Fermilab

Section Office
ES&H Section
630.840.8069 (phone)
630.840.3390 (fax)

Memorandum

September 15, 2005

To: Gerald Brown

From: William Griffing

Subject: Revised FESHM Chapter 7011 – ES&H Program for Construction – Time and Materials (Other Than Fixed Price)

Enclosed you will find revised FESHM Chapter 7011 - ES&H Program for Construction - Time & Materials ACTIVITIES (Other Than Fixed Price) has been revised. Should the job scope include electrical work that requires compliance with NFPA 70E, then the T&M Office is required to verify training under that standard.

After final approval, please return this approval page to Elizabeth May at MS119 for posting on the web.

Encl.

Recommended for Approval:

Gerald Brown _____ Date 9/16/2005

Approved:

Piermaria Oddone _____ Date 9/16/05

Database login _____
Sent for posting on web _____
Date posted _____
E-mail sent _____

ES&H PROGRAM FOR CONSTRUCTION – TIME & MATERIALS ACTIVITIES (OTHER THAN FIXED PRICE)

INTRODUCTION

Fermilab will only award subcontracts to subcontractors to work on the Fermilab site that are able to work safely and in an environmentally sound manner. This chapter describes Fermilab's program, procedures and safety requirements for all Time & Material (T&M) construction work. Construction tends to have greater exposures to hazards and thus higher injury and property damage rates. However, experience has shown that careful planning and review can reduce the rate at which accidents occur.

This chapter also describes requirements for Fermilab employees who will be entering construction areas or who oversee subcontractor T&M construction activities.

DEFINITIONS

Competent Person- The subcontractor and/or Task Manager who by virtue of formal training and/or experience can recognize existing and predictable safety hazards and has the authority to take prompt corrective action. The competent person must be on the Fermilab site at all times when work activities are ongoing. For those activities where OSHA specifically calls out for a competent person; i.e., scaffolding and excavations, the project competent person may act in that capacity provided the OSHA qualification requirements for that activity are met.

Construction – means construction, alteration, demolition, or repair (including dredging, excavating, and painting) of buildings, structures or other real property. For purposes of this definition, the terms "buildings, structures, or other real property" include, but are not limited to, improvements of all types, such as bridges, dams, plants, highways, parkways, streets, subways, tunnels, sewers, mains, power lines, cemeteries, pumping stations, railways, airport facilities, terminals, docks, piers, wharves, ways, lighthouses, buoys, jetties, breakwaters, levees, canals, and

channels. Construction does not include the manufacture, production, furnishing, construction, alteration, repair, processing or other kinds of personal property.

ES&H Audit - a formal review of a line management and subcontractor's activities, documentation, and management systems to verify compliance with the ES&H program as defined by their accepted ES&H Plan and the contract.

ES&H Inspection – an on-site review of construction work activities using the established subcontractor ES&H plan and the contract as review criteria.

ES&H Construction Oversight – Activities of ES&H personnel aimed at assessing a project to verify compliance with laws and regulations as well as Fermilab policies and procedures, contract requirements and the accepted subcontractor's ESH plan. Oversight includes audits of the activities of all line management in support of Fermilab's safety efforts.

Excavation – Any man made cut, cavity, trench, or depression in the earth's surface formed by earth removal, where employee exposure can be reasonably anticipated and employee entry into the excavation is a requirement of the work activity.

Hazard Analysis (HA) - The work planning process by which hazards are identified 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.

Landlord - The Division/Section (D/S) responsible for the space.

Mobile Crane – A crane consisting of a rotating superstructure, operating machinery, and operator's station and boom; mounted on a crane carrier equipped with axles and rubber-tired wheels for travel, a power source(s), and having either a single or separate stations for operating and driving. Its function is to lift, lower and swing loads with boom raising and lowering capabilities and a superstructure that can rotate 360 degrees.

Personal Property - Property that is owned by the government, in custody of the Laboratory, both equipment and expendable, exclusive of plant equipment (i.e. utilities) and real property (i.e. roads, buildings, land).

Procurement Administrator (PA) - The procurement representative, with Laboratory signature authority, who is responsible for the negotiation and administration of subcontract terms and conditions.

Real Property - Includes all land, land improvements, permanent structures and the utilities, fixed plant equipment and components to service the structure for its intended use.

