VERMONT YANKEE
NUCLEAR POWER CORPORATION

Ferry Road, Brattleboro, VT 05301-7002

REPLY TO
ENGINEERING OFFICE
580 MAIN STREET
BOLTON, MA 01740
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May 19, 1995
BVY 95-58

United States Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

References: Operating License DPR-28
Docket No. 50-271
Reportable Occurrence No. LER 95-12

Dear Sirs:

As defined by 10 CFR 50.73, we are reporting the attached Reportable Occurrence as LER 95-12.

Sincerely,

Vermont Yankee Nuclear Power Corporation

Robert J. Wanczyk
Plant Manager

cc: USNRC Region I Administrator
USNRC Resident Inspector - VYNPS
USNRC Project Manager - VYNPS

IE22

NRC FORM 366 (5-92) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
VERMONT YANKEE NUCLEAR POWER STATION	05000271	1 OF 6

TITLE (4) NUMBER OF STACK RADIATION SAMPLING TRAINS LESS THAN REQUIRED BY TECHNICAL SPECIFICATIONS DUE TO POWER INTERRUPTION.

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 NAME	DOCKET NUMBER
04	21	95	95	-- 12 --	00	05	19	95	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)					
POWER LEVEL (10)	000	20.402(b)		20.405(c)		50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)	OTHER
		20.405(a)(1)(iii)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)	(Specify in Abstract below and in Text, NRC Form 366A)
		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	TELEPHONE NUMBER (Include Area Code)
ROBERT J. WANCZYK, PLANT MANAGER	(802)258-5400

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

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 15 single-spaced typewritten lines) (16)

On 04/21/95 at 1430 hours, with the Reactor shutdown for a Refueling Outage, it was identified during Control Room Shift turnover that two plant stack radiation sampling (EIIS*)(IL) trains were not operating. The plant Chemistry Department was notified and at 1450 Operations returned the sampling pumps to service. The pumps had been inoperable since approximately 0926, when power was momentarily interrupted to the two sample pumps. The interruption was the result of the restoration process for load testing previously performed on the Vernon Tie Line, a backup source of power to the plant. The two sampling trains were off for a period of approximately 5 hours - 30 minutes, this was contrary to Technical Specifications Table 3.9.2 which indicates continuous auxiliary monitoring is needed when less than one sampling train is operable.

The root cause for this event is that administrative controls for the bus transfers were inadequate. A detailed review of loads impacted by the removal of Bus 8 from service, including a review of lower voltage loads (eg: less than 480 Volts), would have identified that the sample pumps would be deenergized.

Corrective actions include reviewing administrative controls relative to bus deenegizations and impact on Technical Specification Equipment. Due to the plant status at the time, the event had no safety significance.

* Energy Information Identification System (EIIS) Component Identifier

DESCRIPTION OF EVENT

On 04/21/95 at 1430 hours, with the Reactor shutdown and the plant in Cycle 18 Refueling Outage, it was identified during Control Room Shift turnover that two plant stack radiation sampling (EIIS*)(IL) trains were not operating. The plant Chemistry Department was notified and requested to check the pumps at the Plant Stack. Following their inspection, Operations returned the systems to service at 1450. The two sampling loops draw air samples from the stack and process the effluent through two independent trains containing a particulate sample filter, an iodine filter cartridge, and a noble gas activity monitor. The pumps had been inoperable since approximately 0926, when power was momentarily interrupted to 480 Volt Bus 8 and therefore also to the downstream lighting panel that supplies power to the two sample pumps. The interruption was the result of the restoration process for load testing previously performed on the Vernon Tie Line, a backup source of power to the plant from the Vernon Hydro Station. The control circuitry for the sample pumps contains a momentary start switch that actuates a 'seal-in' circuit to maintain the pumps running. The momentary loss of power to the lighting panel caused the seal-in circuit to reset (drop-out) which prevented the pumps from restarting following power restoration. The two sampling trains were off for a period of approximately 5 hours - 30 minutes.

A similar situation to that described above occurred earlier in the day at 0224 when Operations deenergized Bus 8 for approximately 50 minutes to allow the Maintenance Department to perform the replacement of several Bus 8 breakers. The sample pumps were returned to service following the restoration of power. Chemistry was not notified of this pump interruption.

