

General ES&H Review Criteria

Systems or devices with the following hazards shall require an ES&H review. This is not a complete list. Reviews shall be required whenever the Division Head, Project Engineer, system designer or other knowledgeable person so determines. To initiate a review by the DØ ES&H review committee, or to discuss the need for review of a particular system or device, contact the DØ liaison. (Bill Freeman) **Note:** All systems must meet all Fermilab safety standards.

Mechanical Hazards: Devices which meet any of the following criteria:

- Weighs over 3 tons and is supported above the floor
- Exceeds 10 tons in total weight
- Moves at a speed greater than 5 ft/sec
- Costs more than \$100,000 to replace
- Includes pressure/vacuum vessels

Flammable Gas: Any system that uses flammable gas and flammable gas mixtures.

Electrical Hazards: Electrical systems that meet any of the following criteria:

- Uses non-commercial or modified commercial equipment.
- Uses non-PREP or modified PREP equipment.
- Any non-commercial low voltage high current or high voltage distribution systems.
- Any equipment with large capacitor banks.

Fire Hazards: Any large combustible items such as large quantities of plastic scintillator, large numbers of cables requiring cable trays.

Oxygen Deficiency Hazards: Use of any oxygen-displacing gases such as chamber gas systems, helium bag systems, dry nitrogen, cryogenic magnets or targets.

Cryogenic Hazards: Cryogenic systems for magnets, hydrogen targets, calorimeters, or any cryogenic system with inventory exceeding 200 liters.

Laser Hazards: Lasers of any class.

Radiation Hazards: Radioactive sources/materials that will be used. Specify if embedded in detectors.

Toxic Materials: Toxic/hazardous materials planned or used, if the amount exceeds few gallon/pound quantities. Examples include: lithium, beryllium, mercury, lead, uranium, cyanide, etc.