



# **Lockheed Martin Space Contractor Environment, Safety & Health Requirements**

Document No: ESH-PO-001, Rev. 6

Revised: April 2018

This document has been published by Lockheed Martin Space and applies to all Lockheed Martin Space locations including satellite locations.

This publication is a digest of basic applicable standards and should not be considered as a substitute for provisions of the Occupational Safety and Health Act of 1970 or other local, state and federal environmental and occupational safety and health programs and/or requirements.

Any discrepancy between this publication and regulatory and contractual requirements shall be resolved by using the most stringent requirement.

## Table of Contents

<b>Introduction</b> .....	5
Commitment.....	5
Applicability .....	5
<b>Emergency Preparedness</b> .....	6
Building Evacuation .....	6
Emergency Procedures.....	6
Medical Emergencies .....	6
<b>General Requirements</b> .....	8
Contractor Management .....	8
Contractor Inspections .....	9
Risk Plan.....	9
Enforcement Policy .....	9
<b>Site Briefing / Training</b> .....	10
Site Briefing.....	10
Training .....	10
<b>Environmental Requirements</b> .....	11
Air Emissions .....	11
Erosion and Sediment Control .....	11
Hazardous (Regulated) Waste.....	11
Natural Resources .....	12
Soil Disturbances .....	12
Solid and Sanitary Waste.....	12
Storm Water Pollution Prevention Plan .....	12
Water Resources.....	13
<b>Health and Safety Requirements</b> .....	14
Abrasive Blasting.....	14
Aerial and Scissor Lifts.....	14
Asbestos .....	15
Confined Space Entry.....	15
Control of Hazardous Energy (Lockout/Tagout).....	16
Compressed Gas Cylinders.....	16

Cryogenics.....	18
Demolition.....	18
Dust Control .....	18
Electrical Safety.....	19
Equipment/Machine Guarding.....	19
Excavation and Trenching .....	19
Explosives .....	20
Fall Protection.....	21
Fire Sprinkler Impairment.....	21
Hand and Power Tools.....	22
Hazard Communication.....	22
Hazardous Materials: Flammable, Combustible and Toxic Materials.....	22
Housekeeping and Material Storage.....	23
Hot Work.....	24
Indoor Air Quality.....	25
Ionizing Radiation.....	25
Noise .....	25
Non-ionizing Radiation (Lasers) .....	25
Overhead Power Lines.....	25
Paint Containing Hazardous Metals.....	26
Painting and Spray Painting.....	27
Personal Protective Equipment.....	27
Portable Ladders .....	28
Powder Actuated Tools .....	28
Process Safety Management.....	29
Protruding Steel.....	29
Roofing Operations .....	29
Scaffolds .....	30
Use of LMS Equipment .....	30
Utility Shutdown.....	30
Vehicle Operations and Powered Industrial Trucks.....	30
Warning Signs and Barricades .....	32



Working Alone..... 32



## Introduction

### Commitment

Lockheed Martin Space (LMS) is committed to mission success with a proactive, predictive and preventive Environment Safety and Health strategy to enable program performance excellence. We strive to operate our facilities in a regulatory compliant, responsible manner that provides a safe and healthy workplace for employees, contractors, and visitors. LMS works to prevent occupational injury and illness, protect our products and facilities, as well as the environment and surrounding communities, while committing to pollution prevention and conservation of natural resources.

### Applicability

This publication applies to any organization or individual (Contractor and Subcontractor) engaged by LMS through written agreement to perform work at LMS owned, leased, controlled, and/or operated facilities or at sites where LMS has work performance responsibilities. Contractor includes, but not limited to, construction contractors, service/technical representatives, custodial, vendors and suppliers, maintenance/renovation, consultants, cafeteria and security service providers, lab technicians, contracted software developers or support personnel. For purposes of brevity the above will be referred to in this document simply as "Contractor".

## Emergency Preparedness

### Building Evacuation

LMS has developed emergency response plans for all facilities. Contractor may be asked to participate in evacuation drills.

