

Indian Point 3
Nuclear Power Plant
P.O. Box 215
Buchanan, New York 10511
914 739.8200



**New York Power
Authority**

December 6, 1990
IP3-90-074

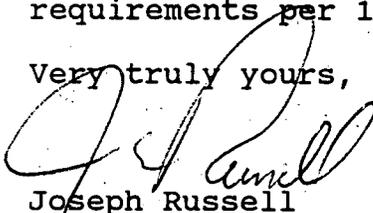
Docket No. 50-286
License No. DPR-64

Document Control Desk
Mail Station PI-137
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Sir:

The attached Licensee Event Report LER 90-009-00 is hereby submitted in accordance with the requirements of 10CFR50.73. This event is of the type defined in the requirements per 10CFR50.73(a)(2)(i)(B).

Very truly yours,


Joseph Russell
Resident Manager
Indian Point Three Nuclear Power Plant

JM/rj
Attachment

cc: Mr. Thomas T. Martin
Regional Administrator
Region 1
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Indian Point Unit 3	DOCKET NUMBER (2) 0 5 0 0 0 2 8 6	PAGE (3) 1 OF 0 5
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TITLE (4)
MISSED DAILY BACKUP SAMPLES FOR AN OUT OF SERVICE WASTE GAS MONITOR

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)
1	1	09	90	90	00	1	2	06			0 5 0 0 0 0
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OPERATING MODE (9) N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																				
POWER LEVEL (10) 0 0 0	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.38(c)(1)	<input type="checkbox"/> 50.38(c)(2)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	<input type="checkbox"/> 50.73(a)(2)(x)	<input type="checkbox"/> 73.71(b)	<input type="checkbox"/> 73.71(c)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)

LICENSEE CONTACT FOR THIS LER (12)

NAME Joseph Macchiarulo	TELEPHONE NUMBER
	AREA CODE: 9 1 4 7 3 6 8 0 4 6

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
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO		

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

On November 9, 1990, a Power Authority QA engineer discovered three required daily backup samples for R-20 that were missed during the first quarter of 1990. The Chemistry Department discovered seven additional missed samples in June 1990.

This event was caused by human error. The Chemistry Department has increased their sampling frequency to once per shift and an R-20 upgrade is scheduled for completion in May 1991.

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

DESCRIPTION OF THE EVENT

On November 9, 1990, while conducting a Radiological Effluent Technical Specifications audit, a Power Authority Quality Assurance (QA) engineer discovered that three (3) required daily backup samples for an out of service Waste Disposal Gas Activity monitor (R-20) were missed during the first quarter of 1990.

On November 14, 1990, the Chemistry Department conducted a thorough review of all required R-20 backup samples dating back to March 12, 1990, when R-20 was originally placed out of service. They discovered that R-20 backup samples were not performed from June 13, 1990 through June 19, 1990, amounting to seven (7) additional missed samples.

INVESTIGATION OF THE EVENT

R-20 monitors the activity of the in-service large gas decay tank in the Waste Gas Holdup System. Technical Specifications require that either R-20 be operable during Waste Gas Holdup System operation or, if it is declared inoperable, the radioactive content of the receiving gas decay tank must be sampled daily.

The R-20 detector is an in-line, ion chamber detector installed in a sample line that is automatically lined up to the in-service large gas decay tank. Overpressurization of the sample line resulting in detector implosion has been a recurring problem at IP-3.

In October 1989, the Authority decided to upgrade R-20 by replacing it with an "adjacent to line" type monitor which is not subjected to system pressure. The engineering for the upgrade began in January 1990, under modification 90-03-031, and is scheduled for completion in May 1991.

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TEXT (If more space is required, use additional NRC Form 388A's) (17)

On March 12, 1990 R-20 failed quarterly performance test 3PT-Q11. The I&C Department investigated the problem and discovered that the detector was damaged. Since efforts were already taking place to replace R-20 with a different type detector, the Authority decided to leave R-20 inoperable and sample the receiving gas decay tank on a daily basis to comply with Technical Specifications.

On November 9, 1990, a Power Authority QA engineer was conducting Radiological Effluent Tech Specs audit 90-29 for the first quarter of 1990 (January 1 through May 31, 1990). He discovered three days during the first quarter when R-20 was inoperable and no backup samples were performed: March 14, March 15, and May 2, 1990.

On November 14, 1990, in response to the QA finding, the Chemistry Department conducted a thorough review of all required R-20 backup samples dating back to March 12, 1990, when R-20 was originally placed out of service. They discovered that R-20 backup samples were not performed from June 13 through June 19 inclusive.

The Watch Chemist Log Book entries for March 14 and March 15, 1990, when the first two samples were missed, do not list R-20 as an out-of-service monitor, even though it was listed as out of service prior to and following these dates.

The Watch Chemist Log Book entries for the additional missed sample dates, May 2, 1990, and the week from June 13 through June 19, 1990, list R-20 as out of service, but no samples were obtained on any of these dates.

CAUSE OF THE EVENT

The following causes have been identified as having contributed to this event:

1. Human error - R-20 backup samples were not performed as required.
2. Although the decision to keep R-20 out of service pending a scheduled system upgrade was reasonable considering its history of detector failure, relying on a backup method to

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

meet Tech Spec requirements for an extended period of time increased the likelihood of human error.

CORRECTIVE ACTIONS

1. As a conservative measure, the Chemistry Department has increased their sampling frequency for R-20 from once daily to once per shift to ensure that the required daily sample is obtained.
2. An R-20 upgrade to a more reliable monitor is scheduled for completion in May 1991.

ANALYSIS OF THE EVENT

This event is reportable under 10CFR50.73(a)(2)(i)(B) because the plant was in a condition prohibited by Technical Specifications on March 14, March 15, May 2, and June 13 through June 19, 1990.

Table 2.2-1 of IP-3 Technical Specifications Appendix B requires that if the Waste Gas Holdup System Noble Gas Activity Monitor is inoperable, the radioactive content of the receiving gas decay tank must be determined daily. This requirement is based on ensuring that the radioactive content of any one tank is limited to less than or equal to 50,000 curies of equivalent Xe-133.

Section 11.1.3 of the Final Safety Analysis Report explains that the limit of 50,000 curies in any one tank ensures that, in the event of a pipe break or tank rupture, this quantity of gaseous activity would result in a dose of less than .5 rem beyond the site exclusion boundary.

The significance of this event is mitigated by the following factors:

- * Gaseous samples performed on the gas decay tanks since initial plant startup have demonstrated that IP-3 has consistently been more than a factor of 100 below the 50,000 curie limit.
- * The missed samples were bracketed by samples that were more than a factor of 100 below the 50,000 curie limit.

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

* Because of the RCS activity required to produce 50,000 curies in the receiving gas decay tank, the following indications would have alerted the plant prior to reaching the 50,000 curie limit on the dates the Waste Gas samples were missed:

- an alarm on the Gross Failed Fuel Detector.
- an R-4 radiation area alarm in the 55' Chemistry Sample Cell.
- an R-68 radiation area alarm in the 15' PAB, outside the large gas decay tank cell.
- abnormally high routine plant survey radiation levels in the vicinity of the large gas decay tank cell, the volume control tank, and any RCS piping in the PAB.

SECURING FROM THE EVENT

The Waste Gas System has been sampled at least daily since June 20, 1990. To ensure that the daily sample requirement has been met, the Chemistry Department has increased their sampling frequency to once per shift.

Work on the R-20 upgrade is scheduled to commence following the current 7/8 cycle outage, and the outage dependent portion of the upgrade is scheduled for completion in May 1991.