

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Fort St. Vrain, Unit No. 1						DOCKET NUMBER (2) 0 5 0 0 0 2 1 6 7			PAGE (3) 1 OF 0 1 6		
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TITLE (4)  
UNANALYZED LIQUID WASTE RELEASE

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)
0	2	1	5	8	7	8	7	8	N/A			0 5 0 0 0
0	2	1	5	8	7	8	7	8				0 5 0 0 0

OPERATING MODE (9)  N

POWER LEVEL (10) 0 1 0 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5 (Check one or more of the following) (11):

<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.406(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
<input type="checkbox"/> 20.406(a)(1)(i)	<input type="checkbox"/> 50.36(a)(1)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(e)
<input type="checkbox"/> 20.406(a)(1)(ii)	<input type="checkbox"/> 50.36(a)(2)	<input type="checkbox"/> 50.73(a)(2)(v)	OTHER (Specify in Abstract below and in Text, NRC Form 308A)
<input type="checkbox"/> 20.406(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(v)(i)(A)	
<input type="checkbox"/> 20.406(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(i)(B)	
<input type="checkbox"/> 20.406(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(v)(i)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Mark A. Joseph, Technical Services Supervisor	3 0 3 6 2 0 - 1 2 0 3

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)  NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

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

At 2049 hours on February 7, 1987, with the reactor shutdown and cooled down for Environmental Qualification work, a liquid effluent release was initiated. Fort St. Vrain ELCO 8.1.2(b)(1) requires that prior to a release, two samples from the radioactive liquid waste system shall be analyzed for gross alpha and beta activity, principal gamma emitters and tritium.

Contrary to the above, this action was not performed for this release due to an assumption that the liquid effluent present in the monitor tank was the same for which samples were taken on February 1, 1987. However, unknown to the operating crew on duty at the time of the release on February 7, 1987, the liquid effluent from which the samples had been taken was released at approximately 0235 hours on February 3, 1987.

This error was not discovered until approximately 1645 hours on February 15, 1987, at which time NRC notification was made in accordance with 10CFR50.72(b)(2)(iii)(C). Since two samples were not obtained and analyzed prior to the release performed on February 7, 1987, this condition constitutes a condition prohibited by the plant's Technical Specifications and is being reported herein pursuant to 10CFR50.73(a)(2)(i)(B) and 10CFR50.73(a)(2)(v)(C).

New policies and procedure changes have been implemented to provide more specific controls to ensure that each effluent release is properly sampled and analyzed.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Fort St. Vrain, Unit No. 1	DOCKET NUMBER (2) 0 5 0 0 0 2 6 7 8 7 -	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		0 0 4	0 1	0 2	OF	0 6	

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

BACKGROUND:

EVENT DESCRIPTION

On February 1, 1987, the liquid effluent in the monitor tank was recirculated and two samples were obtained in preparation for a release of the monitor tank. On February 2, 1987, the samples were analyzed by Radiochemistry and a Radioactive Liquid Release Authorization form initiated. The release number was 1034 and a maximum release rate of 10 gpm with a minimum blowdown rate of 1100 gpm was recommended. The paperwork was then forwarded to Health Physics and the calculations verified. Release form #1034 was then given to Operations so that the release could be performed.

At 0235 hours on February 3, 1987, release of the monitor tank was performed along with surveillance ESR 8.1.2bcd-M prior to release #1034. Upon completion of the liquid effluent release at 0920 hours on February 3, 1987, the lines were flushed and at approximately 1830 hours, B receiving tank was transferred over to the then empty monitor tank. Release Authorization form #1034 was completed by Operations and forwarded to Health Physics for their final review. The surveillance was forwarded to Scheduling. Health Physics reviewed the release authorization form on February 4, 1987 and forwarded it to Radiochemistry.

On February 5, 1987, because the monitoring tank was full, the Health Physics Supervisor began checking to see if the monitor tank had ever been sampled. He found the samples to be those which were taken on February 1, 1987 for release #1034. Health Physics then began checking to see if this release was ever performed by attempting to locate the Radioactive Liquid Release Authorization Form #1034, which they could not find. Apparently, the release form was enroute between Health Physics and Radiochemistry and the surveillance was enroute to Scheduling. Since no paperwork of release #1034 could be found, the Health Physics Supervisor instructed his technicians to investigate the possibility of the release ever being made. Due to a miscommunication, the technicians only checked verbally with Operations personnel to see if a release was ever made under the Radioactive Liquid Release Authorization #1034. Various station logs were never checked. Operations personnel had no recollection of the release ever being made. Therefore, it was reported to the Health Physics Supervisor that release #1034 had never been performed (he was under the impression that logs had been checked). He then came to the conclusion that the Radioactive Liquid Release Authorization form #1034 was lost and a duplicate copy should be reproduced based upon the samples taken February 1, 1987.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Fort St. Vrain, Unit No. 1	DOCKET NUMBER (2) 0 5 0 0 0 2 6 7 8 7 - 0 0 4 - 0 1 0 3 OF 0 6	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		

