



**FLOW DIAGRAM - RECIRCULATION PUMP COOLING WATER**

**NOTES:** SEE REF. DWG. G-191157 NUCLEAR BOILER FLOW DIAGRAM

1. EQUIPMENT, VALVES AND INSTRUMENTS FOR PUMP 1B ARE TO BE SUFFIXED WITH THE LETTER "B" EXCEPT AS SHOWN.

2. ALL RECIRCULATION PUMP INSTRUMENTS ARE TO BE PREFIXED WITH SYSTEM NO. 2-2.

3. PRESSURE INSTRUMENTS IMPULSE PIPING FOR RECIRC. PUMP 1B WILL EXIT PRIMARY CONTAINMENT THROUGH PENETRATIONS X-32E & X-32F

4. THERMOCOUPLES A THRU J, 18, 20 (22) TO BE WIRED OUT THROUGH DRYWELL TO T/C JUNCTION BOX

5. WHERE THERMOCOUPLES ARE DESIGNATED TE/M1, A2 ETC., TE/A2 IS A SPARE ELEMENT.

6. FOR INSTRUMENTS WITHOUT RACK NUMBERS SEE INSTRUMENTATION INSTALLATION DETAILS FOR MOUNTING.

7.

8. UNLESS NOTED OTHERWISE, ALL VALVES ARE PREFIXED WITH SYS 20 IN THE NORMAL CBASCO CONVENTION.

9. RACK 25-7 LOCATED AT RHR SW B PUMP ROOM.

10. FOR RECIRC. PUMP SHAFT VIBRATION MONITORING EQUIPMENT SEE B191301 CWD 712.

- LIST OF PUMP & MOTOR DISPLAY**
- TE/A1,A2- THRUST BEARING UPPER FACE
  - TE/B1,B2- THRUST BEARING LOWER FACE
  - TE/C1,C2- UPPER GUIDE BEARING
  - TE/D1,D2- MOTOR WINDING "A"
  - TE/E1,E2- MOTOR WINDING "B"
  - TE/F1,F2- MOTOR WINDING "C"
  - TE/G1,G2- LOWER GUIDE BEARING
  - TE/H- NO.2 SEAL CAVITY
  - TE/J- NO.1 SEAL CAVITY
  - TE/18- MOTOR COOLING WATER
  - TE/20- MOTOR BEARING COOLING WTR
  - TE/22- SEAL CAVITY COOLING WATER
- CONNECTIONS**
- ② 1/4" SEAL COIL HEAT EXCHANGER INLET
  - ③ 1/4" SEAL COIL HEAT EXCHANGER OUTLET
  - ④ 1/2" NO.1 SEAL CAVITY PRESSURE
  - ⑤ 3/4" SEAL LEAKAGE DETECTION-FS-21
  - ⑥ 3/4" SEAL STAGING FLOW-FS-26
  - ⑦ 3/4" NO.2 SEAL CAVITY PRESSURE
  - ⑧ 1" JACKET COOLER INLET
  - ⑨ 1" JACKET COOLER OUTLET
  - ⑩ 1" SEAL LEAKAGE DRAIN
  - ⑪ 1/2" SEAL LEAKAGE DRAIN
- THERMOCOUPLES DISPLAYED**
- |       |       |
|-------|-------|
| TE/A1 | TE/G1 |
| TE/B1 | TE/H  |
| TE/C1 | TE/J  |
| TE/D1 | TE/18 |
| TE/E1 | TE/20 |
| TE/F1 | TE/22 |

**FLOW INDICATORS.**

- FS<sub>L</sub>17- AIR COOLER FLOW
- FS<sub>H</sub>21- SEAL LEAKAGE DETECTION
- FS<sub>L</sub>23- JACKET COOLING & SEAL COIL HEAT EXCHANGER
- FS<sub>H</sub>/L26- SEAL STAGING FLOW

**SYSTEM INTENDED FUNCTION BOUNDARY**

**COMPONENTS SUBJECT TO AMR**

- REACTOR BUILDING CLOSED COOLING WATER SYSTEM AMRM-12
- PRIMARY CONTAINMENT PENETRATIONS AMRM-20
- REACTOR COOLANT SYSTEM PRESSURE BOUNDARY AMRM-33

THIS IS AN  
**FSAR**  
DRAWING

REV	NO.	DESCRIPTION	BY	CHKD.	APPD.
16	REVISED PER	NO. 03-000370-000	WD	RLS	JWA
15	REVISED PER	CU ER 2002-0748-01	JK	JNW	WCL
ENTERTY NUCLEAR VERMONT YANKEE VERNON, VERMONT					
FLOW DIAGRAM RECIRCULATION PUMP COOLING WATER					
DRAWING NO. G-191159 SH. 5					

NO.	DATE	DESCRIPTION	BY	ENG	CHK	APP
REVISIONS						
LRA-G-191159-SH-05-0						
LRA-G-191159-SH-05-16.DGN						
G-191159-SH-05-16.TIF						

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