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DOCUMENT

2-AP-22.0
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11-29-79

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
UNIT NO. 2

STEAM GENERATOR AUXILIARY FEEDWATER SYSTEM ALTERNATE LINEUPS

1.0 Purpose

To provide a detailed line up and operating procedures for the Steam Generator Auxiliary Feedwater System using Alternate Lineups.

- 22.1 Placing 1-FW-P-3A and/or 3B in Service to feed the Steam Generators via the HCV header.
- 22.2 Removing 1-FW-P-3A and/or 3B from Service as a Steam Generator Feed Source via the HCV Header.
- 22.3 Placing 1-FW-P-3A and/or 3B in Service to Feed the Steam Generators via the MOV Header.
- 22.4 Removing 1-FW-P-3A and/or 3B from Service as a Steam Generator Feed Source via the MOV Header.
- 22.5 Placing 2-FW-P-2 in Service to Feed Steam Generators. 2-RC-E-1B, and 2-RC-E-1C.
- 22.6 Removing 2-FW-P-2 from Service as a Steam Generator Feed Source to 2-RC-E-1B and 2-RC-E-1C.
- 22.7 Loss of Emergency Condensate Storage Tank.
- 22.8 Removing Firemain or Service Water from Auxiliary Feedwater Supply.

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SAFETY RELATED

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
UNIT NO. 1

PLACING 2-FW-P-3A and/or 3B IN SERVICE TO FEED
THE STEAM GENERATORS VIA THE HCV HEADER

REFERENCES:

1. T.S. 3.7.1.2, 3.7.1.3
2. 12050-FM-74A
3. 12050-LSK-5-13A, B and C
4. 12050-ESK-5AA, 5AB, 6PR, and 6CL
5. Final Safety Analysis Report

REV. _____ PAGE _____ DATE _____ APPROVAL _____

RECOMMEND APPROVAL:

Sanford L. Harvey

APPROVED BY:

[Signature]
CHAIRMAN, STATION NUCLEAR SAFETY
AND OPERATING COMMITTEE

DATE: _____ 11-29-79 _____

SAFETY RELATED

1.0 Purpose

1.1 This procedure provides immediate and long term operator actions to be taken in placing 2-FW-P-3A and/or 3B in service to feed the Steam Generators via the HCV header.

2.0 Indications

- 2.1 Abnormal steam generator levels .
- 2.2 Abnormal auxiliary feedwater flows.

3.0 Probable Cause

- 3.1 Loss of one or more auxiliary feedwater pumps.
- 3.2 Secondary coolant breaks on the secondary side of a steam generator.

4.0 Immediate Operator Actions

4.1 None

Initials

5.0 Long Term Operator Action

NOTE: If a steam generator is dry, depressurize the primary systems to less than 1600# across the tube sheet and then cooldown and depressurize the primary system using the other operable steam generators.
If all three steam generators loosing level together, feed and bleed all three steam generators and increase level very slowly. Reduce primary heat sources to a minimum by securing 2 reactor coolant pumps.

NOTE: When level in emergency condensate storage tank reaches 9 feet (37.3% as read on LI-CN-200 in control room) or when suction pressure to aux feed water pumps reaches 4 psig, commence filling the emergency condensate storage tank.

- _____ 5.1 Verify valve checkoff sheet 2-OP-31.2A is completed.
- _____ 5.2 Verify steam generator level inciation is available.
- _____ 5.3 Verify Electric Power is available to 2-FW-P-3A and/or 2-FW-P-3B.
- _____ 5.4 If required, close 2-FW-193 (2-FW-P-3B disch. to MOV Hdr.).
- _____ 5.5 If required, open 2-FW-194 (2-FW-P-3B disch. to HCV Hdr.).
- _____ 5.6 Unlock and open 2-FW-66 and 98 (HCV Hdr. to "A" and "B" Stm. Gen.).
- _____ 5.7 Place the pump control mode selector switch(es) for the Auxiliary Steam Generator Feedwater Pump(s), 2-FW-P-3A and/or 3B to the START position.
- _____ 5.8 Regulate HCV-FW-200A, B and C as necessary to maintain the required steam generator levels.
- _____ 5.9 Make-up to 2-CN-TK-1 as required.

NOTE: Return Auxiliary Feedwater System to normal by 2-AP-22.2

Completed By: _____

Date: _____