Requestor/Task Sponsor (R/TS) – Individual responsible for the assigned task. He/she assures that the task is completed according to plans and procedures, approves and obtains funds, and has authority for scope changes.

Reviewing Official (RO) - The individual who has the final signature authority on the subcontractor performance evaluation. That signature authority is given to the Head, Business Services Section.

Senior Safety Officer (SSO) - An individual who is assigned duties as the principal ES&H advisor to the division/section head.

T&M Contracts - Contracts with work efforts ordered and executed under individual requisitions or work orders on a modified contract.

Task Manager (TM) – A division/section-designated individual specifically assigned to oversee and direct a work activity. Usually this term applies to individuals directing T&M subcontractors. An approved TM list indicating individual experience and competency to direct specific work activities can be found at http://www-esh.fnal.gov/pls/default/matrix.step3?category=TM&days=40&colheader=code&style=color&criteria=job&org=TSKMGR.

Task Manager's Guide – A guide developed with input from TMs as a tool to assist the TM. This guide may be found at http://www-fess.fnal.gov/IMG/tm_guide.pdf.

T&M Manager – The individual assigned to oversee overall contract compliance effort and operating procedures for specific T&M contracts. This individual serves as the focal point for T&M administration of their assigned contracts.

T&M Project Supervisor – Individual within the FESS T&M Office who assists in scheduling qualified subcontract personnel to perform time and material work and follows up to insure that the T&M program overseen by that office is working as intended.

RESPONSIBILITIES

The Associate Head for Operations Support is responsible for updating the TM list on an annual basis.

The Division/Section head (D/S) is responsible for ensuring implementation of the requirements of this chapter for those construction activities managed by his/her staff. The D/S head is also responsible for ensuring a qualified TM is assigned.

The Requestor/Task Sponsor (R/TS) is responsible for ensuring that the project is completed according to plans and procedures. The R/TS review, supplements as desired, and forwards to the T&M Manager the task completion form prepared by the TM. The R/TS may also be asked to review/accept the hazard analysis as prepared by the TM.

The T&M Manager oversees the overall effort on T&M contracts. Responsibilities include:

- Developing T &M contract and operating procedures.
- Monitoring subcontractor performance on all jobs.
- Arranging for Subcontractor Orientation and General Employee Radiation Training (GERT) for T&M subcontractor employees.
- Arranging for Hazard Analysis training for supervisory personnel

The T&M Project Supervisor is responsible for:

- Reviewing new releases assigned to T&M subcontractors for clarity of work to be done, manpower needed to complete job, material needed and equipment if required.
- Confirming and coordinating with the Task Manager and subcontractor the exact starting date, needed manpower, material and equipment and confirm what each will be responsible for and that it is on the job site at the start of work.
- Assuring that the subcontractor has provided qualified tradesmen for the task and the right number of workers on the job.
- Verifying completion of job and obtaining Task Manager confirmation that the job is completed as requested and that all ES&H paper work has been completed

The Task Manager (TM) is responsible for overseeing all aspects of the T&M activity assigned. ES&H Responsibilities include:

- Preparing the HA and obtaining all required reviews and acceptances.
- Planning and directing all work activities.
- Acting as competent person for the job.
- Obtaining the required work permits.

- Preparing and distributing the Work Permit/Notification (WPN) form.
- Conducting pre-job work planning meeting with T&M subcontractor employees to assure they understand the work activity, ES&H hazards, and mitigation measures.
- Assuring all subcontractor employees have received all appropriate training.
- Arranging for Hazard Analysis training for subcontractor supervisor, if not done by T&M Manager.
- Reviewing HA with subcontractor employees, seeking their input, and making changes as appropriate.
- Assuring that all subcontractor employees sign the HA.
- Assuring that the subcontractor performs no work until the HA has been accepted, reviewed and signed off by each employee.
- Notifying the Senior Safety Officer (SSO) and T&M Manager of any employee injuries.
- Conducting incident investigations.
- Informing T&M Manager of ES&H noncompliance issues.
- Submitting subcontractor performance review to the T&M Office after completion of the job (http://www-esh.fnal.gov/FESHM/7000/7010_Form15.pdf)), as appropriate
- Reviewing the condition of any mobile crane used as part of the project, using the guidance in FESHM TA 7010-2.
- Conducting and documenting daily inspections of excavations.

