NUCLEAR POWER BUSINESS UNIT
TECHNICAL SPECIFICATION TESTS

TS 37
MAJOR
Revision 6
January 31, 1997

CONTAINMENT SPRAY NOZZLES CHECK (FREQUENCY OF LESS THAN OR EQUAL TO FIVE YEARS) UNIT 1

Date _____
DSS _____
NPE/OPS_____

RECORD
PROCEDURE VERIFIED CURRENT AND CHECKED FOR TEMPORARY CHANGES. IF FIELD COPIES REQUIRED, USE PBF-0026 IAW NP 1.2.4 AND DO NOT COMPLETE THIS BLOCK.
BY: _____ DATE: _____

1.0 PURPOSE

The purpose of this test is to perform a check of the containment spray nozzles, as required by Technical Specification 15.4.5.I.B.3. The testing frequency is not to exceed 5 years.

2.0 REFERENCES

IR 96-006, NRC Inspection Report; NRC Commitment for Operations procedures PMT/QC reviews.

3.0 PRECAUTIONS AND LIMITATIONS

3.1 Previous tests have shown that dust accumulation in the spray header when air is cut in is minimal. SA supply should be throttled to the minimum required to cause streamer response.

3.2 Ensure adequate fall protection is used when performing nozzle air flow checks from polar crane.

4.0 INITIAL CONDITIONS

4.1 Plant in refueling or cold shutdown. _____

4.2 The reactor vessel is not open to containment atmosphere, or a debris screen is installed. _____

4.3 Service air available for test connections in containment. _____

4.4 Polar crane available for access to spray nozzles. _____

4.5 20' reach pole with streamers available. _____

4.6 Open end wrenches and sockets sizes 1-1/16" and 1-1/4" are available. _____

4.7 Torque wrench(es) available for torqueing bolts to 60 ft/lbs and 165 ft/lbs. _____

INITIALS

4.8 Flex gasket, 4" x 150 psig (Lot No. 913-1493) is available. _____

4.9 Two flex gaskets, 4" x 300 psig (Lot No. 913-1655) are available. _____

4.10 Permission to Perform Test

The conditions required by this test are consistent with required plant conditions including equipment operability. Permission is granted to perform this test.

DSS _____ Time _____ Date _____

5.0 PROCEDURE

5.1 Verify shut valves 1SI-868A & B, spray header isolations. _____

5.2 Verify shut 1SA-28, U2 Cont Inlet Vent _____

***CAUTION* ENSURE THAT EACH 1/8" DRAIN HOLE (LOCATED JUST INSIDE CONTAINMENT ON THE BOTTOM SIDE OF THE SPRAY LINES) IS DRY BEFORE PRESSURIZING THROUGH THE TEST CONNECTION.**

5.3 Remove flange from Service Air test connection at (21' el. U1C, Pipeway 2). _____

5.4 Remove flange from Train A Spray header test connection at (40' 4" el. U1C walkway). _____

5.5 Connect test hose (utilize flanged elbow on whichever test connection best supports hose routing) between 1SA-28 and Train A Spray header test connection, using old gaskets. _____

5.6 Cut in sufficient service air flow through test connections, **AND** check flow through each Train A nozzle (upper, inner nozzle ring). Sufficient nozzle flow is indicated by the waving motion of a streamer. _____

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IR 96-006, NRC Inspection Report; NRC Commitment for Operations procedures PMT/QC reviews.

3.0 PRECAUTIONS AND LIMITATIONS

3.1 Previous tests have shown that dust accumulation in the spray header when air is cut in is minimal. SA supply should be throttled to the minimum required to cause streamer response.