Since the plant was in the shutdown condition at the time of these events and no unusual indications were received from other radiation monitors located in systems which feed into the total stack ventilation flow, the loss of the particulate and iodine samples for the period were of no safety significance. The 5 hour - 30 minute duration without operable stack sampling systems was contrary to Technical Specifications Table 3.9.2, Note 4 which states that "with the number of channels operable less than required by the minimum channels operable requirement, effluent releases via the affected pathway may continue provided samples are continuously collected with auxiliary sampling equipment". The Technical Specification applies to the iodine and particulate samples only and requires a minimum of one channel to be operable. The noble gas monitors have the same minimum channels operable requirement, however may be inoperable for up to 12 hours, at which time grab samples must be taken each 12 hours and analyzed within 24 hours. Based on this Technical Specification 3.9.2, Note 4, and the current interpretation of 'continuous monitoring', it is recognized that there have been several occasions in the past when sampling requirements have been missed following brief simultaneous interruptions in sampling pump operation.

CAUSE OF EVENT

Root Cause

1) Administrative controls for the bus transfers were inadequate. A detailed review of loads impacted by the removal of Bus 8 from service, including a review of lower voltage loads (eg: less than 480 Volts), would have identified that the sample pumps (which are required to be operable on a continuous basis) would be deenergized.

Contributing Causes

1) The control circuitry and power distribution is not designed with features consistent with the continuous operability requirements contained within the Technical Specifications. The control circuitry does not auto-start the pump following a loss of power and the two sampling loops are powered from the same source of power.

2) A contributing cause of the sampling system remaining inoperable for approximately 5 hours - 30 minutes is personnel error. The Stack Gas I and II annunciator alarms located in the Main Control Room, were not immediately responded to following the repowering of Bus 8. Had the alarms been responded to, the pumps could have been restarted from within the Control Room and only a very short period would have elapsed between the pumps stopping and being restarted. It is believed that the reason the two annunciator alarms were not responded to when they alarmed is that they were masked by other surrounding alarms that are normally illuminated when the plant is shutdown for refueling and the large number of audible alarms initially received following the depowering / repowering of Bus 8.

3) Technical Specification 3.9.2, Note 4 does not elaborate on the time allowed to put in place auxiliary sampling equipment following the identification that less than the minimum number of channels are operable. The conservative conclusion is that continuous monitoring must be established immediately following the loss of both of the stack sampling systems. Similar Technical Specification wording exists at other utilities, however their interpretation is that it is reasonable to assume a short period of time is allowed to identify the inoperable equipment and take action to install auxiliary sampling equipment. Additionally, these utilities interpreted the term 'continuous' to refer to the method of sampling (ie: in contrast with grab sampling) rather than the time-frame to establish auxiliary sampling.

4) Plant procedures governing activities that impact the sample pumps power supply currently contain no steps to restore the pumps to service.

ANALYSIS OF EVENT

The event had no safety implications. The sampling system was inoperable for approximately 5 hours - 30 minutes. The function of the plant stack radiation monitoring system is to sample, monitor, indicate, and record the radioactive level of the station effluent gases being discharged from the plant stack during normal operations and to alert operating personnel in the event radiation levels approach or exceed pre-established limits. The plant was in the cold shutdown condition with the mode switch in shutdown at the time of the event. The response of the equipment to the power interruption was as designed. Other radiation monitoring equipment available at the time of the event was reviewed and no significant changes in radiation activity occurred during the period. The Stack High Range Radiation Monitor was in service at the time of the event, this is the monitor utilized for post-accident monitoring dose assessment.

CORRECTIVE ACTIONS

Short Term

1) Following identification that both stack sampling loops were inoperable, Operations notified the Chemistry Department and the pumps were restarted.

2) A review of the radiation recorders for the Reactor Building and Containment Radiation Monitoring Equipment was performed for the 24 hour period encompassing the events and no increases in activity occurred.

3) A review of the circuitry for other pump controllers associated with other systems was performed to determine if the potential for similar occurrences existed. The reactor building and containment continuous air monitors (CAM) are also provided with the same style controllers. The containment CAM is required by Technical Specifications, however the limiting condition for operation is much less restrictive than the stack sampling system and it was therefore concluded that similar instances of Technical Specification non-compliance are not likely.

