

# EXHIBIT A

## For Supply and/or Services Subcontracts

The Subcontractor shall coordinate work schedules, site access, and resolution of technical issues with Point of Contact or Service Coordinator:

Name: Cervando Castro

Phone (630) 840-2100

Email: [nando@fnal.gov](mailto:nando@fnal.gov)

Specific training and exemptions

*List additional training/exemptions, if appropriate*

Subcontract or orientation

General Employee Radiation Training (GERT)

NUMI Underground Safety Training

In reference to Section 2.2, this subcontract will not require the Subcontractor to submit an ES&H Program.

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## 1.0 SCOPE OF WORK & COORDINATION

### 1.1 Point of Contact

The Fermi Research Alliance, LLC (FRA) Point of Contact shall be the first line of contact with the Subcontractor's field personnel. He/she is responsible for auditing to ensure that the Subcontractor is following established and accepted ES&H practices while on site. Point of Contact is assigned for low risk work activities that typically do not require a written job specific Hazard Analysis.

### 1.2 Service Coordinator

A FRA Service Coordinator will be assigned for Subcontracts involving work activities with potential risk. He/she shall be the first line of contact with the Subcontractor's field personnel, and is responsible for auditing to ensure that the Subcontractor is following established and accepted ES&H practices while on site. Service Coordinators are assigned typically when a written job specific Hazard Analysis is required.

### 1.3 References

The Subcontractor and sub-tiered contractors shall comply with the following reference documents. The publications referenced herein, form a part of this Exhibit and Subcontract documents.

- a. Fermilab ES&H Manual  
<http://eshq.fnal.gov/manuals>
- b. 10 Code of Federal Regulations (CFR) 851, Department of Energy (DOE) Worker Safety and Health Program
- c. 10 CFR 820, Procedural Rules for DOE Nuclear Activities
- d. 10 CFR 835, Occupational Radiation Protection
- e. 10 CFR 860, Trespass to Land Owned & Leased by the US Government
- f. 10 CFR 708, DOE Contractor Employee Protection Program
- g. 29 CFR 1904, Record Keeping Guidelines for Occupational Injuries and Illnesses
- h. 29 CFR, 1910, Occupational Safety and Health General Industry Standards
- i. 29 CFR 1926, Occupational Safety and Health Standards for Construction
- j. 40 CFR Protection of the Environment (USA EPA)
- k. 49 CFR Transportation

- l. 35 IAC Illinois Environmental Protection (Illinois EPA)
- m. Illinois State "Rules of the Road" and Vehicle Code
- n. DOE Order 442.1A, Department of Energy Employee Concerns Program
- o. National Fire Protection Association (NFPA) codes and standards
  - i.. NFPA 70E, Standard for Electrical Safety in the Workplace (2009)
- p. American Conference of Governmental Industrial Hygienists (ACGIH), "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices"
- q. American Society of Mechanical Engineers:
  - i. ASME B30 Series, Crane Safety
  - ii. ASME B31 Standards of Pressure Piping
- r. American National Standards Institute (ANSI):
  - i. ANSI A10, Construction Package
  - ii. ANSI Z136.1 Safe Use of Lasers

### 1.4 Enforcement

The describe form requires the Subcontractor acknowledgment and certification of an ES&H program commensurate with the complexity and nature of the work activities. Subcontractor(s) working on Fermi National Accelerator Laboratory (Fermilab) are subject to DOE civil penalties or contract fee reductions for noncompliance, in accordance with 10 CFR 851 and 10 CFR 835.

The Department of Energy (DOE) regulation 10 CFR 851 "Worker Safety and Health Program" defines worker safety and health requirements for the Department of Energy contractors and their subcontractors. The Worker Safety and Health Program acknowledgment is part of the ES&H Certificate, reference paragraph 1.5. Additional information can be found at:

<http://eshq.fnal.gov/worker-safety-health-for-subcontractors>

DOE regulation 10 CFR 835 "Occupational Radiation Protection" defines the requirements pertinent to work where potential exposure to ionizing radiation hazards occur. The protective measures to be taken where this hazard is present shall be communicated to the Subcontractor through the FRA Service Coordinator. FRA has an extensive level of expertise

in management of ionizing radiation hazards that will be utilized to identify the work locations where such hazards are present and establish these protective measures.

The US Department of Energy has the authority to exercise enforcement actions on any Subcontractor who violates any requirement set forth in 10 CFR 851 and 10 CFR 835. The Subcontractor may be subject to civil penalties up to \$80,000 for each such violation. If any violation is a continuous violation, each day of the violation shall constitute a separate violation for the purpose of computing the civil penalty.

