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AP-SW.1	SERVICE WATER LEAK	PAGE 1 of 7

ROCHESTER GAS AND ELECTRIC CORPORATION

GINNA STATION

CONTROLLED COPY NUMBER 23

TECHNICAL REVIEW

PORC REVIEW DATE 2-7-90

Joseph A. Widay
PLANT SUPERINTENDENT

2-23-90
EFFECTIVE DATE

QA X NON-QA _____ CATEGORY 1.0

REVIEWED BY: _____

GINNA STATION
START:
DATE _____
TIME _____
COMPLETED:
DATE _____
TIME: _____

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A. PURPOSE - This procedure provides the necessary instructions to respond to a station service water leak.

B. ENTRY CONDITIONS/SYMPTOMS

1. SYMPTOMS - The symptoms of SERVICE WATER LEAK are;

   a. Service water header pressure low alarms on computer, or

   b. Annunciator H-6, CCW SERVICE WATER LO FLOW 1000 GPM, alarms, or

   c. Annunciator E-31, CONTAINMENT RECIRC FAN CONDENSATE HI-HI LEVEL alarm, exhibits an unexplained increase in frequency, or

   d. Sump pump activity increases in containment, the aux bldg, or intermediate bldg, or

   e. Unexplained increase in the waste hold-up tank, or

   f. Visual observation of an SW leak.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

* *

CAUTION

IF EITHER D/G STARTS, BUT WILL NOT ACCEPT ELECTRICAL LOAD, AND COOLING WATER NOT AVAILABLE, STOP THE AFFECTED D/G TO PREVENT OVERHEATING.

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NOTE: o Steps 1 through 3 are IMMEDIATE ACTION steps.

o See Attachment A for a list of the major non-safeguards loads supplied by each service water header.

1	Verify 480V Busses 17 and 18 - ENERGIZED	Verify D/Gs running OR start D/Gs and manually load busses 17 and 18 onto the D/Gs if necessary.
2	Verify 1 SW Pump RUNNING In Each Loop: o Loop A, 1A or 1B SWP pump - RUNNING o Loop B, 1C or 1D SWP pump - RUNNING	IF an SW pump has tripped, THEN start the standby pump for that loop.
3	Check SW Header Pressure For Each Loop: o A loop SW header pressure - GREATER THAN 40 PSIG AND STABLE OR INCREASING o B loop SW header pressure - GREATER THAN 40 PSIG AND STABLE OR INCREASING	IF pressure can NOT be restored in both loops, THEN trip the reactor and go to E-0, REACTOR TRIP or SAFETY INJECTION.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE: If SW is lost to any safeguards equipment, the affected component should be declared inoperable and appropriate actions taken as required by Tech Specs, Section 3.

4 Check CNMT For SW Leakage:

- o CNMT sump A level - INCREASING
- o CNMT sump A pump start frequency - INCREASING

IF the SW leak is NOT in the CNMT, THEN go to Step 8.

NOTE:
- o An A-25.1, GINNA STATION EVENT REPORT, should be submitted for a SW leak in containment.
- o Refer to 0-9.3, NRC IMMEDIATE NOTIFICATION, for reporting requirements.
- o Sump at 10 feet indicated on the control board indicators is approximately 6 feet 6 inches below the bottom of the reactor vessel.

5 Check If The SW Leak Is Within The Capacity Of 1 CNMT Sump Pump (50 GPM):

- o Maximum of 1 CNMT sump A pump running AND sump A level - LESS THAN 10 FEET AND STABLE OR DECREASING

