

Tritium Facility 233-H Seismic Monitoring Test Plan

This plan outlines a proposal for testing a seismic monitoring/alarm system in Tritium Facility 233-H. Personnel will be trained to evacuate the process rooms once the alarm is activated and to await further verbal instructions.

Selection of sensor/alarm design concept: ongoing -11/01/02

This concept uses common sensors (triggers) that alarm existing Tritium Room Air Monitors (i.e., Kanne monitors) in each process room through the Health Protection Programmable Logic Controller (PLC). We will initially evaluate use of the seismic sensors that are already located in 233-H. This evaluation will consider:

- Design/procurement/installation cost
- Robustness of the design
- Ease/frequency of calibration
- Maintenance requirements
- Surveillance requirements
- Operator response (recognition of alarm and action taken)

Design/Procurement: 11/01/02 – 02/01/03

This portion of the project will focus on design of the concept selected above and procurement of any engineered equipment. Included will be instrument design (sensor), electrical design (conduit and cable), and mechanical design (mounting/supports). Also included may be a PLC program-logic design if the existing Kanne system is selected as the alarm output device.

Installation/Construction: 02/01/02 – 05/01/03

This portion of the project will focus on installation of the sensor, conduit, cable, alarms (as necessary), and PLC programming.

Procedure Development: 04/01/03 – 06/01/03

Alarm response procedures will be developed to support the installed equipment.

Testing: 06/01/03 – 07/01/03

Testing of the installed alarms will be conducted.

Training: 04/01/03 – 07/01/03

Training during normal shift training will be conducted. Additionally an Operating Experience Summary will be generated to provide training to support personnel.

Drills: 07/01/03 – 09/15/03

Drills will be conducted to assess the response of the facility workers to a simulated earthquake.

Final Report/Evaluation of Results: 10/15/03

Once the final report is generated and the results are deemed acceptable, implementation of similar systems in the Tritium Extraction Facility will proceed.