The Senior Safety Officer (SSO) is responsible for providing ES&H support to the TM. He/she is the SSO of the D/S that the TM is associated. Responsibilities include:

- Assisting the TM with the preparation of the HA, as requested.
- Negotiating with the ESH Section as to oversight and support responsibilities for projects under $25K. Notifying the TM of the negotiation.
- Providing field consultation to the TM.
- Reviewing investigation reports for completeness. Assist as requested.
- Notifying the Medical Department of any subcontractor or subtier contractor injuries within 24 hours of notification.
- Assisting the TM in conducting incident investigations, as requested.
- Entering incident investigation information into CAIRS.
- Developing Lessons Learned and submitting them to ESH-SEP for posting on web page.
- Participating as a team member in the evaluation of the subcontractor, as appropriate.
- Reviewing purchase requisitions to ensure appropriate safety requirements are identified (See FESHM 5010).
- Reviewing and approving the Work Permit and Notification form (see FESHM 2020).

The ESH-SEP Group serves as the authority for construction safety policy. Responsibilities include:

- Proposing construction safety policy.
- Evaluating/accepting the subcontractor safety submittal as part of the initial proposal.
- Reviewing/accepting the subcontractor ES&H plan, including revisions on behalf of the Laboratory.
- Maintaining file copies of the subcontractor ES&H plan.
- Providing Subcontractor Orientation, including the principles and core functions of Integrated ES&H Management to subcontractor and subtier employees and providing proof of attendance.
- Providing other Fermilab-specific training to subcontractor and subtier contractor personnel, as requested by the TM. This includes hazard analysis training.
- Conducting documented ES&H inspections and audits of construction activities on site. Observations will be provided verbally and in writing to the TM for disposition. Construction activities include weekly construction meeting with subcontractor, work planning meetings, toolbox and monthly ES&H meetings, Preconstruction meetings, reviewing incident investigation reports and lessons learned documents.
- Interpreting OSHA requirements for construction work, as requested.
- Assisting the TM in the review of the Hazard analysis, as requested.
- Participating in subcontractor performance reviews as appropriate.
- Providing field support as requested.

The Procurement Administrator (PA) is responsible for overseeing the blanket order contract process. Responsibilities include:

- Administering all contractual requirements.
- Obtaining the Fermilab Subcontractor Safety Information Questionnaire Form from potential offerors, and submitting it to ESH-SEP for review and acceptance.
- Obtaining from the subcontractor a minimum of two copies of their ES&H Plan for distribution to the ESH Section and the T&M Manager.
- Incorporating the Subcontractors ES&H Plan as part of the contractual requirements.
- Issuing the Notice to Proceed after all safety and contractual requirements are satisfied.
- Notifying subcontractors of the requirement to attend construction safety orientation.
- Chairing pre-construction meeting.
- Completing the applicable section of the Subcontractor Performance Evaluation form (ESH Admin Form #15).

- Coordinating, and chairing the meeting to complete the Subcontractor Performance Evaluation process.
- Notifying the subcontractor of issues and concerns.

PROCEDURE

Qualification of Subcontractors

The subcontractor must have their past safety performance evaluated and accepted before any construction contract can be awarded. The PA sends the completed form (http://www-esh.fnal.gov/FESHM/7000/7010_Form16.doc) to ESH-SEP for review and acceptance. ESH-SEP will review and provide comments/acceptance to the PA within 3 working days.

The subcontractor must demonstrate a three-year safety record equal to or less than 85% of the most current U. S. Department of Labor-Bureau of Labor Statistics General Construction statistics for Total Recordable Case Rate (TRC) and Days Away, Restricted, or Transferred (DART) Case Rate (http://www.bls.gov/iif/oshwc/osh/os/ostb1244.pdf). The subcontractor's on-site performance, as documented in formal evaluations provided to Procurement, will be considered as well. ESH-SEP will contact Procurement to review any evaluations they may have on file.

ES&H Plan Review

The subcontractor is required to submit two (2) copies of a plan that describes the company's ES&H Program. The PA will distribute the plans to the ESH and the T&M Manager. The ES&H Plan shall be reviewed in light of contractual and OSHA requirements and accepted by ESH-SEP for the Laboratory. ESH Admin Form #18 (FESHM 7010) is used for this purpose.