### 1.5 Subcontractor & ES&H Certificate

In accordance with 10 CFR 851, the Subcontractor shall submit the ES&H Certificate with the pertinent information related to this subcontract. For further instructions, see attachment at the end of this document.

### 1.6 Concern and Reporting Process

Whistleblower Protection for Subcontractor Employees:

- a. The Subcontractor shall comply with the requirements of the "DOE Contractor Employee Protection Program" at 10 CFR Part 708
- b. The Subcontractor shall insert or have inserted the substance of this clause, including this paragraph (b), in lower tier subcontracts, at all tiers, with respect to work performed on any DOE-owned or leased facility, as provided for at 10 CFR part 708
- c. Concern Reporting Processes - Subcontractor employees on the worksite are entitled to use any of the means available to communicate concerns about ES&H conditions and practices. Information about concern reporting is available on ES&H bulletin boards throughout Fermilab, and shall be included with FRA provided materials for the service worksite postings for this project.
- d. DOE Concern Reporting
  - i. Telephone: (630) 840-3281
  - ii. Email: [EmployeeConcerns@science.doe.gov](mailto:EmployeeConcerns@science.doe.gov)

### 1.7 Bulletin Board

Subcontractors that have an on-site base of operations are responsible for installing and maintaining a safety bulletin board at the location

where the majority of the Subcontractor's employees, sub-subcontractors, and sub-tier vendors report to work. Information shall include

- a. DOE Worker Safety and Health Poster DOE-F 5480.2 (Worker Rights), furnished by FRA. Spanish versions of the DOE Safety and Health Poster are also available from FRA upon request.
- b. DOE Occupational Safety and Health Complain Form 5480.4, available on-line

### 1.8 Subcontractor's Competent Person

The Subcontractor shall ensure that there is a Competent Person available on site at all times when work is in progress. The Competent Person shall have the knowledge of OSHA standards and other safety related work practices and procedures.

### 1.9 Work Completion and Clean-up

The Subcontractor shall complete all work and all clean-up operations shall be in compliance with their ES&H program or as agreed by the FRA representative. Documentation for all aspects of the ES&H program shall be complete and in place before Subcontract closeout. All excess materials, equipment, waste materials and rubbish shall be properly disposed from the work site.

## 2.0 SUBCONTRACTOR ES&H PROGRAM

### 2.1 Responsibility

The Subcontractor has primary line responsibility for providing a safe working environment for its employees. The Subcontractor shall provide overview on the program's effectiveness and take appropriate corrective actions. The Subcontractor has responsibility to ensure sub-subcontractors also comply with the Subcontractor's Environment, Safety & Health program and the requirements of this exhibit.

### 2.2 Environment, Safety & Health Program

The program must comply with and encompass all applicable aspects of 29 CFR 1910, OSHA Safety and Health Standards for General Industry, 10 CFR 851, DOE Worker Safety and Health Program, and when applicable, the provisions set forth in 10 CFR 835, Occupational Radiation Protection, 29 CFR 1926, Occupational Safety and Health Standards for Construction, or other regulatory standards. On all subcontracts that have employee(s) on Fermilab site

for more than thirty (30,) eight (8) eight hour days in a twelve (12) month period, or when requested, the Subcontractor shall submit to FRA for review and acceptance a copy of their ES&H (corporate) program description. The program description shall be submitted within 10 calendar days of Subcontract award. The written program should describe the following elements:

- a. Management Commitment and Leadership
  - iii. Subcontractor's policy regarding ES&H goals and how these goals are communicated to the employees;
  - iv. Management commitment of resources to adequately implement the program;
  - v. Participation of management in safety meetings, inspections, and documentation;
  - vi. How ES&H rules are incorporated into site operations; and Enforcement and disciplinary procedures.
- b. Assignment of Responsibility
  - i. Management responsibility for ES&H;
  - ii. Responsibilities, knowledge and authority of supervisor and competent persons; and
  - iii. Employee responsibility.
- c. Training
  - i. General requirements;
  - ii. Supervisor and Competent Person training;
  - iii. New employee training;
  - iv. Hazard specific training;
  - v. Safety Meetings; and
  - vi. Documentation of training
- d. Basic Safety and Health Provisions
  - i. Emergency actions;
  - ii. Recordkeeping and reporting of injuries;
  - iii. Housekeeping;
  - iv. Hazard Communication Plan;
  - v. Personal Protective Equipment; and
  - vi. Fire protection and prevention.
- e. Hazard Assessment Process
  - i. How hazards are identified and analyzed;
  - ii. Preventive controls, and
  - iii. Inspections and Reporting
- f. Waste Handling and Disposal
  - i. Characterization of waste;
  - ii. Packaging and Labeling requirement; and
  - iii. Assurance that appropriate transportations and handling facilities will be used.
- g. Other Programs dictated by Scope of Work (e.g.