Long Term

1) A Standing Order will be issued as an interim measure to provide administrative controls on bus deenergizations, this will be completed by 5/26/95. Secondly, an assessment of the administrative controls process for bus deenergizations will be performed to provide further assurance that Technical Specification requirements are met. This is expected to be completed by 12/15/95.

2) This event will be reviewed with Operations personnel during the next requalification training cycle, this is expected to be completed by 10/30/95.

3) The alarm response sheets for the stack radiation monitoring systems will be enhanced to provide further direction to the Operators in response to these alarms and specifically reference the applicable Technical Specifications. These revisions are expected by 7/30/95.

4) The need for clarification of Technical Specification Section 3.9.2, Note 4 was previously identified as part of an on-going Technical Specification review effort. The review recommendation for this Technical Specification Note is to provide clarification relative to the time-frame allowed to establish the auxiliary monitoring equipment. The time-frame will be consistent with other nuclear facilities. Recommendations from this review are expected to be provided in September 1995.

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

ADDITIONAL INFORMATION

There have been no events reported to the commission within the last 5 years that were determined to be similar.

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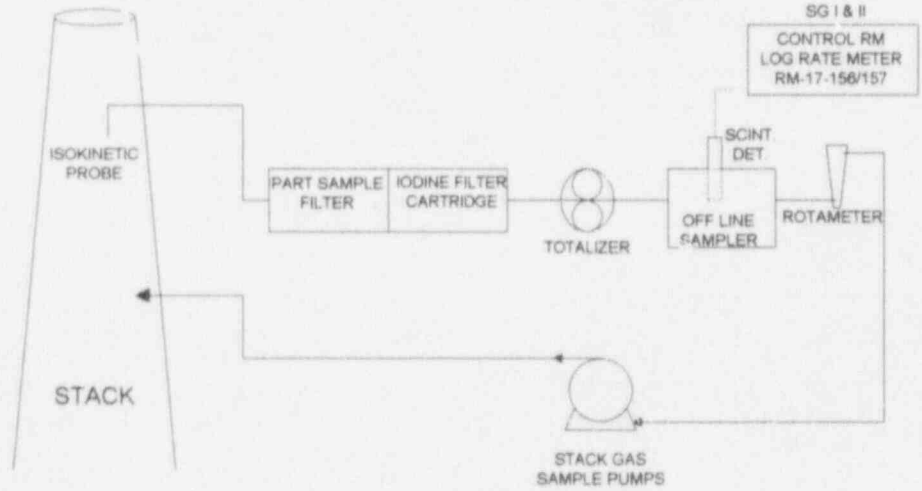
TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

PLANT STACK RAD MONITORING
(TYPICAL BOTH CHANNELS)



MECHANICAL REPRESENTATION

ELECTRICAL REPRESENTATION

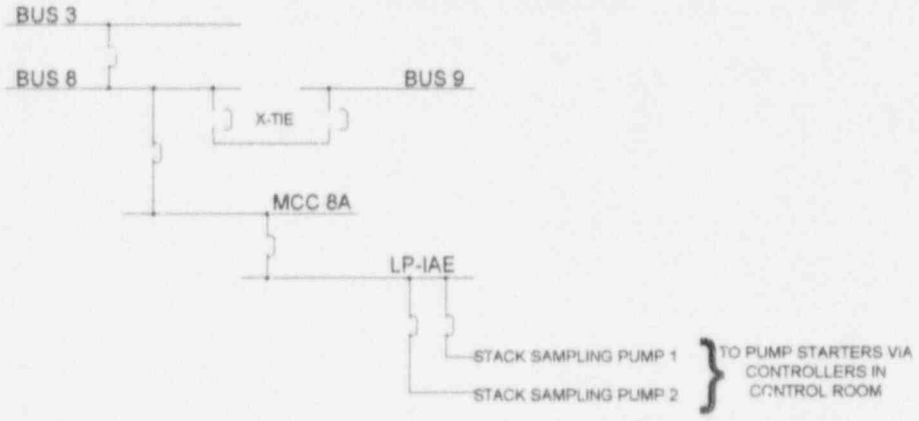


Figure 1, Simplified Overview