Plans will be submitted to the ESH Section Administrative Assistant who will stamp the plan with date/time of receipt. The ESH Section will review the plan within ten (10) work days. ESH-SEP will notify the PA as soon as possible if there are any serious deficiencies with the plan. ESH-SEP will issue an acceptance letter to Procurement, with a copy to the T&M Manager (http://www-esh.fnal.gov/FESHM/7000/7010TA_Form18.doc). Once accepted, the subcontractor's ES&H safety plan is considered part of the subcontractor's contract.

Acceptance of the ES&H Plan is for a three-year period. ESH-SEP will maintain subcontractor ES&H Plans during the life of the T&M contract. The copy provided to the T&M Manager will be filed with the project files.

Once a subcontractor safety plan is accepted for use on a Fermilab project that plan will remain in effect for the remainder of the project for which it was accepted or for three years whichever is later. However there may be conditions under which a modification is justified. Examples include, but are not limited to:

- Change in work scope not addressed in the accepted plan;
- A new OSHA standard has become effective;
- New equipment has come to market with better technology; or
- A best practice not previously considered.
- Subcontract extension option.

In any of these cases the subcontractor shall submit a written letter to the PA, stating the sections of the plan proposed for revision, justification for the change, supporting documentation available and the proposed wording to be inserted in the plan. The PA will forward the memo to ESH-SEP. If accepted, ESH-SEP will issue an acceptance letter to the PA, with a copy of the acceptance letter and the changes to the CM. ESH-SEP will keep the original request and documentation with the subcontractor's ES&H plan.

Hazard Analysis (HA)

A written HA (http://www-esh.fnal.gov/FESHM/7000/7010TA_Form17.doc) is required for all construction work, regardless of who performs the work. The HA document shall identify all hazards associated with each phase of work, and the work processes to be employed to eliminate or reduce those hazards. Required personal protective equipment (PPE) must be identified on the HA. Work will not proceed until the TM has prepared the HA, and has had it reviewed/accepted. As the project develops, new or unanticipated hazards encountered with each project phase or change in specific operations within that phase are addressed and added to the HA.

The TM will prepare an HA, in coordination with the subcontractor. It is recommended that the TM take advantage of the services available from his/her SSO and/or from the ESH Section. The TM must then have the HA reviewed and accepted by another qualified Fermilab employee. This individual may be the R/TS, the TM's supervisor, another TM, or the SSO. The TM will notify the T&M Manager when the HA has been accepted and is ready to start work.

The TM will review the HA with the subcontractor employees to assure that they understand the work plan. The TM will request subcontractor employee input and revise the HA as necessary. The TM will assure that all subcontractor employees working on the job have reviewed and signed the HA.

HA training is required for subcontractor supervisory personnel and will be provided by the ESH-SEP Group. Similar training for subcontractor employees is available upon request.

Change orders give rise to new hazards for the workers or may cost the Laboratory greatly if property damage is the end result of an accident. The HA must be reviewed due to the additional risks that may be introduced. If new hazards are present due to new work activity, the HA must be revised and reviewed/accepted.

If there will be two or more groups (subcontractors and/or employees) working in the same area, and yet operating under different HAs, the TM must coordinate activities with the other TM/CC/supervisor. Any conflicts between the two HAs must be resolved before work begins. Both working groups must review and sign each other's HA.

For projects involving only electrical work, the Electrical Hazard Analysis/Work Permit form found in FESHM Chapter 5042 (http://www-esh.fnal.gov/FESHM/5000/5042_Permit.doc) is sufficient as long as all hazards including electrical hazards are identified and dealt with.

The completed HA form with the signature page must be posted at the worksite. This can be accomplished through a variety of means, including use of the subcontractor's bulletin board or a clipboard. If posting is not feasible, due to the location of the work, the HA should be located in a place so that it is easily available to all affected employees (subcontractors, sub-tier employees, Fermilab employees). If the jobsite conditions are such that the HA could get destroyed, the original should be saved and a copy posted. Remember all subcontractor employees working on the job must sign the HA, as well as any one else who may enter the work area.

At the completion of the job, the TM must submit the HA with signature page to the T&M Manager. Closeout of the job will not occur until the T&M Manager receives paperwork. If for some reason the HA has been destroyed and is not available, the TM and SSO must document that fact in writing. The T&M Manager will retain the HAs and any documentation in the subcontractor's project file.