When fire alarm or other method of emergency notification sounds, Contractor shall:

- Stop all work
- Shut off electrical equipment and machines and secure classified material, if safe to do so
- Walk to the nearest exit, including emergency exits with panic bar assemblies. Push the bar and exit the building
- Report to their supervisor following a general evacuation
- NOT re-enter the facility until instructed to do so by LMS Security and/or LMS ESH

If Contractor is not working in their normal work areas or are in hallways, restrooms, etc., they shall use the nearest exit. Once outside the building, Contractor shall stay at least 75 feet away (if possible) from the building while proceeding to the assembly area. If unaware of the assembly areas, Contractor shall ask the LMS POC in advance. Contractor shall become familiar with the evacuation routes in their work areas.

### Emergency Procedures

Contractor shall make available and/or post information, at the work site, regarding the means of contacting LMS Security, how to seek medical assistance, site emergency numbers, and LMS POCs, as applicable. Additional information shall be provided, if necessary, if Contractor is working alone and/or after hours.

Contractor shall be familiar with and know the location of the following:

- Nearest telephone and emergency numbers to call to report a Fire, Medical Emergency requiring an Ambulance, or a Chemical Spill  
Chemical spill: Release of any chemical substance, including water, to the air, water, soil, ground or floor
- Nearest fire extinguisher (LMS does not require Contractor to use fire extinguishers)
- Nearest emergency exit
- Nearest emergency eyewash and shower or water source, if applicable

### Medical Emergencies

In the event of an injury/illness on LMS property, Contractor shall:

- Seek medical care per their employer's policy
- Call LMS Security for urgent medical response
- Report the injury/illness immediately to their supervisor and to LMS POC, no matter how minor it may seem
- Where blood or other bodily fluids are present, secure the area and immediately notify LMS Security. Contractor shall not clean-up blood or other bodily fluids, unless authorized and trained to do so by their employer



Copies of investigation reports and any relevant documentations for Contractor injury/illness, shall be provided to LMS upon request.

## General Requirements

### Contractor Management

Using their own procedures, Contractor shall comply with all applicable laws, regulations, all communicated LMS, site and program-specific requirements.

Contractor shall:

- Communicate and coordinate with LMS POC and LMS ESH, activities regarding regulatory compliance, site-specific requirements and procedures, and site-specific training, as applicable
- Manage and ensure subcontractors comply with all applicable laws, regulations, and all communicated LMS, site and/or program-specific requirements. As well as communicate applicable ESH requirements to subcontractors working on site
- Hold regular safety meetings with all project personnel, document agenda and keep attendance records. Contractor shall provide documentation to LMS upon request.
- Report to LMS, Contractor occupational injuries/illnesses, incidents involving damage to LMS equipment/facilities, or impacts to LMS operations. Immediately cease work and correct unsafe condition(s). Work shall not resume until the LMS determines the unsafe condition(s) have been resolved
- Provide copy of incident report, including root cause and corrective action, to LMS, within 24 hours after incident
- Provide a “Competent Person” as defined by OSHA for the entire duration of hazardous operation(s). These tasks include, but are not limited to asbestos/lead abatement, welding, erecting/changing scaffolding, excavation, demolition, remediation, use of accessory hoisting equipment, cranes, and fall protection
- Shall assess the job site and verify compliance with safety standards. Continually assess the work site to identify potential hazards and mitigate these hazards
- Shall stop work if it poses an imminent hazard to people, facility, products, or environment
- Inform LMS POC and other potentially affected personnel of any hazards confronted or created during operations. Abate work place hazards created by their activity or under their control
- Report near misses/close calls incidents to LMSCC POC. Near misses/close calls shall be investigated jointly by Contractor and LMS to determine cause and mitigations to prevent recurrence. Near miss: unplanned event that did not result in injury/illness, or damage, but had the potential to do so
- Carefully preserve and report immediately to LMS POC items having possible historical or archeological interest that are discovered during work. Protect monuments, markers and works of art
- Smoking and use of all tobacco products is prohibited on at LMS sites

## **Contractor Inspections**

Contractor shall:

- Perform regular work area/field inspections to ensure compliance with all applicable laws, regulations, and all communicated LMS, site and/or program-specific requirements
- Document inspections and provide to LMS upon request
- Document corrective actions taken where deficiencies are identified
- Provide the name of the Contractor on-site safety representative to the LMS prior to starting work at the jobsite.

