

## FESHM 7020: ES&H PROGRAM FOR SUBCONTRACTOR SAFETY OTHER THAN CONSTRUCTION

### Revision History

<b>Author</b>	<b>Description of Change</b>	<b>Revision Date</b>
Jim Niehoff	<ul style="list-style-type: none"><li>• Modifications to definitions, roles and responsibilities revised to be consistent with other FESHM Chapters.</li><li>• Added low and high hazard level definitions and flow chart.</li><li>• Added Point of Contact definition and roles &amp; responsibilities.</li><li>• Added 10 Hour OSHA 1910 training for Service Coordinators.</li></ul>	January 2015
Kent Collins	Add term requisitioner	December 2010
Elaine McCluskey	Incorporated NFPA 70E requirements	September 2005
Ed Crumpley	Initial release	July 1999

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## 1.0 INTRODUCTION

This chapter establishes a set of procedures that help to minimize the risk of injury to subcontractors by implementing integrated safety management protocols that consider the worker, the environment and the activity and then place controls to mitigate hazards. These procedures guide employees involved in requisitioning and directing the work through a process that places safety planning and hazard control at the same level as productivity, schedule, and quality.

This chapter applies to subcontractors performing work that involves an activity other than construction. If the work involves construction activities, it is covered by Fermilab Environment Safety Health Manual (FESHM) Chapter 7010. When subcontractor employees are directly supervised by Fermilab personnel, the responsibilities for hazard analysis and other related Environmental, Safety, and Health concerns are managed per the policies and procedures used for Fermilab in-house efforts (e.g. FESHM Chapters 2020 and 2060).

Subcontracted activities in many instances are routine, low hazard activities that do not need much in the way of analyzing hazards (e.g. copier repair and consulting services). These low risk work activities requires confirmation by the Landlord Senior Safety Officer that it is low risk; higher risk work activities will require qualified Service Coordinator assign to the activity.

There are subcontract activities that have potential exposure to hazards that require additional planning. It is necessary to look at both the scope of work and the environment where the work takes place. For example, copier repair work in itself may be a low risk activity unless it occurs in a building where cryogenics are used or stored, where their release may cause an oxygen deficient atmosphere.

