

Radiation Safety Guidance for Performing Fermilab Test Beam Facility ORC Reviews

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The Fermilab Test Beam Facility (FTBF) consists of the Meson Test beamline enclosures MT6 Section 1 and MT6 Section 2. The MT6 Section 2 enclosure exists within the Meson Detector Building and is constructed primarily of shielding blocks. Much of the west side of the enclosure is directly adjacent to the FTBF control room while the downstream end of the enclosure consists of a final beam dump.

The FTBF program consists of a number of different experiments that take beam for short periods of time, typically on the order of one to two weeks. Each time an experiment sets up to take beam, a member of the ESH&Q Radiation Physics Engineering groups inspects the area to look for issues that may result in adverse radiological consequences. In addition to reviewing the layout of the apparatus in the enclosures it is necessary to inspect the exterior of the enclosures for appropriate integrity and signage.

The following list represents suggested items that may be checked while performing the walkthrough inspection.

Items the reviewer will check inside the enclosure:

- Does the experimental apparatus create a significant interaction length target?
- Is any extraneous material (tools, ladders, power supplies, etc.) in or near the path of the beam?
- Has apparatus for non-running experiments been moved out of the path of the beam?
- Is the location of the experimental apparatus covered by an interlocked detector?
- Has apparatus been positioned such that it provides shielding for any of the detectors?
- Have any of the detectors been moved from their designated locations?
- Are the hatches in MT6 Section 2 in position and closed?
- Is the Herculite roof of MT6 Section 2 intact?

Items the reviewer will check external to the enclosure:

- Are the shielding blocks and associated fencing in place?
- Is the barrier between MT6 Section 1 and MT6 Section 2 in place?
- Are the Radiological postings in place?
- Are the signs prohibiting access on top of the shielding blocks and control room in place?