## **Risk Plan**

Contractor shall submit a Risk Plan to the LMS POC, for high-risk work activities, including but not limited to: roofing, demolition, asbestos abatement, environmental remediation, spill response and clean-up, confined space entry operations space, trenching and excavations, work with high voltage or potentially energized equipment, control of hazardous energy, cranes, work at heights, overhead work, disabling fire-protection or critical equipment, work with ordnance/explosives, quick-acting acutely toxic materials/chemicals, or and any other activities that pose a significant risk and impact to the health and safety of people, flight hardware, the facilities, and the environment. The level of detail of the RP will be contingent on the scope of the project.

At a minimum, the Risk Plan shall include the following:

- Contractor Name (e.g. company name)
- Scope of the project
- Project dates
- Identification of high risk activities
- Controls and hazard mitigation

## **Enforcement Policy**

LMS will enforce compliance to applicable laws, regulations, and all communicated LMS, site and/or program-specific through a process of progressive discipline. Escalation of disciplinary action is dependent on the severity and frequency of repeated acts of indiscipline. Examples include, but are not limited to verbal notices or warnings, notices of violation, suspension of work, expulsion from the work-site, and removal from participation on bidding for future LMS work and up to contract termination.

LMS shall stop contractor work, if contractor does not provide documentation to LMS when requested. Documentation may include, but not limited to, risk plans, proof of training, certification, and equipment calibration.

## Site Briefing / Training

### Site Briefing

Contractor shall complete “Contractor ESH Site Briefing,” on emergency procedures, general site policies, ESH policies, and potential hazards, prior to performing work on LMS premises. Contractor ESH site-specific briefing link: <http://www.lockheedmartin.com/us/ssc/edc/eshr.html>

### Training

Contractor shall:

- Be trained (by their employer) according to applicable regulatory standards (e.g. OSHA, EPA, DOT) for the tasks performed at LMS premises.
- Maintain written proof of current trainings, certifications, licenses, medical certification, and respiratory fit testing
- Provide written proof to LMS upon request

Training may include, but not limited to:

- Competent Person
- Hazard Communication (Global Harmonized System)
- Personal Protective Equipment
- Control of Hazardous energy (lockout/tagout)
- Confined Space
- Fire Extinguishers
- Fall Protection
- Motorized Work Platforms
- Powered Industrial Trucks
- Refrigerant Equipment Installation or Servicing
- Powder-actuated tools
- Scaffolding
- High Voltage Electricity
- Trenching and Excavation
- Hazardous Material Transportation (DOT)
- Motor Carrier Safety (DOT)
- Hazardous Waste Management
- Ordnance hazards

## Environmental Requirements

### Air Emissions

- Contractor is responsible for regulatory permits and shall fully comply with regulatory requirements, permit restrictions, and procedures
- Contractor shall coordinate any regulatory notifications and/or permits with LMS POC and LMS ESH
- No generators greater than 37 KWe (50 Horsepower) shall be used on LMS premises without prior LMS ESH approval
- All chemical and hazardous material containers should be covered when not in use to restrict emissions to the atmosphere (e.g. gasoline containers)

Regarding ozone depleting compounds (e.g. Chlorofluorocarbons (CFCs)), Contractor shall comply with the following:

- Fluorocarbon refrigerants shall not be vented to the atmosphere
- Refrigerants shall be recovered using an Environmental Protection Agency (EPA) certified recovery unit
- Refrigerant leaks shall be repaired, and integrity verified in accordance with 40CFR82. Written documentation or leak repair efforts and follow-up verifications shall be provided to the LMS POC for all units greater than 50 lbs. of CFC charge
- Written documentation reporting all refrigerant used or charged into equipment shall be provided to the LMS POC for all units greater than 50 lbs. of CFC charge
- Only EPA-authorized refrigerants are permitted in new equipment installations
- Provide a copy of their EPA refrigeration certification card to the LMS POC for activities involving refrigeration system installation, maintenance, and disposal

### Erosion and Sediment Control

- Manage and control borrow pit areas to prevent sediment from entering nearby streams or lakes. Restore areas, including those outside the borrow pit, disturbed by borrowing and hauling operations. Restoration includes grading, replacement of topsoil, and establishment of a permanent vegetative cover
- Clean soils or media brought to the LMS premises from off-site, Contractor shall supply a “clean fill certification” to LMS POC and LMS ESH for approval prior to delivery and land application
- Follow applicable sediment and erosion control plan. LMS ESH shall approve the sediment and erosion control plan prior to commencement of work