## 2.0 REFERENCES

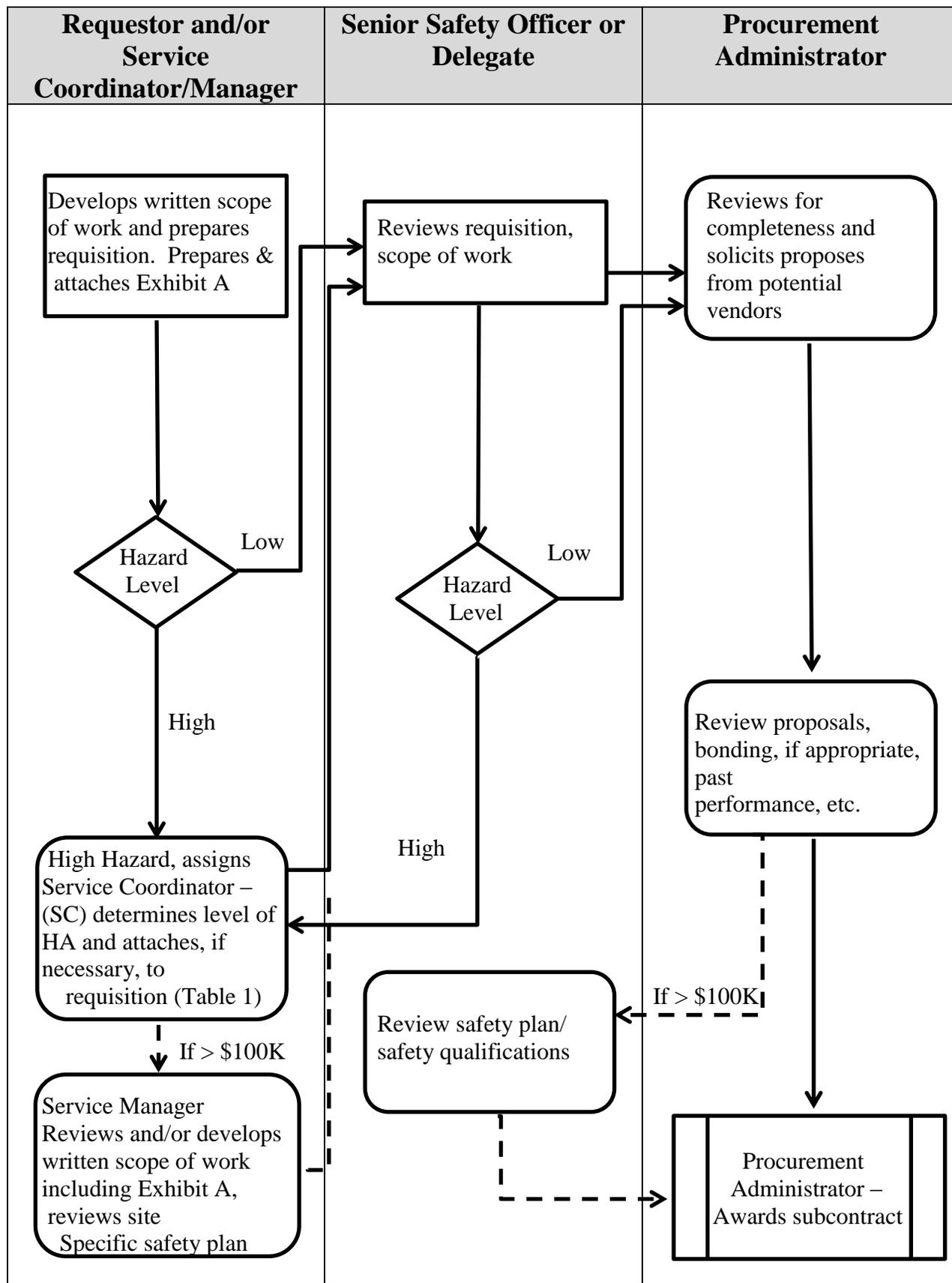
- 29 CFR 1910 - Occupational Safety and Health Standards
- 10 CFR Part 851 - Worker Safety and Health Program
- NFPA-70E (2009) - Standard for Electrical Safety in the Workplace
- FL-3 – Fermilab Construction Subcontract Terms and Conditions
- FL-4 – Fermilab Services Subcontract Terms and Conditions
- Form 7020-F1 – Subcontractor’s ES&H Stop Work Order
- Form 7020-F2 – Subcontractor’s Acceptance & Use of Fermilab Tools/Equipment
- Form 7020-F3 – Subcontractor’s Evaluation
- Form 7020-F4 – Subcontractor ES&H Plan Review
- Appendix 1, Exhibit A – Schedule & Supplementary Terms & Conditions

## 3.0 DEFINITIONS

- **Construction** – Construction is defined by Section 18 of FL-3 Fermilab Construction Subcontract Terms and Conditions.
- **Hazard Analysis (HA)** - The process by which hazards and controls are identified and formally documented for all anticipated phases of work.
- **Imminent Danger** - Any condition or practice that could reasonably be expected to cause death or serious physical harm (permanent or prolonged impairment of the body or temporary disablement requiring hospitalization) to employee or the public, or irreparable environmental harm unless immediate actions are taken.
- **Integrated ES&H Management** - The Fermilab process which systematically integrates excellence in environment, safety, and health into the management and work practices of all activities at all levels so that the mission is achieved while protecting the public, the workers, and the environment.
- **Landlord** - The Division/Section/Center (D/S/C) responsible for the facility or space where work is planned or occurring.
- **Other Than Construction** - Activities that clearly fall outside of the definition of construction activity.
- **Point of Contact** – The Fermilab field point of contact between the subcontractor and the laboratory for specific work classified as low hazard activity; responsible for overseeing the subcontractor’s work activity. Point of contact can also be the requisitioner.
- **Procurement Administrator (PA)** - The procurement representative, with Laboratory signature authority, is responsible for the negotiation and administration of subcontract terms and conditions.
- **Requisitioner** – The person or organization responsible for developing the written scope of work and submitting it to the Procurement Office.
- **Senior Safety Officer (SSO)** - An individual who is assigned duties as the principal ES&H advisor to the division/center/section head.
- **Services** – Services is defined by Section 16 of FL-4 Fermilab Services Subcontract Terms and Conditions.
- **Service Coordinator (SC)** - The Fermilab field point of contact between the subcontractor and the laboratory for a specific work classified as high hazard activity; responsible for overseeing the subcontractor’s work effort. Requesting organizations provide service coordination when required by Service Managers.
- **Service Managers (SM)** - The program manager with overall responsibility for a specific subcontract for work other than construction. The SM develops the overall scope of work,

submits requisitions to the Procurement Office, and serves as the initial field point of contact between a service coordinator and the subcontractor.