LOTO, Confined Space, Hearing Conservation

### 2.3 Hazard Analysis (HA)

A Hazard Analysis (HA) may be required for activities that are considered "high risk", see Attachment B. An HA details the specific hazards associated with the work activities and mitigating actions (including PPE in accordance with ANSI, OSHA, and NFPA 70E) that the Subcontractor will take to reduce or eliminate the risk of injury. Safety Data Sheets (SDS) and any specific procedures (confined space, LOTO) are to be submitted as part of this HA. The HA shall be submitted for FRA review and acceptance prior to commencement of work. Each employee will acknowledge reading and understanding the HA by placing his/her signature on the signature page. The HA is a dynamic document that will require modification as the project moves from start to finish. As the HA is updated, the employees must be advised of the new information.

### 2.4 Stop Work Activity

Any FRA employee may stop a work activity if there is imminent danger of serious injury, fatality, or major environmental release. If the hazard cannot be abated in a timely manner, the work activity shall be stopped and the Service Coordinator/Point Of Contact and Procurement Administrator shall be contacted.

## 3.0 REPORTING & TRAINING REQUIREMENTS

### 3.1 Emergency Response and Reporting

In the event of an actual fire or severe weather, all Subcontractor personnel shall evacuate to a prearranged safe location as designated by the Service Coordinator or Point of Contact.

- a. All accidents or emergencies occurring at the Laboratory site must be report immediately by dialing extension 3131 from a Laboratory phone or 630-840-3131. The accident must be reported immediately to the Service Coordinator or Point of Contact.
- b. The Subcontractor shall investigate all accidents. When required by the Service Coordinator or Point of Contact, a report must be submitted within 2 days of the accident.
- c. A summary of the total man-hours worked on

the project shall be submitted to the Service Coordinator or Point of Contact on a monthly basis.

- d. Subcontractor personnel shall participate in all emergency drills.
- e. All emergency egress routes shall be kept clear at all times.
- f. In the event of a hazardous material spill, the first person to become aware of the spill shall immediately dial 3131.

### **3.2 Subcontractor Safety and Health Records**

Subcontractors shall maintain and provide to FRA upon request any and all applicable occupational safety and environmental records. Such records include, but are not limited to, the records required to be maintained by federal/state regulations, OSHA injury/illness logs, training records, inspection records, safety meetings, and accident investigation.

### **3.3 Subcontractor Training**

- a. All Subcontractors performing work at Fermilab shall provide to their employees all necessary ES&H training as may be required by Federal/State regulations and as appropriate for their activities at Fermilab. FRA will provide appropriate training for site hazards that are unusual for the trade of the Subcontractor's employees, such as training to conduct work in radiation areas or in oxygen deficient areas.
- b. All Subcontractors working at Fermilab who will not be escorted by a full-time FRA Employee must attend Subcontractor Orientation (1/2 hour). All Subcontractor employees will receive a card documenting attendance. This training must be repeated every two years.
- c. The Subcontractor is responsible for assuring that their employees who do not speak English understand all ES&H requirements. The Subcontractor must be able to communicate emergency instructions to those employees.

## **4.0 WORK SITE CONDITIONS**

### **4.1 Fermilab Permits**

FRA conducts work through the use of on-site permits. All required permits will be identified by the Service Coordinator who will arrange for all necessary Laboratory permits. This excludes those permits required elsewhere. No work activity shall be performed without the required permits,

laboratory or other. No alarms, safety devices, etc. will be disabled without prior approval of the Service Coordinator. The Subcontractor shall make a specific request to the Service Coordinator at least 48 hours before disablement. Activities requiring permits include but are not limited to: work notification, electrical work, excavation, burning/welding, modification to drinking water systems, bringing radioactive sources on site, working with/on radioactive material, working in radiological areas, and moving government or Fermilab property off site. The Subcontractor will comply with all restrictions or provisions listed on permits.

