

# **20140206AD INTER-DEPARTMENTAL BEAM OPERATIONS AGREEMENT**

**Control Rooms: ITA Counting house**

**Particle type: 400 MeV Proton beam.**

**Responsible Parties:**

**Particle Physics Division, DDOD, Test Beam Facility**

**Accelerator Division, Operations Department**

**Definitions:**

MeV Test Area (MTA) – The 400 MeV beam line extracted from the Linac and associated building enclosure. This beam enclosure was previously known as the MuCool Test Area (also MTA).

Irradiation Test Area (ITA) – The shielding cave and associated experimental infrastructure located at the end of the MTA beam line as well as the broad program of experimental activities taking place inside the MTA. The facility and user program is overseen by the ITA coordinator.

ITA Coordinator – 2-week rotation coordinating on-site active experiments and acting as the primary contact between ITA experiments and the MCR and other laboratory resources. Oversees experiment installation, ORC approval, operation, and decommissioning activities. ITA coordinator will instruct users on facility procedures and communication protocols with the MCR.

Experiment – A group of users with an approved Technical Scope of Work operating at the ITA. Each group has an experiment spokesperson identified on the TSW.

Experiment representative – The point of contact between the MCR and the experiment during beam operation. The experiment spokesperson or a representative. They will self-identify to the MCR when making the beam request.

**Parameters Monitored:**

MCR monitors beam intensity sent to ITA.

**Delineation of Responsibilities**

ITA users will work with beam line experts and MCR to make sure the beam is steered through their devices. MCR is responsible for delivering beam, users are responsible for monitoring their devices.

**Coordinators**

ITA Coordinators will schedule groups and coordinate user activities. They will inform MCR of which group, using the TXXXX experimental number, has an approved ORC to request beam and their run plan.

**Experiment Locations**

The experiment will identify in the ORC where they will be located during beam operations. There are two options.

ITA Counting House – For experiments with active samples requiring monitoring of cooling, power, active data collection from the samples users will be stations in the ITA counting house (x3101)

Remote – For experiments with passive samples with little monitoring required beyond the total fluence delivered by the accelerator to the samples, users may be remotely located.

### **Communication Protocols**

When an experimental group has a signed ORC and are ready, the experiment representative will contact the MCR to request beam. They will provide the MCR with the experiment number and a contact name, phone number, and location during the period beam is running. The experiment representative will communicate the requested fluence to deliver to their experiment. If the experiment chooses to rotate monitoring in shifts, the new experiment representative will communicate the change in contact upon beginning their shift.

### **Access Modes**

The MTA has two access modes, supervised access and controlled access. There is no open access at the MTA.

Controlled access requires RSO approval for a key to be issued. If an experiment requires a controlled access, they will contact the ITA coordinator who will make the request to the MCR. Controlled access follows all procedures listed in FN000311 / CR. There is no open access at the MTA.

Supervised access is used for the installation and removal of experiments. The enclosure will be configured for supervised access after an experiment has completed their beam request. There will be a cool-off period following beam operations specified by the area RSO. The ITA coordinator will initiate any request to configure the enclosure for supervised access.

The MTA enclosure contains a shielding cave and “front porch” block (Figure 1) which is where experimenters will place the samples they are testing in the beam. Any access that requires reaching into or manipulating equipment inside the shielding cave or the front porch must have a Radiation Control Technician present, as specified in the RWP and posted on the shielding cave.



*Figure 1: Picture of the experimental shielding cave and front porch block located inside the MTA beam enclosure.*

### **Training**

Users will complete MTA Hazard Awareness training for access to the counting house and beam enclosure. If a user requires access to the beam enclosure, they will also complete Controlled Access and Radiological worker training.

### **Cross Training**

Cross training occurs when Operators search and secure the ITA enclosure and visit the area as part of their On-The-Job-Training (OJT). In addition, operators are encouraged to talk with users and learn the needs of the experiment. All new operators should to receive a tour of the MTA enclosure and ITA experimental area by the ITA coordinator.