3.2 Ensure adequate fall protection is used when performing nozzle air flow checks from polar crane.

4.0 INITIAL CONDITIONS

4.1 Plant in refueling or cold shutdown. _____

4.2 The reactor vessel is not open to containment atmosphere, or a debris screen is installed. _____

4.3 Service air available for test connections in containment. _____

4.4 Polar crane available for access to spray nozzles. _____

4.5 20' reach pole with streamers available. _____

4.6 Open end wrenches and sockets sizes 1-1/16" and 1-1/4" are available. _____

4.7 Torque wrench(es) available for torqueing bolts to 60 ft/lbs and 165 ft/lbs. _____

REFERENCE USE

INITIALS

4.8 Flex gasket, 4" x 150 psig (Lot No. 913-1493) is available. _____

4.9 Two flex gaskets, 4" x 300 psig (Lot No. 913-1655) are available. _____

4.10 Permission to Perform Test

The conditions required by this test are consistent with required plant conditions including equipment operability. Permission is granted to perform this test.

DSS _____ Time _____ Date _____

5.0 PROCEDURE

5.1 Verify shut valves 1SI-868A & B, spray header isolations. _____

5.2 Verify shut 1SA-28, U2 Cont Inlet Vent _____

***CAUTION* ENSURE THAT EACH 1/8" DRAIN HOLE (LOCATED JUST INSIDE CONTAINMENT ON THE BOTTOM SIDE OF THE SPRAY LINES) IS DRY BEFORE PRESSURIZING THROUGH THE TEST CONNECTION.**

5.3 Remove flange from Service Air test connection at (21' el. U1C, Pipeway 2). _____

5.4 Remove flange from Train A Spray header test connection at (40' 4" el. U1C walkway). _____

5.5 Connect test hose (utilize flanged elbow on whichever test connection best supports hose routing) between 1SA-28 and Train A Spray header test connection, using old gaskets. _____

5.6 Cut in sufficient service air flow through test connections, **AND** check flow through each Train A nozzle (upper, inner nozzle ring). Sufficient nozzle flow is indicated by the waving motion of a streamer. _____

INITIALS

5.7 Disconnect test hose from Train A Spray header test connection **AND** reinstall blank flange, using new 4" x 300 psig flexitallic gasket. Hand tighten bolts. _____

5.8 Remove flange from Train B Spray header test connection (49' U1C). _____

5.9 Connect test hose (utilize flanged elbow on whichever test connection best supports hose routing) between 1SA-28 and Train B Spray header test connection, using old gaskets. This may require disconnection of test hose from 1SA-28. _____

5.10 Cut in sufficient service air flow through test connections, **AND** check flow through each Train B nozzle (lower, outer nozzle ring). Sufficient nozzle flow is indicated by the waving motion of a streamer. _____

5.11 Disconnect test hose from Train B Spray header test connection **AND** reinstall blank flange, using new 4" x 300 psig flexitallic gasket. Hand tighten bolts. _____

5.12 Disconnect test hose from 1SA-28 **AND** reinstall blank flange, using new 4" x 150 psig flexitallic gasket. Hand tighten bolts. _____

*NOTE: **QC Inspector must witness performance of Step 5.13.***

5.13 Tighten blank flanges:

5.13.1 Torque Train A Spray header test connection bolts to 165 ft/lbs.

Torque Wrench No. _____ Cal Date _____ _____

a. Flange bolts properly torqued. _____
QC

5.13.2 Torque Train B Spray header test connection bolts to 165 ft/lbs.

Torque Wrench No. _____ Cal Date _____ _____

a. Flange bolts properly torqued. _____
QC

INITIALS

5.13.3 Torque Service Air test connection bolts to 60 ft/lbs.

Torque Wrench No. _____ Cal Date _____ _____ _____

a. Flange bolts properly torqued. _____
QC

6.0 RESTORATION

6.1 Position the following valves as directed by DSS.

Valve	At Power Position	Final Position	
1SI-868A	LOCKED OPEN	_____	_____
1SI-868B	LOCKED OPEN	_____	_____
1SA-28	LOCKED SHUT	_____	_____

6.2 Remove test hose and flanged elbow from containment **AND** on the 35' PAB, Pipeway 2 upper platform. _____

Remarks: (Note and explain any abnormalities with test.)