IF leakage exceeds the capacity of 1 CNMT sump pump, THEN plant shutdown should be considered.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
	NOTE: CNMT recirc fan condensate collector level indicators may be helpful in identifying a leaking fan cooler.	
6	Check, Prior to A CNMT Entry, If Source Of SW Leak Is A Leaking CNMT Recirc Fan Cooler OR A Reactor Compartment Cooler:	
	a. CNMT recirc fan coolers AND reactor compartment coolers isolated one at a time (Refer to Attachment B for isolation) - LEAKAGE DETECTED	a. IF leak can NOT be located without a CNMT entry, THEN make a CNMT entry. Refer to A-3, CONTAINMENT VESSEL ACCESS REQUIREMENTS.
7	Complete - ISOLATION OF LEAKAGE SOURCE AND GO TO STEP 16	
8	Check Aux Bldg And Inter Bldg Sump Pump To Determine The General Location Of A Leak: o Aux Bldg OR Inter Bldg sump pump run frequency - INCREASED	IF AUX BLDG and Intermediate Bldg. sump pumps run frequency has NOT increased, THEN have personnel check for leakage in the Turbine Bldg.
9	Establish - THE SPECIFIC LOCATION OF THE LEAK	
10	Complete An Evaluation - ON THE CONSEQUENCES OF ISOLATING THE LEAKING SECTION	

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTE: If SW is lost to either D/G, refer to ER-DG.2, ALTERNATE COOLING FOR EMERGENCY D/Gs, if cooling is required.

11 Establish If Plant Operation May Continue:

o Plant operation - MAY CONTINUE

IF plant shutdown is required, THEN refer to O-2.1, NORMAL SHUTDOWN TO HOT SHUTDOWN.

12 Establish Isolation Of The SW Leak At The Source:

a. SW leak - ISOLATED AT THE SOURCE

a. IF the leak can NOT be isolated within either loop, THEN split the A and B loops as follows:

1) Close V-4669 OR V-4760 in B D/G room.

2) Close V-4611 OR V-4612 in screenhouse.

3) Close V-4625 OR V-4626 in Inter Bldg clean side.

4) Close V-4639 OR V-4756 in Inter Bldg clean side.

5) Go to Step 13.

b. Go to Step 16

13 Establish Which Loop Has The Leak:

a. Check leak location on SW flow print - TO DETERMINE WHICH LOOP SHOULD BE AFFECTED

b. Verify header pressure in affected loop - LESS THAN INTACT LOOP HEADER PRESSURE

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
14	SW Pumps In Affected Loop - STOPPED	Stop SW pumps in affected loop.
15	Complete - ISOLATION OF THE LEAK	
16	Complete - NOTIFICATION TO MAINTENANCE AND HIGHER SUPERVISION	

-END-

ATTACHMENT A

A SW LOOP NON-SAFETY RELATED LOADS:

- o 1A and 1C instrument air compressors.
- o 1A main feed pump.
- o Exciter cooler.
- o Bus duct coolers (both)
- o Seal oil unit airside and H2 side coolers.
- o B turbine oil cooler.
- o All 3 condensate pumps.
- o Secondary sample coolers.
- o Battery room air conditioners.
- o Relay room air conditioners.
- o Traveling screens.
- o Circulating water pumps.
- o Administrative computer room HVAC.
- o House heating boiler sample cooler.
- o Spent fuel pit Hx.

B SW LOOP NON-SAFETY RELATED LOADS:

- o 1B main feed pump.
- o Both heater drain pumps.
- o Both EH oil coolers.
- o A turbine oil cooler.
- o 1B instrument air compressor.
- o Service air compressor.
- o Vacuum priming pumps.
- o 1A and 1B HVAC water chillers.
- o Laundry room cooler.
- o New spent fuel pit Hx.

ATTACHMENT B

SERVICE WATER LOADS IN CONTAINMENT AND ASSOCIATED ISOLATION VALVES:

NOTE: A locked valve key will be needed as these are locked valves.

Intermediate Bldg. (clean side):

- A CNMT recirc fan cooler
  SW inlet V-4627
  SW outlet V-4629

- B CNMT recirc fan cooler
  SW inlet V-4628
  SW outlet V-4630

- C CNMT recirc fan cooler
  SW inlet V-4641
  SW outlet V-4643

- D CNMT recirc fan cooler
  SW inlet V-4642
  SW outlet V-4644

Intermediate Bldg. (hot side - sample hood):

- A Rx compartment cooler
  SW inlet V-4757
  SW outlet B-4758

- B RX compartment cooler
  SW inlet V-4635
  SW outlet V-4636