### Hazardous (Regulated) Waste

Contractor shall handle (storage, labeling, etc.) hazardous waste generated on LMS premises in accordance with regulatory requirements and LMS site procedures:

- Management of all hazardous waste (solid, liquid, etc.) shall be coordinated with LMS POC and/or LMS ESH prior to generating hazardous waste
- If LMS utilizes the services of an on-site hazardous waste vendor, then the on-site hazardous waste vendor is responsible for the management and disposal of regulated waste. Contractor shall not dispose of hazardous waste generated on LMS premises

- Contractor shall arrange with the LMS POC and/or LMS ESH for the characterization, handling, storage and disposal of all hazardous waste generated on site
- Contact LMS POC and/or ESH to coordinate drop off/pick up of hazardous waste containers. DO NOT transport hazardous waste containers
- Store hazardous waste in approved containers and properly label to identify the type of waste
- For oil and hazardous material spills, notify LMS Security and LMS POC and LMS ESH immediately
- Hazardous waste shall not be discharged through any storm water system or sanitary sewer system or disposed of on any outside grounds

### **Natural Resources**

- Contractor is responsible for preserving the natural resources within the project boundaries and outside the limits of permanent work
- Contractor shall restore natural resources to an equivalent or improved condition upon completion of work. Activities will be confined to within the limits of the work indicated or specified
- Except in areas to be cleared, Contractor shall not remove, cut deface, injure or destroy trees or shrubs without the permission from LMS
- Contractor shall not fasten or attach ropes, cables or guy wires to existing nearby trees for anchorage, unless authorized by LMS. Where use of attach ropes, cables or guys wires is authorized, Contractor shall be responsible for any resulting damage

### **Soil Disturbances**

- Activities that will disturb existing soil conditions (e.g., trenching, boring, excavations, post hole digging, etc.) and/or alter drainage systems shall be reviewed and authorized by LMS POC and LMS ESH prior to commencement of activities
- Contractor shall coordinate with LMS ESH regulatory notifications and/or permits and shall fully comply with all laws, regulations, permit restrictions, and procedures
- Excavated soil shall be contained (placed on top of plastic/visqueen or inside lined dumpsters and covered with plastic/visqueen) for reuse or proper disposal pending determination by LMS ESH

### **Solid and Sanitary Waste**

Contractor shall control and properly dispose of waste:

- Trash and recycled material shall be placed in appropriate containers and emptied regularly. Contact your LMS POC to obtain appropriate containers
- Construction material to include paper, glass, plastic, metals, woods, wooden pallets, cardboard, and concrete shall be recycled to the maximum extent possible
- Prior to disposal or recycling, lids of rigid boxes, crates, or containers shall be detached to verify that the item is empty and non-rigid boxes, crates, or containers shall be flattened

### **Storm Water Pollution Prevention Plan**

- Contractor conducting activities from which run-off goes into or adjacent to any surface water in the state shall submit the appropriate Notice of Intent, obtain permit approval

depending on the area of land to be disturbed; identify their role as primary or secondary operator

- Large construction activities which disturb 5 or more acres or are part of a larger common plan of development that will disturb 5 or more acres, are regulated under a construction general permit
- Small construction activities which disturb at least 1 but less than 5 acres or are part of a larger common plan of development that will disturb at least 1 but less than 5 acres, are also regulated under a general permit
- If a permit is required, contractor is required to comply with all aspects of the general permit including the implementation of a storm water pollution prevention plan
- Approval is required from LMS ESH before any equipment will be permitted in live streams or storm water conveyance systems or swales
- No site work can begin until LMS and/or LMS ESH receives appropriate storm water permit modification and/or construction discharge permits. Contractors shall comply with all permit conditions of the storm water permit
- Run-off from pressure washing shall not be allowed to enter facility storm drains, sanitary sewers or swales
- Contractor shall prevent water and sediment run off into storm drain and sanitary sewer, using Hey Pogs, filter fabric, silt fence, or other effective methods.

