

SECTION 2

Safety

2.1 Human Performance Improvement and Integrated Safety Management

2.1.1 Principles

Line Management is responsible for safety. Roles and responsibilities are clearly defined. Individual competence is commensurate with responsibilities. Priorities should be balanced. Safety standards and responsibilities should be identified. Hazard controls should be tailored to the work. Operations should be authorized. Management and the workforce must routinely look for accident precursors and latent weaknesses. The root causes of accidents or incidents must be thoroughly investigated and corrected with input from all parties associated with the process.

2.1.2 Core Functions

Before each job employees are required to define the work, analyze the hazards, establish controls, then perform the work, provide feedback and suggest improvements when needed.

2.1.3 Safety Professionals

FESS and the ES&H Department provide a Senior Safety Officer and other safety professionals to answer questions, provide technical information and gather data such as noise sampling. When the department purchases ES&H sensitive materials such as herbicides, PPE or chemicals, the Senior Safety Officer is asked to review MSDS information prior to purchase. Once the product has been approved by the Senior Safety Officer the MSDS is processed by ES&H and given a Fermilab MSDS number for future reference. When requisitions for Sub-Contracted work are being processed, one of the requirements is for the Senior Safety Officer to review and approve the requisition.

2.2 Specific Safety Program Features

2.2.1 Individual Training Needs Assessment ([see attachment 8.4](#))

Roads and Grounds Department Supervisors fill out an ITNA for each employee. This generates a variety of training classes reflecting that employee's duties and responsibilities. The Supervisor reviews each ITNA at least twice per year.

2.2.2 Work Activities Analysis Form ([see attachment 8.5](#))

Prior to the physical that each employee receives annually, the Medical Department requests a WAAF to be completed by the employee's supervisor. This form communicates what type of work assignments the employee is typically asked to perform. This provides the Medical Department with valuable information prior to the employee's physical. It also tells the Medical Department if the employee needs the CDL associated requirements during that physical exam.

2.2.3 Train Database ([see attachment 8.6](#))

The on-line Train Database is a valuable tool that allows supervisors and employees to easily look up their current training status. The database provides due dates for retraining requirements and it provides a sign up function to allow an employee or supervisor to enroll for a required training class.

2.2.4 DuPont Style Audits ([see attachments 8.7](#))

Since 1999 the Site Services Department has conducted monthly safety audits using all employees as auditors. A schedule is maintained that designates 3 employees each month as the audit team. This team picks a Site Services related job and conducts a safety audit at the job site. An audit typically consists of; observing the work activity, stopping the work activity and discussing the work with the crewmembers. If the audit team has safety concerns about either the work activity or the PPE involved, they communicate this to the crewmembers. If any safety related findings are observed they are noted on the audit form and the auditors present their findings at the next weekly Tool-Box Meeting.

2.2.5 Fermilab JULIE Program ([see attachment 8.8](#))

Roads and Grounds Operations frequently require employees to penetrate the surface of the ground with powered equipment. Typically, the equipment would include; powered augers, front end

loaders, back-hoes and excavators. Prior to these kinds of operations, supervisors and operators must assure that the appropriate JULIE Excavation Permit has been completed, reviewed and is available at the job site. Based on department and corporate knowledge of utilities in a certain area, a waiver of the JULIE requirements may be written as specified in FESHM 7030. Jobs that will not require the JULIE process are light digging with a shovel near the surface, cleaning a ditch or process waterway in an effort to return it to its designed elevation or removing surface layers of asphalt.

2.2.6 Roads and Grounds Specific Training

2.2.6.1 Hazard Assessment ([see attachment 8.9](#))

Fermilab's FESHM manual requires a formal Hazard Assessment for specific work activities. The Roads and Grounds Department develops these required HAs and develops additional HAs in cases where the work activity is not routinely done by the group and the work activity is of a significantly hazardous nature. An example of this is the HA for bison handling ([see attachment 8.9](#)). It is not required by FESHM but is not done regularly and is of a fairly dangerous nature. The Hazard Assessment development takes place at a weekly Tool-Box meeting with all employees encouraged to participate. For HA required functions that are routinely done throughout the course of the year, an annual review and update of the HA is performed with the crew (e.g. Excavations).

Subcontractors performing work for Roads and Grounds are required to attend the Subcontractors Orientation class or be escorted during their time on site by a Fermilab employee. Subcontractors develop a Hazard Assessment before work begins. Roads and Grounds' Service Coordinators or task Mangers often assist with this development.

2.2.6.2 Training ([see attachments 8.10, 8.23 and 8.24](#))

The Tuesday Tool-Box Meeting, conducted each Tuesday morning at site 37 is the cornerstone of the Roads and Grounds Department Safety Program. An "open forum" format is encouraged with all employees expected to participate in safety related discussions about the past week's work activities. Other typical subjects for these

meetings include HA review and development, emergency preparedness, equipment operation training videos and DVDs, bio-hazard videos, snow removal plans and procedures, safety audit reviews and “near miss” reviews from DOE , OSHA and other sources. Individual training sessions are provided for new employees including hands-on equipment training.

2.2.6.3 Off-Site Certifications and Training ([see attachment 8.11](#))

The Roads and Grounds Department sends employees off-site for training when needed. These training activities include subjects such as OSHA General Construction Training, OSHA Excavations, Mid-west Prescribed Burn Crew Training, Pesticide Applicator or Operator training and certification and mechanic related repair clinics.

2.2.6.4 Site 37 Emergency Plans ([see attachment 8.24](#))

2.2.7 Environmental Management System

The Roads and Grounds Department will follow the guidelines of Fermilab’s EMS. All work will be planned, scheduled, completed and reviewed with environmental impacts considered and mitigated whenever possible or to the greatest extent possible. The Environmental Review Form (ERF) will address all these issues. Controlling the release of pollutants into the environment will be of primary concern. These releases could potentially be fuels, lubricants, pesticides, emissions, silt and other erosion, salt and smoke from biofuels during burning operations. When a Work Orders is written, it is determined whether or not a FESS Environmental Review Form (ERF) is needed. This determination is noted on the Work Order record.

Specific operations affecting environmental concerns are found in; 3.8 (Pest Control), 3.6 (Snow Removal), 3.13 (Agricultural Lease Management), 3.14.5 (Drainage System Maintenance), 3.14.6 (Process Waterway Maintenance), 7.2.1.1 (Wildlife policy), 7.2.12 (Ozone Action Days) and 7.2.14 (No Idling Policy).