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Joseph R. Bynum
Vice President, Nuclear Operations

MAR 0 1 1991

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

Dear Sir:

TVA - BROWNS FERRY NUCLEAR PLANT (BFN) UNIT 1 - DOCKET NO. 50-259 - FACILITY OPERATING LICENSE DPR-33 - REPORTABLE OCCURRENCE REPORT BFRO-50-259/91002

The enclosed report provides details concerning the reactor zone vent exhaust monitor sample that was missed when the particulate filter and charcoal cartridge were not placed in the filter holder assembly. As a result a required sample was missed, thereby causing technical specification monitoring requirements to be exceeded. This report is submitted in accordance with 10 CFR 50.73(a)(2)(i)(B).

Very truly yours,

TENNESSEE VALLEY AUTHORITY

J. R. Bynum

Enclosure
cc: see page 2

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U.S. Nuclear Regulatory Commission

MAR 0 1 1991

cc (Enclosure):
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Resident Inspector, BFN

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NRC Form 366 (6-89) | U.S. NUCLEAR REGULATORY COMMISSION | Approved OMB No. 3150-0104 Expires 4/30/92

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1): Browns Ferry Unit 1 | DOCKET NUMBER (2): 0 5 0 0 0 2 5 9 | PAGE (3): 1 OF 0 5

TITLE (4): A reactor vent exhaust monitor sample was missed when a filter holder assembly was improperly prepared, thereby causing a technical specification monitoring requirement to be exceeded.

EVENT DAY (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 5 0 0 0
0 2	0 1	9 1	9 1	0 0 2	0 0	0 3	0 1	9 1		0 5 0 0 0

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	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 (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	X 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)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (AREA CODE)
J. E. Wallace, Compliance Licensing Engineer	2 0 5 7 2 9 - 2 0 5 3

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): YES (If yes, complete EXPECTED SUBMISSION DATE) | X | NO

EXPECTED SUBMISSION DATE (15): MONTH | DAY | YEAR

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

On February 1, 1991, TVA discovered that the reactor/turbine building ventilation radiation monitor (1-RM-90-250) did not contain the particulate filter and the charcoal cartridge in the filter holder assembly. The failure to install the sample media occurred during a routine changeout on January 26, 1991. Without the sampling media, BFN did not meet the Technical Specification Requirement to continuously collect samples for periods of 7 days and analyze within 48 hours at the end of sampling.

The root cause of this event was personnel error. The Radiochemical Laboratory Analyst (RLA) failed to follow the procedure that controls filter changeout. As a result, the RLA installed an empty holder assembly into the radiation monitor. There were two contributing factors to this event: (1) the filter holders had not been prepared according to an approved procedure, and (2) the supervisor did not ensure that RLAs were familiar with a newly revised procedure.

Immediate corrective actions were to replace the improperly prepared filter holder assembly and to verify that other in-service effluent CAMs had the required sampling media. Long-term corrective actions to preclude reoccurrence are: (1) appropriate personnel corrective actions were administered to chemistry personnel, (2) chemistry laboratory personnel were instructed to review procedures revisions prior to performance, and (3) chemistry laboratory personnel were required to review this event.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Browns Ferry Unit 1	0 5 0 0 0 2 5 9	9 1	-- 0 0 2	-- 0 0	0 2 OF 0 5

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

DESCRIPTION OF EVENT

On February 1, 1991, at 1212 hours, TVA discovered that an unmonitored release had occurred since January 26, 1991. While using an approved procedure, a Radiochemical Laboratory Analyst (RLA) did not place the charcoal cartridge or the particulate filter into a radiation monitor [IL] filter holder assembly. The filter holder assembly was then installed in accordance with a newly revised procedure into the Reactor/Turbine Building Ventilation System Monitor's sampling line; however, the unloaded sample media was not detected. The failure to properly load the filter holder assembly was later discovered when the sample media was being prepared for analysis. The installation of the unloaded filter holder assembly caused a technical specification requirement not to be satisfied. At the time of the event,the reactor/turbine building ventilation system [VA] was in service.

On January 25, 1991 at approximately 1630 hours, a Radiochemical Laboratory Analyst (RLA) (utility non-licensed) prepared in accordance with an approved chemical instruction (CI-737), "Preparation of Eberline Continuous Air Monitor (CAM) Iodine and Paritculate Filer Holder", three filter holder assemblies used for sampling gaseous effluent release points. The RLA did not follow the instructions when preparing the filter holder assemblies in that he did not initial and date the assembly tags, verifying that they were properly prepared, prior to placing these in storage. He place these assemblies in a storage facility that contained seven (7) other filter assemblies (date of preparation is indeterminable). It should be noted that of the seven assemblies in the storage facility , none were initialed or dated.

On January 26, 1991 at approximately 0400 hours, while performing surveillance instruction 0-SI-4.8.B.2-1, "Airborne Effluent Analysis - Particulate and Charcoal Filter Analysis", another RLA replaced the on-line filter holder assembly for the reactor zone ventilation system continuous air monitor (CAM) with an improperly prepared filter holder assembly. During the changeout, the RLA did not know that the filter holder assembly was not properly prepared.