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

On February 6, 1987, Operations was presented with a duplicate of Radioactive Liquid Release Authorization form #1034 for which the two initial samples had been performed on February 1, 1987. On February 7, 1987, at 2049 hours, the second release under the same release number was performed along with a second surveillance ESR 8.1.2bcd-M prior to release #1034, with a maximum release rate of 10 gpm and a minimum blowdown rate of 1100 gpm. Upon completion of the release on February 8, 1987 at 0110 hours, the duplicate release form was forwarded to Health Physics and the surveillance was sent to Scheduling. Health Physics performed their final review of the form on February 9, 1987 and forwarded it to Radiochemistry.

On approximately February 12, 1987 the Health Physics Supervisor received a call from Scheduling informing him that they had two copies of ESR 8.1.2bcd-M with the same release number and essentially the same information with the exception of different dates. Going on the assumption that the first set of paperwork for release #1034 was invalid because the release was never performed and the paperwork lost, he instructed Scheduling to keep the current copy of the surveillance dated February 7, 1987, because it was the valid copy, and to destroy the old copy dated February 3, 1987, which they preceded to do.

On February 15, 1987, while updating the computer program for liquid effluent releases with the information provided on release form #1034, performed on February 7, 1987, a Radiochemistry Technician discovered that there had already been a release performed under this same number with a different starting level in the monitoring tank and a release start and stop time existing. Therefore, contrary to Technical Specifications, the liquid effluent present in the monitoring tank at the time of the release on February 7, 1987, had never been sampled and analyzed. Apparently, between February 5, 1987, and February 15, 1987 the first release form #1034, performed on February 3, 1987, was received by Radiochemistry and the information was entered into the computer data base. The Radiochemistry Technician immediately informed his supervisor of the situation and was instructed to contact the on duty Shift Supervisor. The Radiochemistry Technician informed the Shift Supervisor that he had evidence indicating that an unanalyzed release was made on February 7, 1987. At 1940 hours, having received this information, the Shift Supervisor made a four hour Non-Emergency report to the NRC in accordance with 10CFR50.72(b)(2)(iii)(C).

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Fort St. Vrain, Unit No. 1	DOCKET NUMBER (2) 0 5   0   0   0   2   6   7	LER NUMBER (F)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

CAUSE DESCRIPTION:

Procedural Deficiency

The process for performing liquid waste releases is not controlled from initiation to completion through the Technical Specification surveillance procedure.

The initiation of a liquid waste release begins with a verbal request from Operations to Health Physics indicating a need to perform a release and requesting that the monitoring tank be sampled. Health Physics obtains two samples from the recirculated monitoring tank and delivers them to Radiochemistry for analysis. Radiochemistry analyzes the samples and initiates a Radioactive Liquid Waste Release Form along with the release number and release calculations. The release form is then sent to Health Physics for their review of the calculations. Upon completion of the review, the release form is then delivered to Operations at which time the actual release is performed along with the surveillance procedure ESR 8.1.2bcd-M. Hence, the surveillance procedure for liquid waste releases does not begin until Operations receives the Radioactive Liquid Release Form from Health Physics. Operations performs the release, ESR 8.1.2bcd-M is sent to Scheduling and the release form to Health Physics for review of the release performed by Operations. Once Health Physics reviews the release form, it is forwarded to Radiochemistry. Radiochemistry and Health Physics are not part of the surveillance procedure and are not required to sign off on it acknowledging initiation and completion of a release, only the release form is sent to them for verification. Therefore, if the release form was lost but the surveillance was not, Health Physics and Radiochemistry would have no idea that the release was ever performed.

Communication Error

The Health Physics Supervisor instructed his technicians to investigate the possibility of liquid effluent release #1034 ever being made. He assumed that they would check station logs. The technicians, however, only checked verbally with Operations personnel to see if the release was ever made. Nobody in Operations had any recollections of the release being made, so it was reported to the Health Physics Supervisor that the release was never performed when in actuality, it had been and there was sufficient documentation in the station logs to support this fact.

SAFETY ANALYSIS:

The second release performed on February 7, 1987 was released from the monitoring tank without taking and analyzing two preliminary samples of the contents of the tank. Since Fort St. Vrain ELCO 8.1.2(b)(1) requires that two initial samples be drawn and analyzed, this event constitutes operation prohibited by the plant's Technical Specifications.



LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Fort St. Vrain, Unit No. 1	DOCKET NUMBER (2) 0 15 10 0 0 2 6 7	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		87	- 0 0 4	- 0 1	0 5	OF 0 6

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During the liquid effluent release performed on February 7, 1987, a sample from the cooling tower blowdown mixing station was obtained by Operations and analyzed by Radiochemistry. Upon analysis, the sample was found to have alpha activity of 8.50E-09 uCi/ml, beta activity of 1.37E-08 uCi/ml, and tritium activity of 3.99E-06 uCi/ml. The MPC for both alpha and beta activity is 3.00E-08 uCi/ml and 3.00E-03 uCi/ml for Tritium. The Radiochemistry Supervisor performed calculations using the maximum sample activity (year-to-date) of all 14 liquid waste samples analyzed in 1987 and came to the conclusion that the tank could have been released at a maximum rate of 11 gpm and a minimum cooling tower blowdown flow of 1100 gpm. The actual average effluent release rate of the monitoring tank was 6.8 gpm with an average blowdown flow of 1500 gpm. This, along with the cooling tower blowdown sample activity, verifies the fact that the MPC for alpha, beta and gamma had not been exceeded.

Additional assurance that the release effluent was maintained within MPC limits was provided by liquid effluent activity monitors RT-6212 and RT-6213. Prior to cooling tower blowdown dilution, a portion of the release effluent flows through these monitors. Either of them is capable of automatically terminating the release if high gamma activity is detected in the discharge effluent. No high gamma activity was detected.

Based on the above analysis, it is concluded that this event did not affect the health and safety of the public.

CORRECTIVE ACTION:

New policies have been placed in effect that prohibit duplicating Radioactive Liquid Release Forms and Radioactive Gas Waste Release Forms. These policies also prohibit making a release before the completed release form from the previous release has been received by Radiochemistry. If a liquid effluent release form is lost, the monitoring tank will be recirculated and two samples retaken and reanalyzed with a new form being issued from this data. If a gas waste release form is lost, another grab sample and tritium sample will be taken and reanalyzed with a new form being issued. In this way, no unanalyzed liquid effluent release or gas waste release will be made.

| The liquid waste release surveillance procedure, ESR 8.1.2bcd-M, has been revised and effective since November 13, 1987. The surveillance was revised to more clearly define and control the different responsibilities involved in the release process. Also, a sequential numbering log for radioactive effluent releases has been adopted by the Operations Department.

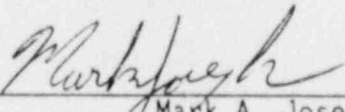
| Procedures dealing with radioactive gas waste releases and reactor building sump releases were reviewed by June 30, 1987 with this consideration in mind. The decision was made to rewrite the gas waste release surveillance, ESR 8.1.1bc-M, to more clearly define the involvement of the Health Physics and Radiochemistry departments in the release process. The surveillance will be rewritten and implemented by May 31, 1988.

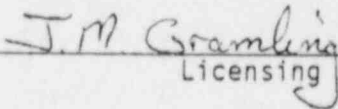
LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

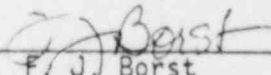
FACILITY NAME (1) Fort St. Vrain, Unit No. 1	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)																
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER																	
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

  
 Renee Millison  
 Technical Services Technician

  
 Mark A. Joseph  
 Technical Services Supervisor

  
 J.M. Gramling  
 Licensing

  
 F. J. Borst  
 Support Services



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February 1, 1988  
Fort St. Vrain  
Unit No. 1  
P-88050

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

Docket No. 50-267

SUBJECT: Licensee Event Report  
87-004, Revised Final  
Report

REFERENCE: Facility Operating  
License No. DPR-34

Gentlemen:

Enclosed please find a copy of Licensee Event Report No. 50-267/87-004, Revised Final, submitted per the requirements of 10 CFR 50.73(a)(2)(i)(B) and 10 CFR 50.73(a)(2)(v)(C).

This revision is being submitted to update the corrective action date.

If you have any questions, please contact Mr. M. H. Holmes at (303) 480-6960.

Sincerely,

R. O. Williams, Jr.  
Vice President  
Nuclear Operations

Enclosure

cc: Regional Administrator, Region IV  
ATTN: Mr. T. F. Westerman, Chief  
Project Section B

Director Nuclear Reactor Regulation  
ATTN: Mr. J. A. Calvo, Director  
Project Directorate IV

Mr. R. E. Farrell  
Senior Resident Inspector, FSV

ROW/djm

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