Pre-Construction Meeting/Pre-Job Briefing

All contracts require a pre-construction meeting. The PA and T&M Manager will conduct this meeting with the subcontractor. ESH-SEP attends this meeting to review with the subcontractor Fermilab's ES&H requirements using ESH Admin Form #19 - Pre-Construction Checklist (http://www-

esh.fnal.gov/FESHM/7000/7010TA_Form19.pdf). At this time, the name of the competent person for each T&M subcontract must be submitted in writing and provided to the T&M Manager.

TMs are required to conduct a pre-job work planning session with the subcontractor employees to review the specific job plan and HA. A daily briefing is required if there are multiple trades working in an area, or multiple tasks taking place.

Training of TM

Assignment of a TM is an important link in the subcontractor safety program. Before assignment as a TM, an employee must complete training as follows:

- FN000303- Construction Management & Safety (mandatory)
- Excavation Competent person (mandatory if the excavation activity meets the excavation definition)
- Training required by the areas where the work will be performed and/or the nature of the activity (e.g. Rad Worker, ODH, Controlled Access).

For additional information on availability of courses contact the ESH Section.

Training of Subcontractor Personnel

All subcontractor employees who will not be escorted by a trained Fermilab employee are required to attend a safety orientation before start of work. The ESH-SEP Group will provide this orientation on a daily basis at 7:30 am. The training will be documented with an attendance sheet and a card that the subcontractor employee must carry at all times while working at Fermilab. If the subcontractor employee is unable to produce the card, the employee will be required to stop work for the day and attend the orientation again. The orientation expires two (2) years from the date of attendance.

TMs whose subcontractor need to enter radiological controlled areas or radiation areas must coordinate training in advance by sending an e-mail to GERT@fnal.gov with the number of people needing training, date training needed, and company affiliation. This information must be sent one working day in advance for GERT (no later than 3 pm), and 1 week in advance for Radiological Worker.

The subcontractor is responsible to ensure that employees (including subtier contractor employees) are able to understand Fermilab's ES&H requirements. ESH-SEP has produced a Spanish version of both Subcontractor Orientation and GERT. It is up to the CC to arrange for this specialized training, either through their division/section or through ESH-SEP. The subcontractor is responsible for providing a translator for this training.

All subcontractors and sub-tier contractors performing work at Fermilab shall provide safety training, medical surveillance, and safety equipment, including PPE for their employees. Exceptions involve hazards that are unusual due to the nature of work at Fermilab. In particular, the Laboratory will provide training, medical surveillance, and equipment for subcontractors working in radiation areas or in buildings/spaces designated as oxygen deficiency hazard (ODH) areas. Additional training, surveillance and equipment will be provided as stipulated in the contract documents.

All subcontracts shall contain a statement formally notifying the subcontractor and all sub-tier contractors that they are required to 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 by the T&M Office prior to exposing employees to the respective hazard. The activities that require verification of training prior to execution are:

- Entry into a permit-required confined space (provided by the subcontractor)
- Entry into a facility or area classified as Oxygen Deficiency Hazard (provided by Fermilab)
- Entry into a radioactive or controlled work area. (provided by Fermilab)
- Use of respiratory protection (provided by the subcontractor- verify medical clearance, fit testing and training) when potential exposure levels will be above established limits
- Fall Protection
- Lockout/Tagout
- Electrical activities requiring compliance with NFPA 70E

The TM should audit other types of ES&H training such as erecting and using scaffolding, excavations and other training at random.

Work Permit and Notification (WPN)

The TM is responsible for completing the WPN and submitting it for review and approval as described in FESHM 2020 (http://www-esh.fnal.gov/FESHM/2000/2020.pdf). The TM is responsible for securing all permits required for the activity.

Delivery Personnel

Delivery personnel are required to use personal protective equipment applicable to their own activities. When outside their vehicle, they must wear PPE as specified in the HA.

Emergency Services

On occasion, it is necessary for subcontractors to provide emergency repair services on site. The TM is required to prepare an HA. This may be accomplished in the field with the subcontractor and the TM or by another responsible Fermilab employee who is familiar with the scope of work. Under no circumstances shall an emergency serve as exemption from complying with safety requirements.

Visitors to Construction Sites

All persons entering a construction site must notify the TM and immediately review and sign the HA. All persons entering a construction site must wear the required work clothing as well as the PPE defined in the HA.

