

(3P)

EARTHQUAKE

SEE THE...

I. EVENT

- A. "Moderate Earthquake": One that is readily felt but does not cause observable damage to the plant or surrounding structures.
- B. "Severe Earthquake": One that is of sufficient magnitude to cause significant observable damage to the plant or surrounding structures. These earthquakes may result in an automatic trip due to equipment or instrumentation malfunctions. In any event a manual reactor trip shall be initiated if there is significant observable damage to the plant or surrounding structures.

II. SYMPTOMS

- A. Moderate or severe oscillations in plant and surrounding structures.
- B. Reactor trip.
- C. Turbine trip.

CHECK APPLICABLE CONTROLLED
STICK FILE FOR CURRENT INFORMATION

III. AUTOMATIC ACTION

- A. No automatic tripping devices are provided that will trip the reactor at a given earthquake intensity. If an automatic trip occurs from equipment or instrumentation malfunction, follow the appropriate emergency procedure that relates to the trip condition.

IV. MANUAL ACTION

- A. A manual reactor trip shall be made at the discretion of the Control Operator.

V. SUBSEQUENT ACTION

- A. Moderate Earthquake
 - 1. A comprehensive physical inspection shall be made of the plant with particular attention to the following systems.
 - a. Safety Injection System, including the Refueling Water Storage Tank.
 - b. Radwaste System, including that part of the Chemical and Volume Control System that is located within the Reactor Auxiliary Building.
 - c. The New and Spent Fuel Building.
 - d. Component Cooling Systems.
 - e. Boric Acid Storage Tank and associated piping.

A. Moderate Earthquake (continued)

- f. Emergency power supply including diesel generators and associated auxiliary systems located within the diesel building.
 - g. Sphere enclosure building including sphere electrical and piping penetrations.
 - h. Containment sphere spray system including the hydrazine additive tank.
2. Exercise the control rods as outlined in Operating Instruction S-3-3.12.
 3. Control rod position, reactor power, and other pertinent variables shall be evaluated to verify that no change has occurred in core reactivity.
 4. Perform a hot leak test of the Reactor Coolant System as outlined in Operating Instruction S-3-1.9.
 5. Complete electrical supply breaker alignment and power availability check-off sheet as per OI S-2-16.
 - * 6. Perform a routine monthly test of diesel generators no. 1 and no. 2 per OI S-2-11.
 7. Check the water level in the Spent Fuel Building. Check the liner for leakage and the spent fuel transfer tube liner for leakage at the sumps.
 8. Verify that there is no abnormal operation of the sphere sump or reactor cavity pumps.
 9. Note initiation of off-site or on-site seismic trigger alarms.
 - * 10. Notify the Supervisor of Nuclear Plant Instrumentation Unit 1 in accordance with requirements of Station Order S-E-102.

B. Severe Earthquake

The procedures outlined in "A" above shall also be followed in the event of a "severe earthquake". In addition, the following tests shall be made.

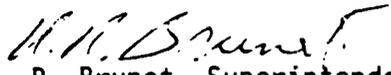
1. Conduct a sphere penetration leak rate test on all penetrations except those that require the plant to be in cold shutdown.
2. Conduct the two week reactor plant instrumentation testing as outlined in Instrument Test Procedure S-II-1.1.
3. Conduct the nuclear instrumentation testing for the source, intermediate, and power ranges as outlined in Operating Instructions S-3-3.8, S-3-3.9, and S-3-3.16.
4. Make a thorough inspection of the Reactor Coolant System, including the control rod housings, the steam generators, the reactor coolant pumps, the pressurizer, and all associated piping.

Based on the physical inspection of the plant and the general conditions found, the Superintendent may consider it necessary to conduct additional testing. The unit shall not be returned to service following a "severe earthquake" until an evaluation has been made by the Superintendent. Any observed damage to the plant shall be documented so that it can be related to the intensity of the earthquake.

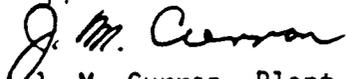
5. Recover "CHIPS" from the peak recording accelerometer, located in and on the top of the containment sphere.
6. Conduct a safeguard load sequence internal test as per OI S-3-3.14.
7. Conduct a hot operational test of safety injection and containment sphere spray system as per OI S-3-3.3.

During the return to service the following tests shall also be conducted:

1. Obtain a Reactor Coolant System sample and analyze for total activity.
2. Obtain an incore thermocouple map and evaluate.
3. Obtain an incore flux map and evaluate.


R. R. Brunet, Superintendent Unit 1

Approved:


J. M. Curran, Plant Manager

JLR:sel

*Indicates revision