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FORT ST. VRAIN NUCLEAR GENERATING STATION
PUBLIC SERVICE COMPANY OF COLORADO

TITLE: ABNORMAL RADIOACTIVE LIQUID WASTE FROM PLANT

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(H-1)
ABNORMAL RADIOACTIVE LIQUID RELEASE FROM PLANT
SYMPTOM-ACTION MATRIX

ACTIONS	SYMPTOMS			
	1.1 Liquid Waste Activity High RIS-6212, R-03A, 2-6	1.2 Liquid Waste Activity High RIS-6213, R-01C, 5-4	1.3 Liquid Waste Cooling Water Mixing Flow Low FSL-4101-1, R-01A, 4-3	1.4 Any Release In Excess of Limits Set Forth On The Authorization Form For The Release Of Radioactive Wastes
OPERATOR ACTION 2.1 Dispatch operator to verify HV-6212 and HV-62249 are closed.	XX	XX	XX	XX
2.2 Ensure reactor building sump pumps are tripped and place handswitch in PTL.			XX	
2.3 Ensure liquid waste transfer pumps are tripped.	XX	XX	XX	
2.4 Terminate release (operator initiated).				XX

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INTRODUCTION

Abnormal radioactivity is an indication that something is wrong with the systems for containment, control and/or disposal of radioactive materials in the plant. Malfunction of these systems poses a direct hazard to the health and safety of the public and, as such, must be immediately dealt with. In order to detect such malfunctions, radiation monitors are located in and around the general plant area, and also associated with certain components of particular interest, such as the cooling tower blowdown discharge line, the plant stack, etc. All these detectors produce alarms in the Control Room when their setpoints are exceeded. In addition, some radiation detectors initiate automatic actions to control or terminate activities that may be the cause of the abnormal radioactivity.

This Abnormal Operating Procedure deals with situations that may be associated with the detection of abnormal radioactive liquid waste. High radiation levels may be detected in the cooling tower blowdown discharge line during the process of disposal of liquid radioactive wastes. In this case the automatic action will terminate the disposal process.

ABNORMAL RELEASE TO COOLING TOWER BLOWDOWN

DISCUSSION OF SYMPTOMS

SYMPTOMS

1.1 Liquid Waste Activity High RIS-6212, I-03A, 2-6

1.2 Liquid Waste Activity High RIS-6213, I-01C, 5-4

1.3 Liquid Waste Cooling Water Mixing Flow Low FSL-4101-1, I-01A, 4-3

If either of the liquid waste discharge monitors detects radiation levels in excess of 0.0001 microcuries/cc (1.1 and 1.2), or if the cooling tower blowdown flow rate falls below 1100 gpm (1.3), the discharge of liquid radioactive waste is automatically terminated.

1.4 Any Release In Excess Of Limits Set Forth On The Authorization Form For The Release Of Radioactive Wastes.

Each planned discharge of radioactive material must be specifically approved and documented on an authorization form (see Administrative Procedure P-3). The authorization may set specific limits on quantities and radiation levels. The discharge should be terminated if any of the stipulations of the authorization form are not met.

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DISCUSSION OF OPERATOR ACTION

OPERATOR ACTION

2.1 Dispatch Operator to verify HV-6212 and HV-62249 are closed.

An operator is dispatched to insure that the discharge from the liquid radioactive waste system has been terminated. HV-62249 is provided with local indicator lights.

2.2 Ensure reactor building sump pumps are tripped, place handswitch in PTL.

The operator acts as backup to the automatic action and verifies that the Reactor Building sump pumps are tripped. To insure that the Reactor Building sump pumps do not automatically restart, the hand switch is placed in the pull to lock (PTL) position.

2.3 Ensure liquid waste transfer pumps are tripped.

The operator acts as backup to the automatic action and verifies that the transfer pumps are tripped. Tripping the pumps provides additional assurance that the discharge is terminated.

2.4 Terminate release (operator initiated).

In the event that automatic action has not terminated a possible abnormal liquid waste release, the operator will manually terminate the release. Manual termination of the release may be accomplished by lowering the cooling tower blow down flow rate or manually trip RIS-6212 or RIS-6213.