### **4.2 Electric Power**

The Subcontractor shall provide and pay for telephone service for its requirements. FRA will furnish electric power at 480Y/277V and/or 208Y/120. The Subcontractor will pay cost of connection to this power source. Installation of the Subcontractor's electrical distribution will be subject to the approval of FRA.

### **4.3 Transportation of Equipment and Materials**

The Subcontractor shall transport all equipment and materials to the job site at its own expense. Subcontractor shall be responsible for minimizing any interference with local traffic or FRA operations.

### **4.4 Access and Traffic Ways**

- a. Access to the work shall be via Main Roads only. Traffic on all paved roads shall be restricted to rubber-tired vehicles only.
- b. The Subcontractor shall repair at its expense any damage due to its operations to existing structures such as culverts, fencing and barricades. The Subcontractor to the satisfaction of FRA shall immediately remove debris or litter on any roads caused by the Subcontractor's operations. Applicable safety standards shall apply to the use of all existing roads.

### **4.5 Temporary Heat**

The Subcontractor shall provide and pay for installation of temporary heating facilities, fuel, protective coverings and enclosures as necessary to protect the work. Coal or kerosene type salamanders, pots and open fires will not be

permitted.

#### 4.6 Temporary Lighting and Ventilation

The Subcontractor shall install and maintain temporary lighting and ventilation throughout the project to an extent that permits craftsmen to work without compromise of safe working conditions.

#### 4.7 Water and Sanitation

Industrial water (non-potable) is available at hydrants adjacent to the site. See the FRA Service Coordinator for arrangements for their use. Domestic water (potable) is not available for drinking purposes. Subcontractor will be required to furnish drinking water and portable sanitation facilities for his employees.

#### 4.8 Hazardous Materials

Any substance which by reason of being explosive, flammable, poisonous, corrosive, oxidizing, irritating or otherwise harmful, or is likely to cause death or injury shall be considered a hazardous material. The use of hazardous material shall be identified in the Subcontractor's HA and approved by the FRA Service Coordinator before use, disposal shall comply with the bid documents and coordinated with FRA's Service Coordinator.

#### 4.9 Confined Work Spaces

- a. The Service Coordinator will identify all existing confined workspaces including hazards and entry operations to the subcontractor.
- b. If a Subcontractor is required to enter a permit-required confined space as part of their contract with FRA, the Subcontractor shall provide the Service Coordinator with the following records at least five (5) working days prior to entry:
  - i. A written copy of their confined space entry program and permit.
  - ii. Training records for entrants, attendants, and supervisors.
  - iii. Evidence that all air monitoring equipment is properly calibrated.
- c. The Subcontractor must provide all of its own personal protective equipment (PPE), such as lifelines, harnesses, respirators, tripods, ventilators, etc.
- d. The Subcontractor shall inform the Service Coordinator prior to entering the confined space and include any specific permit space

procedures the Subcontractor will follow.

- e. Once the work is completed, a copy of the Subcontractor's confined space permit shall be provided to the Service Coordinator annotated, if unplanned hazards were encountered.

#### 4.10 Work on Existing Utilities

- a. No work shall be performed on existing in-service piping systems without prior approval and coordination of the system outage by FRA's Service Coordinator. The Subcontractor shall make requests for such outages at least 48 hours in advance. Pressure shall be relieved on all piping systems before opening up and starting work. Lockout/Tagout shall be used by the Subcontractor for all valves, blank-offs and relief lines.
- b. Work on existing utilities and any testing shall be included in the HA.
- c. No work shall be permitted unless specified by the job and specific procedures have been submitted and accepted by FRA.

#### 4.11 Personal Protective Equipment (PPE)

The Subcontractor must provide all required PPE to its employees and monitor the worksite to assure employees are wearing the required PPE. PPE must be in accordance with ANSI, OSHA, and NFPA 70E.

#### 4.12 Burning/Welding/Brazing/Spark Producing

A permit is required before a Subcontractor may burn/weld. The Service Coordinator will contact the Fermilab Fire Department (FFD) and secure a Burn permit. Information concerning the burning/welding permit is listed below:

- a. The FRA Service Coordinator will contact the Fermilab Fire Department (FFD) and secure the Burn Permit;
- b. Members of the FFD will meet with the FRA Service Coordinator and the Subcontractor's Representative and examine the proposed operation, prescribe precautions, assure appropriate instructions are understood, and then issue a written Burn Permit;
- c. The Subcontractor must arrange for fire watches during burning, welding, or other fire or spark generating work. This fire watch must continue for a minimum of thirty minutes after work is complete;
- d. It is the Subcontractor's responsibility to furnish the proper number and type of fire

extinguishers for any welding, cutting, or brazing activities as specified in the Burn Permit;

- e. The extinguishers must be located in clear sight and no farther than 50 feet from the work areas;
- f. All welding shall be in accordance with the requirements of the American Welding Society (AWS) Standard: Safety in Welding, Cutting, and Allied Process (ANSI/ASC Z49.1-94).
- g. UL or FM listed check valves shall be installed on oxygen-fuel torch cutting equipment.