On February 1, 1991, at 0900 hours, Operations personnel (utility licensed) requested a filter change on CAM 1-RM-90-250 after a flow alarm was received. At 1020 hours, an RLA changed the charcoal cartridge and particulate filter holder on CAM 1-90-250 for the reactor/turbine building ventilation system in accordance with 0-SI-4.8.B.2-1 surveillance instructions and the external flow alarm was reset in the control room, and the CAM returned to service. At 1145 hours, the RLA that was preparing the charcoal cartridge and particulate filter for analysis discovered that the reactor zone ventilation monitor filter holder assembly was void of sampling media. At 1212 hours it was verified that the reactor zone ventilation was in service during this event.

During this event all three units were defueled and no fuel handling or operations over the spent fuel was performed. The technical specifications requirement to continuously collect samples for periods on the order of seven days and analyze within 48 hours after the end of the sampler period could not be satisfied. Therefore this event is reportable under 10 CFR 50.73(a)(2)(i).

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Browns Ferry Unit 1	0 5 0 0 0 2 5 9	9 1	-- 0 0 2	-- 0 0	0 3 OF 0 5

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

ANALYSIS OF EVENT

The Continuous Air Monitors take an isokinetic sample of various exhaust ventilation effluents and the release rate for each activity is electronically fed to the control room control terminal. A high radioactivity or monitor malfunctions also alarms in the main control room. Since this monitor does not initiate an isolation signal, the system is not essential during a transient or accident; consequently, no redundancy is required.

The absence of continuous monitoring could have resulted in an unmonitored release to the environment when the improperly prepared filter holder assembly was in place. An evaluation of the available data indicates that there was a low probability that any radiological release via this pathway had occurred because of the current plant condition. Finally, the isolation signals for these systems are generated from a Geiger- Muller type detector, externally attached to the effluent ducts.

The required chemistry sample was being obtained by RLAs in accordance with surveillance instruction 0-SI-4.8.B.2-1. This SI addresses the removal and installation of the filter holder assemblies for release point monitors and the subsequent analysis of the removed sampling media. However, the preparation of the sampling media in the assemblies is performed in accordance with chemical instruction (CI-737). These prepared assemblies are then stored until used. The RLA replacing the assemblies at the monitor per SI did not know that one of the assemblies was not properly prepared. This was later discovered on February 1, 1991.

CAUSE OF EVENT

The root cause of the installation of the empty filter holder assembly was personnel error due to inattention to detail, resulting in an approved instruction not being followed. Contributing factors in the event were: (1) the filter holder assembly had not been prepared according to an approved procedure, (2) the Radiochemical Laboratory shift supervisor did not ensure that the RLAs were familiar with a newly revised procedure.

CORRECTIVE ACTION

Immediate corrective actions were taken to correct this event. The RLA changed the improperly prepared filter holder assembly and promptly notified the first line manager of the event. Other in-service effluent CAMs were checked to verify that required filters were in place. The long-term corrective action to preclude recurrence were: (1) chemistry laboratory personnel involved in this event received personnel corrective actions in accordance with approved procedures, (2) chemistry laboratory personnel were required to review this event and (3) chemistry laboratory personnel were instructed to ensure that procedure revisions are reviewed prior to performance.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Browns Ferry Unit 1	0 5 0 0 0 2 5 9	9 1	-- 0 0 2	-- 0 0	0 4 OF 0 5

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

PREVIOUS SIMILAR EVENTS

LER 259/85010 - The control room operator received an erroneous alarm from the reactor building ventilation system. Compensatory samples were being taken until 2200 hours when a maintenance personnel told the RLA that the "as found" condition showed that two of the three channels were working properly. This interface lead to the RLA prematurely suspending needed sampling. The root cause was not related the prestaging of filter holder assemblies in the February 1, 1991 event.

LER 259/85046 - The sampling hose for the turbine building ventilation CAM was left disconnected during a source check test. The disconnected hose was discovered and reconnected. Even though the root cause of this event was personnel error, the corrective actions for LER 259/85046 were adequate for the event and did not contribute to the February 1, 1991 event.

LER 259/88010 - The chemistry section was notified that the reactor building closed cooling water heat exchanger was removed from service. At that time, the RLA presumed that the raw cooling water to the heat exchanger was also isolated. Therefore, the RLA prematurely suspended sampling. This heat exchanger event is different since no secondary systems were involved in the February 1, 1991 event.

LER 259/88041 - An RLA failed to perform a compensatory sample for the raw cooling water system. The root cause was due to an inadequate shift turnover. The system was still out-of-service and this piece of information was not discussed at the shift turnover. This previous LER did not address any prestaging of filter holder assemblies; therefore, its corrective action appear adequate and did not contribute to the February 1, 1991 event.

LER 259/90005 - An RLA took two of three chemistry samples in a secondary location on the raw cooling water system. This was due to the RLA not realizing that a third raw cooling water heat exchanger was in service. This previous event's root cause was also due to failure to follow procedure. Due to the similarity of the 259/90005 event, the corrective actions have been escalated to ensure appropriate management attention on this February 1, 1991 event.

LER 296/90005 - A new reactor/turbine building ventilation exhaust monitor was being initially calibrated. At that time, the inlet valves to the monitor's sample lines were closed thereby isolating a compensatory measure sample which was being taken off the monitor. The root cause was a poor design review for not installing new upstream sample point when the old sample line piping was removed. A lack of a proper design review did not contribute to the February 1, 1990 event.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Browns Ferry Unit 1	0 5 0 0 0 2 5	9 1	-- 0 0 2	-- 0 0	0 5 OF 0 5

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

COMMITMENTS

None

Energy Industry Identification EIIS Codes are identified in the text as [XX].