

## PLACEMENT OF PORTABLE FIRE EXTINGUISHERS IN PRIMARY BEAM ENCLOSURES

### INTRODUCTION

The typical construction of primary beam enclosures (or any other enclosure in which radioactivation of components is of concern) is of noncombustible material. The enclosures typically contain equipment and apparatus of low combustibility.

It is the policy of Fermilab that portable fire extinguishers shall not be located in primary beam enclosures (or any enclosure in which radioactivation of components is of concern) of low combustibility loading.

The basis for this policy is as follows:

1. Emergency procedures require that personnel immediately evacuate if a fire occurs in a radiation enclosure involving radioactive material. Unprotected personnel are not to attempt to fight a fire involving radioactive materials. Only personnel wearing a Self-Contained Breathing Apparatus (SCBA) and protective clothing are allowed to re-enter the area and/ or fight the fire.
2. Regular access to extinguishers in primary beam enclosures for inspection by the Fermilab Fire Department is not possible without severe programmatic impact due to the "No Access" status of enclosures during beam-on periods.
3. Exposure to primary beam results in radioactivation of extinguisher shells and contents.

### REFERENCES

FESHM 2010, Planning and Review of Accelerator Facilities and Their Operations

NFPA 10 Standard for Portable Fire Extinguishers

### PROCEDURES

1. The division/ section heads may request a review by the Environment, Safety, & Health Section Fire Protection Engineer (ESH-FPE) if the combustible loading of any area within an enclosure has changed.
2. The ESH-FPE shall provide technical guidance as to the combustible loading of the enclosure. If the ESH-FPE feels the combustible loading is too high, the ESH-FPE may request the combustible loading be lowered or adequate local fire extinguishers be provided if that cannot be accomplished.
3. The division/ section heads may request either the Fermilab Fire Department or the ESH-FPE to recommend the quantity, type and placement of portable fire extinguishers. The Fermilab Fire Department shall be informed of the location of all portable fire extinguishers. Wherever possible, the portable fire extinguishers should be located just outside the enclosure.
4. During maintenance/ modification activities which increase the fire hazard, extra portable fire extinguishers shall be provided by the responsible division/ section or contractor and removed upon completion of the maintenance/ modification activity. (The division/ section can borrow fire extinguishers from the Fermilab Fire Department.) Permanent fire extinguishers should not be relocated for maintenance/ modification activities.