#### **4.13 Open Burning, Fire Barrels, Coal or Kerosene Type Salamanders**

Open burning, fire barrels, coal or kerosene type salamanders, or open flame heating devices that have exposed fuel below the flame are not allowed on the Fermilab site. The following sets forth the minimum acceptable requirements for temporary heating devices at Fermilab:

- a. Spark arresters shall be provided on all stacks or burning devices having forced drafts;
- b. Temporary heating devices, used in any enclosed building, room, or structure, shall be listed by UL, FM, ETL, or other approval-testing laboratory and vented to the outside.
- c. Flammable liquid fixed heaters shall be listed by UL, FM, ETL, or other approval-testing laboratory and equipped with a primary safety control to stop flow of fuel in the event of a flame failure. Barometric or gravity oil feeds are not acceptable primary safety controls.

#### **4.14 Electrical Work**

The following sets forth the minimum acceptable requirements for work on electrical systems at Fermilab:

- a. All electrical work shall be performed in accordance with NFPA 70E, Standard for Electrical Safety in the Workplace;
- b. The Subcontractor personnel must be trained in Lockout/Tagout (LOTO) prior to participating in LOTO of hazardous energy sources and working on LOTO systems or equipment;
- c. The Subcontractor shall provide ground fault circuit interrupter protection for electric hand held tools, portable generators, temporary electrical extension cords and other wiring, etc.
- d. GFCI protection shall be provided for electric hand-held tools, portable generators, temporary

electrical extension cords, and other wiring, etc. The assured grounding program is not an acceptable alternative.

#### **4.15 Oxygen Deficient Hazards**

The following sets forth the minimum acceptable requirements for oxygen deficient hazard (ODH) work at Fermilab:

- a. FRA has policies and procedures governing work in ODH areas. The FRA Service Coordinator will communicate specific requirements and work practices to the Subcontractor;
- b. All Subcontractor and Sub-tier contractor personnel who must enter designated ODH areas must have and display a level of medical fitness acceptable to FRA prior to entering those areas;
- c. FRA will assess the need for ODH training for Subcontractor personnel. If ODH training is necessary FRA will provide it free of charge.
- d. Oxygen monitoring equipment will be supplied to the Subcontractor personnel, as necessary. The Subcontractor is responsible for returning this equipment upon request or upon completion of the work;
- e. FRA will furnish emergency evacuation equipment. Care, use, and the return of such equipment will be the responsibility of the Subcontractor.

#### **4.16 Radiation Protection**

The following sets forth the minimum acceptable requirements for radiation protection at Fermilab:

- a. FRA has policies and procedures governing radiological work. The FRA Service Coordinator will advise the Subcontractor of the requirements and work practices, if potential for radiation affects the work scope;
- b. FRA will assess the need for radiological training for Subcontractor personnel. If radiological training is necessary it will be provided free of charge by FRA;
- c. Radiation dosimeters will be supplied to the Subcontractor personnel, as necessary. The Subcontractor is responsible for returning this equipment upon request or upon completion of the work;
- d. FRA will furnish protective clothing. Disposal of such clothing will be the responsibility of FRA;
- e. Prescribed procedures for material handling and

segregation shall be followed explicitly. Potentially radioactive material must be surveyed prior to removal from site. The FRA Service Coordinator shall coordinate this survey.

- f. Metals offered for recycling shall be coordinated with FRA's Point of Contact or Service Coordinator.