- **T&M Manager** - The individual assigned to oversee a set of trade-specific subcontracts from which Fermilab supervised labor and other work can be ordered. The T&M Manager is responsible for the overall subcontract compliance effort and operating procedures for specific subcontracts. This individual serves as the focal point for administration of the assigned subcontracts.
- **Work, Low Level Hazard** – Work limited to those activities or administrative activities commonly performed in public areas, posing limited hazards, with controls that may be implemented without permits, or written hazard analysis, or special ES&H training, excluding subcontractor orientation training or specific orientation training to an entire area. Examples are performing routine office work, using office supplies, reviewing schematics, specifications, taking photos, field verification/measurements, servicing break room appliances, and servicing printers, facsimile, and copiers. In high hazard level work activities, a qualified service coordinator shall be assigned. Reference flow chart below.



<b>Category</b>	<b>High-Level Hazard</b>
<i>Radiological Work</i>	<ul style="list-style-type: none"> <li>• Potential for radiological contamination * (FRCM Article 322)</li> <li>• Work in “Radiological Areas”* (FRCM Article 322)</li> <li>• Potential for spills</li> </ul>
<i>Electrical work</i>	<ul style="list-style-type: none"> <li>• Work activities near or on exposed electrical conductors, circuits, or equipment that are or may be energized and where there is a significant and unmitigated exposure to electrical shock or a significant potential for arcing, flash burns, electrical burns, or arc blast* (FESHM 5042)</li> </ul>
<i>Confined Space Work</i>	<ul style="list-style-type: none"> <li>• Permit required confined space entry* (FESHM 5063) where and when hazards cannot be adequately addressed in the permit</li> </ul>
<i>Crane &amp; Hoist Usage</i>	<ul style="list-style-type: none"> <li>• Load requires exceptional care in handling because of size, shape, weight, close-tolerance installation, high susceptibility to damage, or other unusual factors</li> </ul>
<i>Excavation and digging</i>	<ul style="list-style-type: none"> <li>• Digging or excavating in area where the potential exists for encountering buried utilities* (FESHM 7030)</li> <li>• Employees entering excavation/trench that is <math>\geq 4</math> feet in depth</li> </ul>
<i>Hazardous substances &amp; regulated pollutants</i>	<ul style="list-style-type: none"> <li>• Potential for release of hazmat on-site in quantities &gt; 50% of “Reportable Quantities”</li> <li>• Potential to generate hazardous waste</li> <li>• Potential for release of petroleum, fuel oil, oil refuse, and oil mixed with wastes (FESHM 8030 &amp; 8031)</li> </ul>
<i>Chemical Usage</i>	<ul style="list-style-type: none"> <li>• Use of materials that are flammable, combustible, corrosive, reactive, toxic, caustic, poisonous or any material that because of the quantity and/or manner it is being used is hazardous to the health of the worker</li> </ul>
<i>Respiratory and Hearing Protection</i>	<ul style="list-style-type: none"> <li>• Work requiring hearing or respiratory protection due to exceedance of Permissible Exposure Limits (FESHM 5061 and 5103)</li> </ul>
<i>Hazardous Substance Abatement Activities</i>	<ul style="list-style-type: none"> <li>• Work involving abatement of asbestos, lead, PCBs, or mercury</li> </ul>
<i>Cryogenic Systems</i>	<ul style="list-style-type: none"> <li>• Potential for exposure to reduced atmospheric oxygen</li> <li>• Working on cryogenic systems</li> </ul>
<i>Magnetic Fields</i>	<ul style="list-style-type: none"> <li>• Potential for exposure in excess of action limits established in FESHM 5062.5</li> </ul>
<i>Lasers</i>	<ul style="list-style-type: none"> <li>• Use of Class IIIB or IV lasers (FESHM 5062.1)</li> </ul>
<i>Working at Heights</i>	<ul style="list-style-type: none"> <li>• Fall potential is &gt; 4 feet, and additional fall protection is required for non-construction related activities.</li> </ul>
<i>Other</i>	<ul style="list-style-type: none"> <li>• Working with systems or equipment which are pressurized &gt; 15 psig</li> <li>• Working with vacuum vessels (FESHM 5033)</li> <li>• Work requiring welding, brazing, or open flames*</li> <li>• Potential for inadvertent startup of equipment</li> <li>• Potential for unexpected release of energy (hydraulic, pneumatic, thermal, potential, etc.) where lockout/tag out is required.</li> <li>• Potential for job-induced alertness reduction (e.g., long hours, short deadlines)</li> </ul>

## 4.0 RESPONSIBILITIES

A responsibilities section is included only if there are any responsibilities which are unusual, i.e., different than those indicated in FESHM 1010.

