

Docket No. 50-336
B14405

Attachment 1

Millstone Nuclear Power Station, Unit No. 2

Proposed Revision to Technical Specifications
Radioactive Liquid Effluent Monitoring Instrumentation
Marked-Up Technical Specification Pages

April 1994

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January 1, 1986

TABLE 3.3-12

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM # OPERABLE</u>	<u>ALARM SETPOINT REQUIRED</u>	<u>APPLICABILITY</u>	<u>ACTION</u>
1. Gross Radioactivity Monitors Providing Automatic Termination of Release				
a. Clean Liquid Radwaste Effluent Line	1	Yes	*	1
b. Aerated Liquid Radwaste Effluent Line	1	Yes	*	1
c. Steam Generator Blowdown Monitor or <u>Condenser Air Ejector Monitor</u>	1	Yes	***	2
d. Condensate Polishing Facility Waste Neut Sump	1	Yes	***	1
2. Gross Radioactivity Monitors Not Providing Automatic Termination of Release				
a. Reactor Building Closed Cooling Water Monitor#	1	Yes	*	3
3. Flow Rate Measurements				
a. Clean Liquid Radwaste Effluent Line	1	No	*	4
b. Aerated Liquid Radwaste Effluent Line	1	No	*	4
c. Condensate Polishing Facility Waste Neut Sump Discharge Line	1	No	*	4
d. Dilution Water Flow	##	No	*	NA
e. Steam Generator Blowdown Line	###	No	*	NA

February 23, 1988

TABLE 3.3-12 (Continued)

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

Table Notes

- * - At all times - which means that channels shall be OPERABLE and in service on a continuous, uninterrupted basis, except that outages are permitted, for a maximum of 12 hours, for the purpose of maintenance and performance of required tests, checks, calibrations, or sampling.
- ~~DELETED~~
** - Although both monitors are normally operable, only one is necessary as the activity measured by each can be related to the other, and both monitors are capable of automatically isolating the steam generation blowdown.
- *** - Modes 1-5 and Mode 6 when pathway is being used except that outages are permitted for a maximum of 12 hours for the purpose of maintenance and performance of required tests, checks, calibrations, or sampling.
- # - Since the only source of service water contamination is the reactor building closed cooling water, monitoring of the closed cooling water and conservative leakage assumptions will provide adequate control of service water effluents.
- ## - The dilution water is determined by the use of condenser cooling water and service water pump status. Only those pumps actually discharging to the quarry at the time of release are included. Pump status is only reviewed for purposes of determining flows.
- ### - Determined by the use of valve curves and/or make up flow rates for the purpose of determining flows only.
- NA - Not applicable.

January 1, 1986

TABLE 4.3-12

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
1. GROSS RADIOACTIVITY MONITORS PROVIDING ALARM AUTOMATIC TERMINATION OF RELEASE				
a. Clean Liquid Radwaste Effluent Line	D*	P	R(1)	Q(2)
b. Aerated Liquid Radwaste Effluent Line	D*	P	R(1)	Q(2)
c. Steam Generator Blowdown Monitor	D*	M	R(1)	Q(2)
d. Deleted Condenser Air Ejector Monitor	D*	M	R(3)	Q(2)
e. Condensate Polishing Facility - Waste Neut Sump	D*	P	R(1)	Q(2)
2. GROSS RADIOACTIVITY MONITORS PROVIDING ALARM BUT NOT PROVIDING AUTOMATIC TERMINATION OF RELEASE				
a. Reactor Building Closed Cooling Water	D*	M	R(1)	Q(2)
3. FLOW RATE MEASUREMENT DEVICES				
a. Clean Liquid Radwaste Line	D*	NA	R	Q
b. Aerated Liquid Radwaste Line	D*	NA	R	Q
c. Condensate Polishing Facility - Waste Neut Sump Line	D*	NA	R	Q
d. Dilution Water Flow	D(4)	NA	NA	NA
e. Steam Generator Blowdown Line	D(4)	NA	NA	NA

TABLE 4.3-12
(Continued)

TABLE NOTATIONS

- * - During releases via this pathway and when the monitor is required OPERABLE per Table 3.3-12. The CHANNEL CHECK should be done when the discharge is in progress.
- NA - Not Applicable.
- (1) - Calibration shall include the use of a known radioactive liquid or solid source which is traceable to an NBS source.
- (2) - The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following exist:
- a. Instrument indicates measured levels above the alarm/trip setpoint.
 - b. Instrument indicates a downscale or circuit failure.
 - Automatic isolation of the discharge stream shall also be demonstrated for this case for each monitor except the reactor building closed cooling water monitor. For the condenser air ejector monitor it is the isolation of the steam generator blowdown that shall be demonstrated.
- ^{DELETED}
(3) - Calibration shall be performed using a known source whose strength is determined by a detector which has been calibrated to an NBS source. The source shall be in a known reproducible geometry.
- (4) - Pump or valve status, as appropriate, shall be checked daily for the purposes of determining flow rates.