#### 4.17 Environmental Protection

All work on the Fermilab site shall comply with all applicable environmental executive orders, laws, regulations, and permits. All Subcontractors and sub-subcontractors shall conduct their activities in an environmentally sound manner that limits the risks to the environment and protects the public health. The following sets forth the minimum acceptable requirements for environmental protection at Fermilab:

- a. Soil Erosion and Sedimentation Control (SESC) requirements for this project;
- b. If required, the Subcontractor shall install all erosion control in accordance with SESC plan prior to the start of excavation activities;
- c. Excavation at or adjacent to streams' tributaries, or other drainage outfalls shall be done only after notification to the FRA Service Coordinator;
- d. The FRA Service Coordinator will inform the Subcontractor if any wetlands are present in work area and what protective measures are necessary;
- e. Unexpected environmental impacts shall be immediately reported to the FRA Service Coordinator and mitigated by the Subcontractor;
- f. Flammable and/or combustible liquids, fuels, and oils shall be provided with containment and shall not be stockpiled beyond one day's usage. Storage of these materials, plus maintenance and fueling areas used by the Subcontractor, shall be properly graded and maintained and shall be located a minimum of 100 feet away from a wetland or water body boundary so that adverse effects on the environment are eliminated;
- g. The Subcontractor shall make routine inspections to assure that all motorized equipment is free of leaks of petroleum and other toxic or hazardous materials. The Subcontractor shall keep sufficient cleanup

supplies on hand (e.g. oil dry, absorbent booms, etc.) to contain/absorb any spill or leak of fuels, oils, etc. that could potentially leak from his equipment. If a spill or leak should occur, the Subcontractor should immediately take appropriate steps to contain spills, move equipment out of sensitive areas (near wetland or water body) and immediately notify the FRA point of contact or service coordinator;

- h. At the close of each workday, the Subcontractor's Representative shall inspect the complete site to ensure that all erosion controls, drainage patterns, excavations and staging areas are in environmentally sound condition for the weather conditions anticipated.

#### 4.18 Smoking

Smoking is prohibited in locations where flammable and/or combustible materials are stored. "No smoking" signs shall be posted in these areas. Smoking is prohibited in all Fermilab buildings except in designated areas.

#### 4.19 Drug and Alcohol-Free Work Place

- a. All personnel of the Subcontractor, sub-subcontractors, and sub-tiers are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of controlled and restricted substances. All Subcontractors and Subcontractor's personnel shall adhere to the Federal Controlled Substances Act (12 USC 8120 and further defined in Federal Regulations 29 CFR 1308.11-3808.15) and stated in the subcontract documents.
- b. After damage to property or environment release by the Subcontractor or sub tier contractor associated personnel are subject to drug testing and results shall be submitted to the FRA Point of Contact or Service Coordinator.

#### 4.20 Fuel Storage Tanks

The following sets forth the minimum acceptable requirements for vehicles and equipment at Fermilab:

- a. Above ground fuel storage tanks for construction vehicles shall not be permitted on the Fermilab site;
- b. Fuel tanks mounted on pick-up trucks shall conform to the requirements of the Illinois State

- Fire Marshall’s Office;
- c. Fuel tanks mounted on pick-up trucks shall be removed from the Fermilab site at the end of each workday;
- d. Refueling of equipment while the motor is running is prohibited;
- e. During refueling from truck-mounted fuel tanks or with portable fuel cans, etc., a 10-pound (minimum) A-B-C dry chemical fire extinguisher must be present;
- f. Maintenance and fueling areas used by the Subcontractor shall be properly graded and maintained and shall be located a minimum of 100 feet away from a wetland or water body boundary to avoid adverse effect on the environment.

**4.21 Explosives**

The use of explosives is not permitted without prior written approval of the FRA Director or his designee

**4.22 Vehicles and Equipment**

The following sets forth the minimum acceptable requirements for vehicles and equipment at Fermilab:

- a. Operators must have an appropriate, valid driver’s license when operating vehicles on site. Seat belts are required to be provided and worn for the operators and passengers of all vehicles;
- b. All vehicles and mobile powered equipment, except automobiles and pickup trucks, shall have reverse signal alarms (a.k.a. backup alarms) audible above the surrounding noise level. If backup alarms are not present on the equipment, a spotter (other than the driver of the vehicle) must be present to warn pedestrians and the drivers of other moving equipment;
- c. If required by the equipment manufacturer, roll over protection structures shall be provided;
- d. Personnel lifts must be equipped with audible motion alarms. These alarms must be in operation and audible over the surrounding ambient noise when the lift is in use. Additionally, all lifts require two distinct actions in order to make the lift move in a forward or backward direction or in an upward or downwards direction. A foot pedal is considered one of the actions if independent of the other controls;

