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DUKE POWER

December 10, 1990

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

Subject: McGuire Nuclear Station Unit 1 and 2
Docket No. 50-369
Licensee Event Report 369/90-30

Gentlemen:

Pursuant to 10 CFR 50.73 Sections (a)(1) and (d), Licensee Event Report 369/90-30 concerning an unmonitored release being made from the Contaminated Parts Warehouse Ventilation System was to be submitted on December 10, 1990. Please be advised that due to unresolved concerns, this report will be submitted in its entirety no later that January 15, 1991. Should there be any questions, contact R. O. Sharpe at (704)875-4447.

Very truly yours,

Tony L. McConnell

T.L. McConnell

DVE/ADJ/cbl

Attachment

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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
McGuire Nuclear Station, Unit 1	0 5 0 0 0 3 6 9	1 OF 3

TITLE (4) A Technical Specification Surveillance Requirement Was Missed, Resulting In A Potential Unmonitored Release From The Contaminated Parts Warehouse Ventilation System

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	1 0	9 0	9 0	— 0 3 0	— 0 0	1 2	1 0	9 0	McGuire, Unit 2	0 5 0 0 0 3 7 0
										0 5 0 0 0

OPERATING MODE (9)	5	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
Alan Sipe, Chairman, McGuire Safety Review Group	7 0 4 8 7 5 - 4 1 8 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)

		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
X YES (If yes, complete EXPECTED SUBMISSION DATE)	NO		0 1	1 5	9 1

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

On November 10, 1990, Construction and Maintenance Department - North (CMD-N) personnel were terminating control wiring for the alternate supply breaker to shared motor control center SMXR in a Unit 1 shared load center, 1SLXC. This was being performed in accordance with McGuire Production Variation Notice (MPVN) 1380. At 0913, while connecting wire number 9 of control cable 1EPD 814, the normal supply breaker to SMXR tripped and caused a loss of power to EMF-53, Radiation Monitor For the Contaminated Parts Warehouse Ventilation system. Since the Contaminated PartsWarehouse Ventilation system continued to operate, this resulted in a potential unmonitored release from the Contaminated Parts Warehouse. The Contaminated Parts Warehouse Ventilation system was completely shutdown at 1130. Power was restored to EMF-53 at 1257. Units 1 and 2 were in Mode 5 (Cold Shutdown) at the time of this event. Radiation Protection personnel determined that there were no radiation area alarms, spills, or work in progress in the Contaminated Parts Warehouse during the event. Subsequent sampling and analysis by Radiation Protection personnel indicated there was no measurable radiological release.

EVALUATION.

Background

Radiation monitoring equipment [EIIS:IL] (EMFs) monitor ventilation systems which remove air from locations where systems containing radioactivity are located. The EMFs provide information and alarms [EIIS:RA] regarding airborne releases from the station. The quantity of the airborne radioactive material released is determined by laboratory analyses. The Containment Purge system [EIIS:VA], Containment Annulus Ventilation system [EIIS:VD], Condenser Air Ejector system [EIIS:WF], Auxiliary Building Ventilation system [EIIS:VF], Fuel Pool Ventilation system [EIIS:VG], and other potentially radioactive systems discharge through the unit vents [EIIS:VL]. The Contaminated Parts Warehouse Ventilation system has a separate discharge point. It is continuously monitored for radioactive gases by EMF 53. EMF 53 incorporates a sample pump [EIIS:P] that draws a single gas stream in series through a particulate paper filter [EIIS:FLT], an iodine filter consisting of a charcoal cartridge, and a gas channel [EIIS:CHA] chamber. A minimum flow device [EIIS:FA] is incorporated into the stream that alarms in the Control Room [EIIS:NA] when sample air flow falls below predetermined values. An indicator light [EIIS:IL] for loss of power is also provided at the EMF and in the Control Room. A loss of sample flow or a loss of power to the EMF will not result in an automatic shutdown of the Contaminated Parts Warehouse Ventilation (VA) system. Daily channel checks are performed by Operations personnel on the alarms and indicators located in the Control Room. Daily checks are also performed by Radiation Protection (RP) personnel to verify operability of the minimum flow device. Daily and weekly samples are obtained by RP personnel which are analyzed for particulate, iodine, tritium, and gaseous activity. A Trip 2 alarm signal on EMF 53 automatically shuts down the ventilation supply and exhaust fans [EIIS:FAN] for the Contaminated Parts Warehouse Building [EIIS:ME]. When the alarm is reset in the Control Room and the alarm condition clears on the EMF, the ventilation supply and exhaust fans restart.

Technical Specification (TS) 3.3.3.9 requires the radioactive gaseous effluent monitoring instrumentation channels shown in Table 3.3-13 be operable with their alarm/trip setpoints set to ensure that the limits of TS 3.11.2.1 are not exceeded. It further requires that with less than the minimum number of radioactive gaseous effluent monitoring instrumentation channels operable, take the action shown in Table 3.3-13. Table 3.3-13 Action Statements 36 and 37, which are the required actions for EMF-53, state that with the minimum flowrate device inoperable and the noble gas activity monitor [EIIS:MON] inoperable, releases through this pathway may continue for up to 30 days provided the flow rate is estimated at least once per 4 hours and grab samples are taken at least once per 12 hours. These grab samples must be analyzed for gross radioactivity within 24 hours. Also, according to TS 3.11.2.1, Table 4.11-2 Number 5 requires that a continuous Particulate and Charcoal (P&C) sample be maintained on EMF 53. This sample is obtained and analyzed every 24 hours. All the above requirements are necessary when the Contaminated Parts Warehouse Ventilation system is operating. If the

Contaminated Parts Warehouse Ventilation system is shut down for longer than 30 days, RP personnel are required to report the reason in their Semi-Annual Effluent Release Report.

EMF 53 is powered from a shared motor control center, SMXR. This motor control center has a normal and an alternate power supply. The normal power supply is load center 2SLXI, and the alternate power supply has been load center 2SLXC. Load centers 2SLXI and 2SLXC are powered from the same Unit 2 6900 volt bus, 2TC. MPVN 1380 was originated to change the alternate power supply for SMXR to Unit 1.

SAFETY ANALYSIS:

The failure to maintain continuous flow through the alternate P&C Sampler for EMF-53 when it was inoperable could have allowed unquantified radioactive materials to be released from the Contaminated Parts Warehouse Building. However, during the 2 hour and 17 minute period when the potential release occurred, there were no contamination spills, decontamination activity, or other sources of contamination which could have generated particulate or gaseous radioactive materials to be released. Laundry operations were secured after the Contaminated Parts Warehouse Building Ventilation system was shut down.

Items stored in the Contaminated Parts Warehouse have to meet certain radiological requirements before being stored there. The standard requirement is that if the items have loose contamination greater than 1000 dpm/100cm2, the items are wrapped in plastic. However, all tools with loose contamination stored in the warehouse are decontaminated to less than 1000 dpm/100 cm2 before being placed in the warehouse.

The cartridge from the continuous 24 hour particulate and charcoal sample for EMF-53, along with particulate and charcoal samples taken from the Contaminated Parts Warehouse, Laundry, Surveillance and Control (S and C) Laboratory, Hot Laboratory, and the Hot Machine Shop were analyzed. The analysis of these samples revealed no activity.

Based upon the sample results, it can therefore be assumed that no unquantified radioactive material was released from the Contaminated Parts Warehouse Building during the period when continuous monitoring was not maintained.

This incident did not affect the health and safety of the public.