

DRESDEN DAM FAILURE

(Primary Responsibility - Operations Director)

A. PURPOSE

Should the Dresden Dam fail during hot weather, the lake would be the only source of cooling water, with little or no makeup from the river. The cooling water injection temperature would increase and vacuum would decrease causing an increase in turbine back pressure. Obviously, immediate load reduction would be required and continued de-rated operation time would have to be determined.

This procedure is to show how cooling water can be provided to the suppression chamber in the event of failure to the Dresden Island Lock and Dam. Operation in the Emergency Core Cooling Mode increases the drywell pressure and temperature due to the transfer of core decay energy to the Containment System. Within two hours suppression chamber cooling will be required. This will be accomplished by restoring suction to one Containment Cooling Service Water Pump within this 2 hour time limit.

B. REFERENCES

None.

C. PREREQUISITES

None.

D. PRECAUTIONS

None.

E. LIMITATIONS AND ACTIONS

None.

F. PROCEDURE

1. Shut down Unit 1 and use water in the Unit 1 intake canal for shutdown cooling.
2. Establish communications from the Control Room with the crib house and possibly with the lift station and the flow regulating station.

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3. Ensure electrical power available:
 - a. MCC A20-3 Screen Refuse Pump 2/3 A and MCC A30-2-Screen Refuse Pump 2/3 B.
 - b. Bus 23 (33) Containment Cooling Service Water Pump 2A & B (3A & B).
 - c. Bus 24 (34) Containment Cooling Service Water Pump 2C & D (3C & D).
 - d. Bus 20 (30) flow regulating station.
 - e. Bus 12-07 lift station.
4. STOP any radwaste discharge to river.
5. CLOSE gates 4450 A through D at the flow regulating station to prevent losing cooling water to the river.
6. ADJUST the cooling lake spillway gates and 4451 A through 4451 D gates at the flow regulating station to make sure there is enough cooling water in the 2/3 intake canal. Maintain the level in the canal at 495' elevation or slightly below. If the level is above 495' elevation, water will spill out to the river. If the level is too low, there will not be enough suction head for the pumps. Minimum suction level for Containment Cooling Service Water Pumps is 494' elevation and that for Circulating Water Pumps is 490' elevation. If the levels cannot be maintained, DECREASE the load on the units as much as possible prior to tripping the pumps which may result in unit scram.
7. ADJUST Lift Pumps for necessary hot flume level control to avoid overflow through the emergency spillway.
8. If cooling lake is not available, shut down the units, CLOSE lake spillway gates and use the emergency spillway and the bypass gate at center dike to provide close cycle shutdown cooling with the Circulating Water Pumps operating. Opening of 4452 gates or de-icing line can also provide the cooling.
9. PLACE fire pump enclosure stop logs in place.

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10. OPEN Screen Refuse Pump Discharge to Fire Pump Enclosure Valve 2/3-4401-500R and CLOSE Screen Refuse Pump Discharge to Canal Valve 2/3-4407 to permit flow to fire pump enclosure from Screen Refuse Pump 2/3 A or B. This will raise the level in the fire pump enclosure to above 499' elevation, thus providing suction to CCSW Pumps in case LOCA occurs and CCSW Pumps have to be turned on for torus water cooling. If the level cannot be maintained above that, shut down the units.
11. OPEN Circulating Water Pump Suction Well-Drain Valves 2A (3A) and 2B (3B) to allow flow to trash rake refuse pit.
12. Maintain level in fire pump enclosure to above the 500' elevation to permit running a Containment Cooling Service Water Pump, if necessary, for containment cooling. Filling the fire pump enclosure is accomplished by the Sump Pumps which should start automatically.
13. Throttle Valve 2/3-4407, (to discharge canal), if fire pump enclosure begins to overflow.
14. Run a Containment Cooling Service Water Pump as needed.
15. Depending on plant condition, power for Screen Refuse Pump is controlled from MCC A20-3 (A30-2) which is fed from 4KV switchgear 24 (34). Power may also be supplied to switchgear 24 (34) from unit auxiliary transformer 21 (31) or standby diesel generator 4KV switchgear 24-1 (34-1). In case the Screen Refuse Pumps have to be fed from the D/G and it is carrying other loads, (such as in the loss of off-site power situation), make sure that starting the Screen Refuse Pumps will not overload the D/G.

G. CHECKLISTS

None.

H. TECHNICAL SPECIFICATIONS REFERENCES

None.