- e. The equipment manufacturer must approve any modifications to lifting and hoisting equipment;
- f. All hand and power tools must be checked prior to use on each shift to assure that they are maintained in a safe condition. Any deficiencies shall be repaired, or defective parts replaced, before continued use.
- g. Equipment inspection and modification (The Subcontractor shall comply with 29 CFR 1910.169, 1910.176, and 1910.178 and when applicable, the provisions set forth in 29 CFR 1926.600, Subpart O):
  - i. The Subcontractor must inspect all heavy equipment before use on site, prior to use on each shift, and during use to make sure it is in safe operating condition. Defective equipment shall be removed from service;
  - ii. The Subcontractor is to assure that regulatory inspection records are complete and up-to-date and that operating manuals are available;
  - iii. In no case shall the original safety factor of the equipment be reduced.
- h. All tools and equipment brought on site by the Subcontractor are subject to inspection by FRA. Items found to be out of compliance shall be repaired or immediately removed from service, tagged out of service.

**4.23 Fermilab Closure**

The Fermilab site is closed for major holiday and no construction activities shall occur on these days:

- New Year’s Day – January 1<sup>st</sup>
- Martin Luther King Jr. Day – 1<sup>st</sup> Monday after January 15<sup>th</sup>
- Memorial Day – Last Monday in May
- Independence Day – July 4<sup>th</sup>
- Labor Day – 1<sup>st</sup> Monday in September
- Thanksgiving Day – 4<sup>th</sup> Thursday in November
- Day After Thanksgiving – Friday after Thanksgiving
- Christmas Eve (1/2 Day) – December 24<sup>th</sup>
- Christmas Day – December 25<sup>th</sup>
- New Year’s Eve (1/2 Day) – December 31<sup>st</sup>

If any these holidays occur on a weekend day, a weekday will be used for the holiday.





## Attachment A

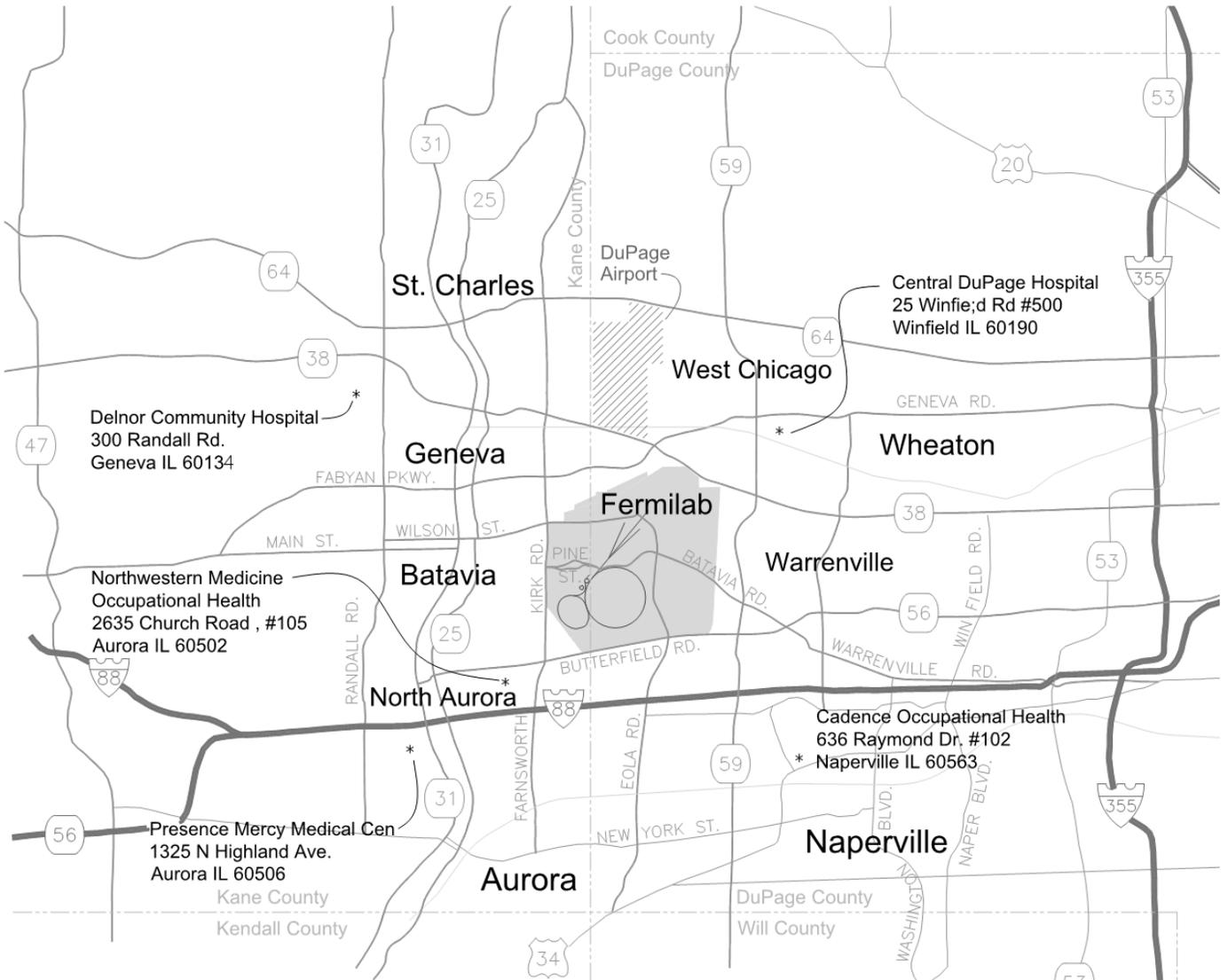
### Environment, Safety, and Health Certification (ESHC)