**4.1 Division/Section/Center Head** ensures implementation of the requirements of this chapter for those services other than construction activities managed by his/her staff. The D/S/C head also ensures qualified SM/SC as assigned.

### 4.2 Environment, Safety, Health and Quality Section

- Provides subcontractor safety orientation and assists the service coordinator by providing training and technical advice when requested.

### 4.3 Point of Contact

- Prepares a scope of work that clearly describes the typical work and classifies as low hazard;
- Completes information required in paragraph 11 of Exhibit A, and appends the Exhibit to the requisition. Exhibit A is found at the end of this chapter;
- Assures subcontractor employees have received the Fermilab orientation and other trade specific training.

### 4.4 Procurement Administrator (PA)

- Administers all contractual requirements;
- Obtains the Fermilab Subcontractor Safety Information Questionnaire Form from potential bidders and submits it to SM and D/S/C SSO;
- When required, incorporates the Subcontractors ES&H Plan as part of the contractual requirements;
- Issues the Notice to Proceed after all safety and contractual requirements are satisfied.
- Screens the requisition for completeness;
- Forwards the safety plans and hazard analysis to the service manager for review and acceptance;
- Drafts and sends a letter of recognition based on the recommendations submitted by the service coordinator in the “Subcontractor Evaluation - Services Form, Form 7020-F3, found at the end of this chapter;
- Coordinates the subcontractor performance evaluation process;
- Notifies the subcontractor of issues and concerns.

### 4.5 Requisitioner

- Prepares a scope of work and the subcontract specifications that clearly describes the work. Completes information required in the Appendix 1 entitled Exhibit A and

appends the Exhibit to the requisition. Exhibit A is found at the end of this chapter. The Point of Contract and/or Service Coordinator can act as the requisitioner.

#### 4.6 Service Coordinator

- Prepares a scope of work that clearly describes the typical work, classifies high hazards under the criteria provided in Table 1 – Potential Hazards for HA preparation, and submits with requisition;
- Completes information required in paragraph 11 of Exhibit A, and appends the Exhibit to the requisition. Exhibit A is found at the end of this chapter;
- Assures subcontractor employees have received the Fermilab orientation and other task specific training. Reviews the work planning or written hazard analysis submitted by the subcontractor for acceptance, providing input when requested;
- Oversees and assures that the subcontractor work activities are in compliance with the subcontract requirements, including the ES&H requirements. Insures that as conditions change through the life of the subcontract, or within a specific work activity, the same level of rigor for planning, approval, and oversight is maintained as would have been required for a new subcontract activity;
- Obtains necessary permits and distributes them, including the Work Permit/Notification (WPN) form;
- Reviews incident reports submitted by the subcontractor and forwards copies to the SSO, Procurement Administrator, and Service Manager;
- Coordinates the Site-Specific Meeting. Identifies site specific hazards and insures the subcontractor incorporated site specific hazards and associated mitigations on the HA as may be required;
- Notifies the subcontractor in a timely manner of uncorrected deficient or non-compliant work or safety violation using the Subcontractor ES&H Stop Work Order (Form 7020-F1) with a copy sent to the Service Manager and Procurement Administrator or designee;
- Notifies the Senior Safety Officer (SSO) of any employee injuries;
- When requested, completes the Subcontractor Performance Evaluation Form found at the end of this chapter (Form 7020-F3) and submits to the Procurement Administrator.

#### 4.7 Service Manger

- Reviews/accepts the subcontractor ES&H plan when required on subcontracts usually on \$100,000.00 or greater, including revisions, on behalf of the laboratory. Optional Form 7020-F4 may be utilized for this process;
- Prepares a scope of work that clearly describes the typical work and classifies it under the criteria provided in Table 1 – Potential Hazards for HA preparation and submit with requisition;
- Completes information required in paragraph 11 of Exhibit A, and appends the Exhibit to the requisition. Exhibit A is found at the end of this chapter;

- Assures subcontractor employees have received the Fermilab orientation and other trade specific training;
- Reviews/accepts the subcontractor's ES&H safety plan, including revisions, on the behalf of the laboratory.

