

TENNESSEE VALLEY AUTHORITY

SEQUOYAH NUCLEAR PLANT

EMERGENCY INSTRUCTION

E-2

FAULTED STEAM GENERATOR ISOLATION

Revision 2

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DATE APPROVED: MAY 22 1987

Reason for revision (include all Instruction Change Form Nos.):

Revised to change HP to RAD CON; step 1 - added S/G level to RNO in determin-
ing faulted S/G, and step 2 - added part a RNO (comment from training) and
part d RNO (WP 12188).

The last page of this instruction is number: 4

E-2

[illegible]

FAULTED STEAM GENERATOR ISOLATION

A. PURPOSE

This guideline provides actions to identify and isolate a faulted S/G.

B. SYMPTOMS

1. S/G press 100 psi lower in one S/G than the others
2. Any S/G press decreasing in an uncontrolled manner

C. TRANSITION FROM OTHER INSTRUCTIONS

1. E-0, Reactor Trip Or Safety Injection
2. E-1, Loss Of Reactor Or Secondary Coolant
3. Foldout page
- * 4. FR-S.1, Response To Nuclear Power Generation/ATWS
- * 5. FR-Z.1, Response To High Containment Pressure

FAULTED STEAM GENERATOR ISOLATION

| <u>STEP</u> | <u>ACTION/EXPECTED RESPONSE</u> | <u>RESPONSE NOT OBTAINED</u> |
|-------------|---|--|
| 1 | <u>Identify Faulted S/G</u> a. Any S/G press decreasing in an uncontrolled manner b. Press in one S/G lower than the others | <p>IF faulted S/G can <u>NOT</u> be identified, <u>THEN</u>:</p> <p>Check S/G enclosure temp T1002A and T1003A</p> <p>Search for break in main steamlines, main feedlines, and other secondary piping</p> <p>IF faulted S/G <u>NOT</u> identified, <u>THEN</u>:</p> <p><u>AFTER</u> all S/G narrow range levels $> 25\%$, <u>THEN</u> close all MSIVs, MSIV bypasses, and isolate all AFW</p> <p>Check for uncontrolled decrease in S/G press or level to identify faulted S/G</p> <p>IF faulted S/G <u>NOT</u> identified, <u>THEN</u> go to step 3</p> |

FAULTED STEAM GENERATOR ISOLATION

| <u>STEP</u> | <u>ACTION/EXPECTED RESPONSE</u> | <u>RESPONSE NOT OBTAINED</u> |
|-------------|---------------------------------|------------------------------|
|-------------|---------------------------------|------------------------------|

CAUTION: At least one S/G must be maintained available for RCS cooldown.

CAUTION: The pressure difference between the RCS and the faulted S/G should be maintained less than 1600 psid.

2 Isolate Faulted S/G

- | | |
|--|--|
| a. Close faulted S/G MSIV and MSIV bypass | a. <u>IF</u> MSIV or bypass can <u>NOT</u> be closed, <u>THEN</u> close: 1) Intact S/G MSIVs and bypasses 2) HP steam to MSRs and MFW pump turbine 3) Condenser steam dumps 4) Steam seals |
| b. Close AFW | |
| c. Ensure main FW - ISOLATED | |
| d. Ensure S/G PORV - CLOSED | d. Locally close S/G PORV from 480-V SD Bd Rm (S/Gs 1 and 4) or annulus (S/Gs 2 and 3) |
| e. Ensure blowdown - CLOSED | |
| f. Ensure turbine - driven AFW pump being supplied from intact S/G | f. <u>IF</u> both S/G 1 and 4 faulted, <u>THEN</u> verify at least one motor-driven AFW pump aligned to an intact S/G, <u>THEN</u> stop turbine - driven AFW pump |

FAULTED STEAM GENERATOR ISOLATION

| <u>STEP</u> | <u>ACTION/EXPECTED RESPONSE</u> | <u>RESPONSE NOT OBTAINED</u> |
|-------------|--|--|
| | <u>CAUTION:</u> Any faulted S/G or secondary break should remain isolated during subsequent recovery actions unless needed for RCS cooldown. | |
| 3 | <u>Check Secondary Side Radiation - NORMAL</u> a. Condenser exhaust monitors b. S/G blowdown monitors | IF secondary side radiation is high, THEN go to * E-3, STEAM GENERATOR TUBE RUPTURE IF condenser exhaust and S/G blowdown monitors NOT available, THEN: Notify Rad Con to survey main steamlines and S/G blowdown lines Notify chem lab to sample S/G activity Check RM-90-124 Aux Bldg 690 |
| 4 | <u>Go To E-1, Loss Of Reactor Or Secondary Coolant</u> | |

- END -