<b>FOR ALL EMERGENCIES CALL:</b>			
Fermilab Emergency Contact number: <b>x3131</b> - or - <b>(630) 840-3131</b> from a cell phone.			
For all incidents, injuries, property damage, near-misses, work-induced illness or chemical over-exposures, the Service Coordinator or Point of Contact <b>MUST</b> be immediately contacted upon scene stabilization, but in all cases within one hour			
<b>ACKNOWLEDGMENT of 10 CFR 851</b>			
As a Subcontractor to FRA, while your workers are physically located at FERMILAB you must meet the requirements of Title 10, <i>Code of Federal Regulations</i> , "Energy", Part 851, "Worker Safety and Health Program". As such, you must be aware of, and comply with, the requirements of this regulation. ( <a href="#">Link to 10 CFR 851</a> )			
<b>Acknowledgment</b>	I, Enter Subcontractor - Company Officer, certify that that I have read the requirements of 10 CFR 851 and attest that my firm and sub-tier contractors will comply with the requirements.	Yes <input type="checkbox"/>	No <input type="checkbox"/>
<b>MEDICAL SURVEILLANCE AND QUALIFICATION</b>			
<b>Occupational Medicine</b>	Will you have any employees that will work on-site at Fermilab for 30, eight-hour days in a 12-month period, or are enrolled for any length of time in a medical or exposure monitoring program required by federal, state, or local regulations (including hearing conservation, respiratory protection, lead exposure)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
	If yes, you will need to: <ol style="list-style-type: none"> <li>1. Comply with the occupational medicine requirements of 10 CFR 851, Appendix A</li> <li>2. Provide your occupational medicine provider contact information. FRA has identified five medical facilities on the attached map. Highlight the facility to be used, or identify and map an alternate. Post the map at the job site and annotate the address for the designated facility on the map.</li> </ol>		
<b>Clinic / Physician</b>	Enter the name and address of your company's occupational medicine provider for this project	Enter telephone number: xxx-xxx-xxxx	Enter e-mail address: user@domain
<b>Required Medical Surveillance</b>		<b>Task-specific medical testing</b>	
<input type="checkbox"/> DOT/Commercial Vehicle <input type="checkbox"/> Hearing Conservation <input type="checkbox"/> Fit For Duty <input type="checkbox"/> Substance Abuse Testing	<input type="checkbox"/> Blood Lead <input type="checkbox"/> Respirator User <input type="checkbox"/> Other(s) :List other(s)	List specific task(s) requiring medical surveillance	

Signature (Subcontractor)	Subcontractor's Name	Dated



FRA has identified five medical facilities. Please highlight the facility to be used, or identify and provide a map of an alternate selected place. Annotate address for designated facility.



If a different location than above, provide a map and address of the subcontractor's occupational medical facility Hospital Route and attached to the back of this Project Plan and posted at the work site.

### Attachment B - High Risk Level Requiring Hazard Analysis

<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>Silica Exposure</i>	<ul style="list-style-type: none"> <li>• Contact the ESH&amp;Q Industrial Hygiene Group</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 9120)</li> </ul>
<i>Confined Space Work</i>	<ul style="list-style-type: none"> <li>• Permit required confined space entry* (FESHM 4230) 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(PEL) and/or Threshold Limit Values (TLV) (FESHM 4140 and 4150)</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 4270</li> </ul>
<i>Lasers</i>	<ul style="list-style-type: none"> <li>• Use of Class IIIB or IV lasers (FESHM 4260)</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>