#### **4.8 Senior Safety Officer**

- Reviews purchase requisitions to ensure high or low level of work activity appropriate safety requirements are identified (See FESHM 5000 series);
- Assists the Point of Contact or Service Coordinator with the review of the hazard analysis when requested;
- Reviews and approves the work permit and notification form (see FESHM Chapter 2020);
- Provides technical support and oversight.

### **5.0 PROCEDURES**

#### **5.1 Service Requisition Preparation**

The Service Manager will complete a requisition for services that includes a detailed scope of work, or the performance objective.

#### **5.2 Service Requisition Processing**

The Division/Section/Center will perform an ES&H review/approval. This review is aimed at verifying that the clauses stipulated by the requisitioner are applicable and also serves as quality assurance for thoroughness in the description of the scope of work and subcontract clauses.

#### **5.3 Service Coordinator Training**

Divisions/Sections/Centers shall designate Service Coordinators based upon individual knowledge, skill, ability, and experience, and the associated nature and complexity of the service work activity. 10 Hour OSHA 1910, General Industry Outreach (FN000022/CR/00) is required for Service Coordinators. A training course covering procedures for administering Service Subcontracts is available and highly recommended for all individuals involved in regular or recurring service contract oversight. Course FN000319 subjects include identification of hazards, requirements for hazard analysis, subcontractor training, and work activity documentation.

Note: A Task Manager/Construction Coordinator as delineated in FESHM 7010 can function as a Service Coordinator without any additional training requirements.

#### **5.4 Subcontractor Training and Documentation**

All service subcontractor companies shall maintain records of training completed by all personnel working on the Fermilab site. Training needs shall be based upon statutory requirements, Fermilab requirements, the nature and complexity of the work, and/or the associated hazards. These training records will be subject to audit and verification by Fermilab. Training records for certain high hazard activities will be inspected prior to exposing employees to the respective hazard. These activities include, but are not limited to:

- Entry into a permit-required confined space (training provided by subcontractor);
- Entry into a facility or area classified as an Oxygen Deficiency Hazard (training provided by Fermilab);
- Entry into a radioactive or controlled work area (training provided by Fermilab);
- Use of respiratory protection (provided by the subcontractor – verify medical clearance, fit testing, and training);
- Working in areas requiring fall protection (training provided by subcontractor);
- Working on equipment with potential energy requiring lock and/or tag-out;
- Working on electrical equipment or service requiring protection from electrical arc-flash with PPE or equipment isolation as detailed in NFPA 70E (training provided by subcontractor);
- Operating a fork lift, industrial truck, or mobile crane (training provided by subcontractor).

## 5.5 Subcontractor Safety Plan and Hazard Analysis

The Exhibit A attached to the subcontract may require a safety plan if warranted by the scope and potential hazards associated with the work, and usually requires a safety plan when the scope of work exceeds a dollar value of \$100,000. A hazard analysis (HA) shall be prepared for work activities fitting the hazard screening criteria of Table 1. The service coordinator has the authority to request an HA if, in her/his opinion, the work and the environment where the service is to be performed introduces complexities or other hazards not otherwise covered in Table 1. Use the Hazard Analysis Form found in FESHM 2060. The procurement administrator or designee will make available written safety plans and hazard analyses to the service manager and/or service coordinator. When either a written safety plan or a written HA is required, it shall be accepted before work is allowed to proceed. Service Coordinators are responsible for retaining hazard analyses for six (6) years from the completion of the project, reference FESHM 2060.

## 5.6 Work Notification Form

The service coordinator will complete a work notification form to notify the affected Division/Section/Center and affected parties.

## 5.7 Work Planning, Briefing and Orientation

All subcontractor employees working without a direct Fermilab employee escort shall attend Fermilab subcontractor orientation once every two years. The orientation is available daily in Wilson Hall. The Division/Section/Center may waive the requirement for a subcontractor orientation based upon a review of the potential hazards associated with the specific service provided.

In conjunction with the subcontractor's orientation, or at the commencement of a new or different type activity, the subcontractor under the advisement of the Service Manager shall conduct a site-specific briefing with the subcontractor employees. This briefing will include a review of the work process and an analysis of the associated hazards (HA), procedures concerning fire, tornadoes, medical emergencies, handling of spills, and other pertinent site or building-specific information. The Service Manager will document the briefing and obtain signatures of the participants acknowledging the briefing and, if required, the review of the HA.

