont Yankee Local Control Switching Rules". All procedures were reviewed for their potential impact on the event and no corrections are deemed necessary. Proper identification by the shift supervisor terminated the event by halting the refueling operation and isolating the System.
- 2) From the very conservative analysis of a refuel accident at the time of the occurrence, a person standing at the site boundary would receive less than 20% of the 10CFR100 thyroid dose. The analysis considered that the entire release goes through the vented path.
- 3) Although the service water system is an undesirable discharge path, the following safeguards would have mitigated the potential release.
 - a) Two Service Water Radiation Monitors - Upon indication of increasing radiation level, Operations would immediately isolate service water to prevent further release.
 - b) The leak path is through service water and out through circ water discharge. If a release were to occur, a factor of 10 reduction would be provided to remove the radioactive Iodine 131.

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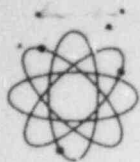
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- 4) Additionally, the conservative analysis performed took no credit for the following:
- a) Removal of any Iodine by standby gas.
 - b) FSAR assumes fuel falls through air over the core and all pins break. Kinetic Energy would be reduced by a factor of 3.5 due to the fact that fuel was moved over the spent fuel pit. An additional reduction due to water resistance was also not considered.
 - c) The FSAR assumes a 7X7 fuel type, where P8X8R is the present fuel used and a 4 to 10% reduction in activity is provided.
 - d) Neither credit for meteorological conditions nor large reductions for dispersion were considered.
 - e) The DBA assumes power level of 1665 Mwt, since we operate at 1593 Mwt maximum, an additional 5% for activity reduction was not taken.

Based on the information presented, there were no consequences to the health and safety of the public due to this occurrence.



VERMONT YANKEE NUCLEAR POWER CORPORATION

P. O. BOX 157
GOVERNOR HUNT ROAD
VERNON, VERMONT 05354
VYV-84-475

September 16, 1984

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

REFERENCE: Operating License DPR-28
Docket No. 50-271
Reportable Occurrence No. LER 84-12, Rev. 1

Dear Sirs:

As defined by 10CFR50.73, we are reporting the attached Reportable Occurrence as LER 84-12, Rev. 1 to correct the word "reduction" in Step 4.d on page 4.

Very truly yours,

James P. Pelletier
Plant Manager

RDP/cjm

cc: Regional Administrator
USNRC Office of Inspection and Enforcement
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

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