Inspection of Construction Site

The TM is responsible for conducting ES&H inspections of the work activity and monitoring the subcontractors' performance to verify compliance with the ES&H plan and adherence to the HA. The frequency of these visits should be sufficient to regularly identify and correct safety concerns. The frequency will be based upon the complexity of the project or specific activities, hazard level, and the subcontractor's demonstrated level of compliance. Regardless of the frequency of inspections, the TM must make daily contact with the subcontractor to review the work planned for the day.

ESH-SEP and the SSO will perform oversight inspections of construction sites as well. The frequency of inspections shall be determined based upon the complexity of the project or specific activity, hazard level, and the subcontractor's demonstrated level of compliance.

Inspection of the jobsite should include a review of site conditions, work activities, review of subcontractor's inspection results, follow-up (site and equipment inspections for themselves and sub-tier activities), and spot-checking of equipment, including heavy equipment. All inspection activities must be documented, discussing both good and less than adequate work practices. Copies of the documentation must be distributed to the T&M Manager, the ES&H oversight personnel, the PA, and the TM management.

ES&H Audits of Subcontractor's Program

T&M subcontracts that are scheduled to last more than 12 months are required to have an ES&H audit twelve-month interval. The T&M Manager will coordinate with ESH-SEP to conduct these audits.

Stop Work Activity Authority

Fermilab employees have the authority to stop construction activities if an Imminent Danger condition is noted or perceived. After the work activity is stopped, the employee who stopped the work activity shall contact the TM who will gain consensus from the subcontractor the actions necessary to restart the activity. This is an informal process designed to stop work, quickly abate the hazard, and restart the work.

Occasionally, a more formal work stoppage process must be invoked. If exposure to the hazard cannot be abated quickly, or if consensus cannot be reached as to the corrective action, the TM shall stop the associated work using the Subcontractor ES&H Stop Work Order Form (http://www-esh.fnal.gov/FESHM/7000/7010TA_Form5.pdf). Refusal by the subcontractor to stop the work activity when requested may result in termination of the subcontract. It must be noted that the stop work activity authority is to stop a specific activity within a project and not an entire project. Anytime a formal ES&H Stop Work Order is issued, the T&M Manager and PA shall be notified.

Authority to restart an activity after a formal Stop Work Order has been issued resides with the D/S head after consultation with other appropriate organizations and individuals, such as the TM, D/S SSO, ESH, and Head BSS. The Subcontractor ES&H Stop Work Order will be used to restart work.

Just as Fermilab employees have a duty to safely resolve dangerous conditions, so do subcontractor employees. This duty should be addressed in the subcontractor ES&H plan.

Work Clothing on Construction Sites

Anyone entering a construction area must wear sturdy work type shoes or boots that cover the ankle. Tennis or canvas shoes, sandals, shoes with open toes or heels, or shoes with narrow high heels cannot be worn on the job site. Long trousers and short sleeve shirts must be worn as well. Not allowed are tank tops, mesh shirts, cutoff shirts, and sleeveless shirts. Clothing must not hang loose to the point where it may be caught in moving machinery, or snag onto dangerous objects.

Besides the mandatory work clothing stipulated above, the HA document must specify other types of personal protective equipment that may be needed to address hazards. Hardhats, safety glasses with rigid plastic side shields, gloves and any other personal protective equipment needed to protect workers and employees must be identified in the HA. When hardhats are specified as mandatory in the hazard analysis these hats must be worn with the brim in a forward position. Hats resembling other types of head wear; for example, cowboy hats are not acceptable.

Electrical Safety

Fermilab is required to follow NFPA 70E, and has flowed these requirements down to their subcontractor through contract documents.

Ground Fault Circuit Interrupters (GFCI's) are the only accepted method to protect construction workers from the hazard of electrocution when hand held power tools are used. Subcontractors and their sub-tier contractors shall supply portable GFCI's for the use of their work force if GFCI protected circuits are not available at the point of use.

Excavations

Excavations shall be carried out in compliance with 29 CFR 1926.650, FESHM 7030, "Utility Identification and Permit Program" (http://www-esh.fnal.gov/FESHM/7000/7030.pdf), and FESHM 8012, "Sedimentation and Erosion Control Planning" (http://www-esh.fnal.gov/FESHM/8000/8012.htm). The subcontractor's competent person must be present at all times when the ground is being excavated. Daily inspections by the TM are required and must be documented.