### **Water Resources**

- Wastes, waste water, or chemical substances shall not be discharged to surface water or into any storm or sanitary sewer system or be disposed of on any outside grounds without prior authorization. Discharges shall be authorized in advance by the LMS POC and LMS ESH
- Prevent oily or other hazardous substances from entering the ground, drainage areas or local bodies of water
- Provide adequate protection to contain any leaks (e.g. secondary containment with 110% of container size)
- DO NOT disturb fish and wildlife
- DO NOT alter water flows or otherwise significantly disturb the active habitat adjacent to the project and critical to the survival of fish and wildlife, except as indicated or specified
- DO NOT encroach upon wetland areas without authorization from LMS ESH
- No dredging, filling or dewatering may occur on-site until LMS POC and LMS ESH receives appropriate dewatering and/or dredge/fill permits. Contractor shall comply with all permit conditions of the dewatering and/or dredge/fill permits
- Sanitary sewer connections shall not be made without authorization from LMS POC and LMS ESH. Connections to sanitary sewer may require appropriate industrial wastewater discharge permit modification or notification
- No equipment shall be used, or work performed outside which impacts (or effects) surface water or storm water (e.g., washing of equipment outside, or soil disturbances) without pollution prevention controls in place
- Precautions shall be taken to prevent spills or releases to the environment

- Contractor shall provide and maintain appropriate spill kits/absorbent materials onsite to be used promptly in the event of incidental spills
- Contractor is wholly responsible for the cost of cleanup
- Spill or release of any chemical substance shall be immediately reported to LMS Security and LMS POC and LMS ESH

## Health and Safety Requirements

### Abrasive Blasting

- LMS ESH shall approve sandblasting operations and its materials prior to commencement of work activities
- Silica-based blasting material is prohibited and shall be not used
- Contractor shall provide tarpaulin drop cloths and windscreens under and around blasting operations to confine and collect dust, sand, paint and other debris
- LMS ESH will take a representative sample of waste materials to determine if the material is hazardous
- Collect abrasive blasting waste containing lead or other heavy metals in approved containers
- Collect dust, sand, paint and other debris resulting from sandblasting operations and store in drums with watertight lids
- Emissions from abrasive blasting activities shall be controlled by the Contractor
- Blasting material shall be cleaned up immediately after completion of the activity or at the end of the work day

### Aerial and Scissor Lifts

Contractor shall follow the Manufacturer operator manual when operating boom-supported aerial platforms (aerial lifts), scissor lifts and vehicle mounted work platforms.

- Inspect the equipment and test the controls prior to use each day. If defective, tag out of service and do not use.
- Only trained, authorized personnel shall operate equipment.
- Employees shall wear a full body harness with a lanyard attached to the anchor points provided by the manufacturer on all boom-supported elevating work platforms (e.g., articulating boom lifts) and vehicle mounted work platforms when moving work is being performed.
- Maintain the minimum safe approach distances to power lines in accordance with OSHA requirements, the manufacturer's safety warnings and equipment labels.
- DO NOT exceed maximum weight limit listed on the equipment. (lift capacity accounts for person and equipment)
- DO NOT climb, sit, stand or hang on the guardrails or mid-rails to gain height.
- DO NOT use aerial lifts and scissor lifts as cranes, jack stands or forklifts.
- When working in elevated locations, ensure materials and tools fit within the platform and do not fall.
- Tools, materials and trash shall not be dropped or thrown to or from elevated locations.
- Barricade areas under overhead work and clear them of personnel.

- Only battery or electrical powered vehicles may be used indoors unless approved by ESH.

### **Asbestos**

Prior to demolition of asbestos containing materials Contractor shall comply with the following:

- Notify LMS POC and the LMS ESH when performing any maintenance, repair, renovation, construction, removal, demolition or salvage activities on any Asbestos Containing Material (ACM) or materials suspected to contain asbestos
- Asbestos sampling shall be coordinated with LMS POC and LMS ESH
- Contact LMS POC in advance for small-scale, short duration operations, such as pipe repair, valve replacement, installing electrical conduits, installing or removing drywall, and other general building maintenance or renovations operations to establish acceptable monitoring and work practices
- DO NOT disturb or dispose of ACM without LMS ESH approval
- Immediately report any incidental disruption of ACM or Potentially Asbestos Containing Material (PACM) to the LMS POC
- All work shall be completed in a way that will not expose LMS employees to asbestos
- Contractor will post signs in accordance with OSHA stating that asbestos work is in progress
- Asbestos waste/contaminated debris shall be coordinated with LMS POC and/or LMS ESH, in advance, for disposal
- Contractor shall inspect the job site at the end of each day to ensure all asbestos debris in the area has been properly cleaned up
- Contractors performing bulk and post abatement air sampling shall provide a copy of the results of all areas and personnel monitored to the LMS POC and LMS ESH
- Contractor activity that may disturb or introduce any material with any amount of asbestos shall not commence work until the Contractor has received approval from LMS ESH
- Asbestos abatement contractors shall submit an abatement plan to LMS ESH for review and approval, prior to start of work
- Only LMS ESH approved Contractor shall be used for sampling and abatement