Attachment 2

Millstone Nuclear Power Station, Unit No. 2

Proposed Revision to Technical Specifications
Radioactive Liquid Effluent Monitoring Instrumentation
Retyped Technical Specification Pages

April 1994

TABLE 3.3-12

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM # OPERABLE</u>	<u>ALARM SETPOINT REQUIRED</u>	<u>APPLICABILITY</u>	<u>ACTION</u>
1. Gross Radioactivity Monitors Providing Automatic Termination of Release				
a. Clean Liquid Radwaste Effluent Line	1	Yes	*	1
b. Aerated Liquid Radwaste Effluent Line	1	Yes	*	1
c. Steam Generator Blowdown Monitor	1	Yes	***	2
d. Condensate Polishing Facility Waste Neut Sump	1	Yes	***	1
2. Gross Radioactivity Monitors Not Providing Automatic Termination of Release				
a. Reactor Building Closed Cooling Water Monitor#	1	Yes	*	3
3. Flow Rate Measurements				
a. Clean Liquid Radwaste Effluent Line	1	No	*	4
b. Aerated Liquid Radwaste Effluent Line	1	No	*	4
c. Condensate Polishing Facility Waste Neut Sump Discharge Line	1	No	*	4
d. Dilution Water Flow	##	No	*	NA
e. Steam Generator Blowdown Line	###	No	*	NA

TABLE 3.3-12 (Continued)

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

Table Notes

- * - At all times - which means that channels shall be OPERABLE and in service on a continuous, uninterrupted basis, except that outages are permitted, for a maximum of 12 hours, for the purpose of maintenance and performance of required tests, checks, calibrations, or sampling.
- ** - Deleted.
- *** - Modes 1-5 and Mode 6 when pathway is being used except that outages are permitted for a maximum of 12 hours for the purpose of maintenance and performance of required tests, checks, calibrations, or sampling.
- # - Since the only source of service water contamination is the reactor building closed cooling water, monitoring of the closed cooling water and conservative leakage assumptions will provide adequate control of service water effluents.
- ## - The dilution water is determined by the use of condenser cooling water and service water pump status. Only those pumps actually discharging to the quarry at the time of release are included. Pump status is only reviewed for purposes of determining flows.
- ### - Determined by the use of valve curves and/or make up flow rates for the purpose of determining flows only.
- NA - Not applicable.

TABLE 4 3-12

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
1. GROSS RADIOACTIVITY MONITORS PROVIDING ALARM AUTOMATIC TERMINATION OF RELEASE				
a. Clean Liquid Radwaste Effluent Line	D*	P	R(1)	Q(2)
b. Aerated Liquid Radwaste Effluent Line	D*	P	R(1)	Q(2)
c. Steam Generator Blowdown Monitor	D*	M	R(1)	Q(2)
d. Deleted				
e. Condensate Polishing Facility - Waste Neut Sump	D*	P	R(1)	Q(2)
2. GROSS RADIOACTIVITY MONITORS PROVIDING ALARM BUT NOT PROVIDING AUTOMATIC TERMINATION OF RELEASE				
a. Reactor Building Closed Cooling Water	D*	M	R(1)	Q(2)
3. FLOW RATE MEASUREMENT DEVICES				
a. Clean Liquid Radwaste Line	D*	NA	R	Q
b. Aerated Liquid Radwaste Line	D*	NA	R	Q
c. Condensate Polishing Facility - Waste Neut Sump Line	D*	NA	R	Q
d. Dilution Water Flow	D(4)	NA	NA	NA
e. Steam Generator Blowdown Line	D(4)	NA	NA	NA

TABLE 4.3-12
(Continued)

TABLE NOTATIONS

- * - During releases via this pathway and when the monitor is required OPERABLE per Table 3.3-12. The CHANNEL CHECK should be done when the discharge is in progress.
- NA - Not Applicable.
- (1) - Calibration shall include the use of a known radioactive liquid or solid source which is traceable to an NBS source.
- (2) - The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following exist:
 - a. Instrument indicates measured levels above the alarm/trip setpoint.
 - b. Instrument indicates a downscale or circuit failure.
 - Automatic isolation of the discharge stream shall also be demonstrated for this case for each monitor except the reactor building closed cooling water monitor.
- (3) - Deleted.
- (4) - Pump or valve status, as appropriate, shall be checked daily for the purposes of determining flow rates.