Service Coordinators or Service Managers may provide an ES&H information sheet to subcontractor superintendents for distribution to delivery personnel. This information sheet outlines site-specific warning signals, contacts and telephone numbers if ES&H support is needed.

## **5.8 Safety Violation Program**

Service coordinators are expected to monitor the subcontractor to ensure their safety program is effective. Fermilab personnel will document safety violations observed in the field to support actions under the terms of the subcontract. The Fermilab Services Subcontract Terms and Conditions provide contractual support for Fermilab actions from suspension for a period of days up to, and including, immediate requests to leave the Fermilab premises. Use Form 7020-F1-Subcontractor ES&H Stop Work Order to notify the subcontractor and the procurement administrator of uncorrected, deficient or non-compliant work or safety violations.

## **5.9 Change Orders**

When a scope change order occurs, additional hazards may be introduced. This may require a revision to the hazard analysis, and the associated Fermilab review and acceptance.

## **5.10 Loaning of Fermilab Tools and Tool Inspections**

Fermilab does not loan tools and equipment unless the tools or equipment is specifically authorized in the contract documents. Excluded from this policy are non-powered hand held tools and lockout/tagout locks and tags.

Conditions may arise where a service coordinator finds it absolutely necessary to loan a tool or piece of equipment. In these instances, the tool or equipment may be loaned but under very strict conditions. To loan a tool or equipment:

- There must be a compelling reason;
- The subcontractor and the service coordinator must inspect the item loaned;
- The subcontractor employee using the tool or equipment must certify that he/she has

had training in the use of the tool or equipment;

- The subcontractor releases Fermilab of any liability if an injury occurs to the subcontractor employee while using the tool or equipment owned by Fermilab;
- The subcontractor accepts the tool for the intended use.

Form 7020-F2 at the end of this chapter shall be used for this purpose. The original completed form will be sent to the procurement administrator for filing after the tool is returned to Fermilab control. A copy of the completed form will also be sent to the T&M Manager in the case of T&M contracts. The original form will be maintained in the procurement subcontract file for six (6) years.

### 5.11 Emergency Services

Occasionally, it is necessary for subcontractors to provide emergency services on site. Time may not allow the subcontractor to submit a safety program. The subcontractor may be permitted to provide the service after completing a hazard analysis and submitting it to the service coordinator in lieu of a safety program. This may be accomplished in the field with the subcontractor and the service coordinator or by another responsible Fermilab employee who is familiar with the scope of work. The subcontractor must agree to comply with Fermilab ES&H regulations for the duration of the contract. Under no circumstances shall an emergency serve as exemption for compliance with safety requirements.

### 5.12 Inspection of Service Work Activity

The service coordinator is responsible for conducting inspections of the work activity and monitoring the subcontractor's performance to verify compliance with federal and state regulations, Fermilab requirements, the subcontractor's safety plan, and adherence to the hazard analysis. The frequency of these visits should be sufficient to regularly identify and correct safety concerns. The Division/Section/Center SSO may also perform oversight inspections of service sites.

### 5.13 Stop Work Activity Authority

Fermilab employees have the authority to stop contracted activities if an imminent danger condition is noted or perceived. If the hazard cannot be abated quickly in the field, or agreement reached to stop the activity until the hazard is abated, then the associated activity will be stopped and documented using the Subcontractor ES&H Stop Work Order Form (Form 7020-F1). Refusal by the subcontractor to stop the work activity when requested may result in disciplinary action. It must be noted that the stop work activity authority is to stop a specific activity within a project and not an entire project.

Authority to restart an activity after a formal Stop Work Order has been issued resides with the Division/Section/Center head. The Subcontractor ES&H Stop Work Order (Form 7020-F1) will be used to restart work.

Just as Fermilab employees have a duty to safely resolve dangerous conditions so do subcontractor employees. They should address this duty in their subcontractor safety plan.

## 5.14 Accident Investigation and Reporting

All accidents and near misses will be reported to the Service Coordinator who will in turn notify the Service Manager and the Division/Section/Center SSO. Subcontractors are expected to conduct a thorough investigation and submit a report within two working days of the accident or near miss. The subcontractor will use their own internal accident/incident report forms. The subcontractor will identify root causes and corrective action in the report. The Service Coordinator shall have the report submitted to the Service Manager and the Procurement Administrator for filing and a copy to the division/section/center SSO for entry into CAIRS.