Loaning of Fermilab Tools and Tool Inspections

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

Conditions may arise where a TM finds it absolutely necessary to loan power tools or a piece of equipment. In these instances the tool or equipment may be loaned but under very strict conditions. ES&H Form #20 (http://www-esh.fnal.gov/FESHM/7000/7010_Form20.pdf) will be used for this purpose. To loan a tool or equipment:

a. There must be a compelling reason.

b. The subcontractor and the TM must inspect the loaned item.

c. The subcontractor employee using the tool or equipment must certify that subcontractor employee has had training in the use of the tool or equipment.

d. The subcontractor superintendent releases Fermilab of any liability if an injury occurs to the subcontractor employee while using the tool or equipment owned by Fermilab.

e. The subcontractor superintendent accepts the tool for the intended use.

The original of the form will be sent to the PA 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.

Tool Inspections

Tool inspections of subcontractor owned tools are the responsibility of the subcontractor. Random inspections to verify compliance may be conducted by the TM and ES&H construction safety personnel.

Heavy equipment such as mobile cranes are unique pieces of equipment whose maintenance and operation are covered by the ANSI standards which are part of the Laboratory's Work Smart Set of standards. This equipment must be inspected by the subcontractor or sub-tier contractor before use on site. The TM is responsible for assuring this inspection has been completed and any corrective actions taken before the equipment is used.

If a crane is being used on site, the TM must also review the condition of the crane, using the guidance, "Mobile Crane – Safe to Operate Review Items" found at the end of this chapter. ESH-SEP is available to assist the TM with these inspections

Tool Box Meetings

Subcontractors must conduct, as minimum, weekly and monthly toolbox meetings. It is intended that the subcontractor and sub-tier contractors will use these meetings to address safety issues of the current construction phase of work. The weekly five-minute safety meeting discussion shall be documented with an attendance sheet and a thorough description of the topic. The monthly meeting shall be approximately one hour long and shall be used to emphasize special job conditions, procedures and applicable standards. The monthly meeting will be documented in the same fashion

as the weekly meeting. Minutes of the meetings will be submitted to the T&M Manager.

Accident Investigation and Reporting

All incidents and near misses will be reported to the TM who will in turn notify the SSO, the ESH-SEP Group, and the PA. The TM is responsible for assuring that an investigation has been conducted. A report must be submitted within two working days of the occurrence or near miss. The investigation shall identify factors that contributed to the incident, and any corrective actions taken to address those corrective actions. The TM is responsible for assuring the investigation report is submitted to the SSO for entry into CAIRS within six (6) calendar days of report of the incident.

All incident and near miss reports (reports not filed in CAIRS) shall be sent to ESH-SEP within six (6) calendar days of generation of the report.

The D/S SSO is responsible for the development of lessons learned. All OSHA-recordable incidents entered into the CAIRS database, must have lessons learned determined. Development of lessons learned for near misses is at the discretion of the SSO. Any lessons learned developed shall be sent to ESH-SEP for information and possible distribution site wide.

Close Out T&M Tasks

When the Release has been completed, the TM must forward the T&M TM Questionnaire, T&M Release Close Out Request and the HA that has been signed by all workers to the T&M Manager.

Subcontractor Evaluations

At the end of the subcontract a formal subcontractor evaluation meeting will be held to review quality of work, adherence to the schedule and cost, and the effectiveness of the subcontractor's ES&H program. The PA will chair the meeting and bring all interested parties together to complete the evaluation. As a minimum, personnel will include the T&M Manager, the SSO, and ESH-SEP. The Fermilab Subcontractor Performance Evaluation Form- Construction (http://www-esh.fnal.gov/FESHM/7000/7010_Form15.pdf) will be used for this purpose. Completed evaluations forms shall be retained in Procurement, and a copy sent to ESH-SEP.

Any individual Task Order, Master contract or Blanker Order completed may be evaluated at the discretion of the interested parties if a subcontractor is found to be

deficient in any of the evaluation areas stated above. If an evaluation is requested, the PA will conduct the meeting as described above.

During the performance of a subcontract, the PA may issue an interim Subcontractor Evaluation when performance is determined to be less than satisfactory. The TM may request to participate in these meetings by contacting the PA, or by submitting written comments to the T&M Manager.