### **Confined Space Entry**

LMS premises have confined spaces and permit required confined spaces, many of which are labeled, but not all. LMS confined spaces include, but are not limited to: storage tanks, pits, sewers, elevator shafts, boilers, environmental chambers more than (4) feet deep, ventilation ducts, tanks, tunnels and open top spaces that are more than four (4) feet in depth such as pits, vaults and equipment.

- Contractor shall notify the LMS POC and LMS ESH prior to performing any work in confined spaces and permit required confined spaces
- Contractor, LMS POC and LMS ESH shall exchange information regarding hazards in the space, prior and post entry.
- Contractor is required to provide their own written program, confined space permit, sampling/monitoring, rescue, equipment, etc.

- Any space considered a permit-required confined space by LMS shall be considered permit-required by the contractor
- Contractor shall also be informed of any special precautions or procedures that LMS has implemented for the protection of employees in or near the permit required confined space where contractor may be working
- Contractor shall provide on-site rescue, per OSHA requirement

### **Control of Hazardous Energy (Lockout/Tagout)**

Contractor shall be responsible for developing and implementing an effective Lockout/Tagout (LO/TO) program. Hazardous energy sources may include, but are not limited to electrical, hydraulic, thermal, pneumatic, gravitational, mechanical, and chemical systems.

Prior to performing LO/TO:

- Contractor and LMS POC shall exchange information on each other's LO/TO programs and identify all potential energy sources, shut offs, locks, tags, etc.
- Where it is not possible to LO/TO a given system, contractor shall notify the LMS POC and LMS ESH to identify a safe method for safeguarding
- Contractor LOTO tags shall contain, at a minimum, Contractor information, phone number, and name of person applying the LOTO

### **Compressed Gas Cylinders**

Compressed gas cylinders are considered hazardous. Contractor bringing compressed cylinders on site shall:

- Chain or secure cylinders in an upright position always; whether in storage or in use
- Store and properly secure cylinders in a well-ventilated location
- Move cylinders only when they are chained to a handcart. Never drop, roll or slide them across the ground or floor
- Keep the protective cap in place always when the cylinder is not in use
- Label cylinders clearly with contents and hazard warnings
- Always use the proper regulator for each cylinder. DO NOT use an adapter or other connections to attach a regulator to a gas cylinder
- Always use non-sparking cylinder wrench or other tightly fitting wrench to tighten the regulator nut and tube connections
- Ensure cylinders are free of corrosion and inspected/tested per Department of Transportation (DOT) requirements
- Tag "Do Not Use" and remove from LMS property, cylinders that do not meet DOT inspection requirements
- Store oxygen and fuel gas cylinders a minimum distance of 20 feet apart or separate them by a noncombustible barrier at least five (5) feet high having a fire resistance rating of at least ½ hour as required by the National Fire Protection Association (NFPA)/OSHA.
- Oxygen and fuel gas cylinders may be stored together, on cylinder carts, only when gases are in use
- Tag and cap cylinders that are empty
- NOT lift cylinders with ropes or chain slings
- Shut off cylinder valves when left unattended (e.g. breaks, lunch, end of work shift)

- Remove all compressed gas cylinders from LMS's premises upon job completion
- Not use compressed air to clean themselves or clothing while they are worn
- Not use compressed air for cleaning parts unless it is less than 30psi pressure and proper PPE is worn

## **Cranes and Hoisting Operations**

Contractor crane operations including mobile cranes, commercial truck-mounted, boom truck cranes, helicopter crane, etc., shall be coordinated with the LMS POC.

- A detail Lift Plan shall be submitted to the LMS POC and LMS ESH for review and approval prior to the commencement of lifting activities. It shall include the following:
  - Make and model of the crane
  - Operator's certifications (29CFR1926.1427)
  - Rigger qualification (29CFR1926.1404 and 29CFR1926.1425)
  - Signalmen qualification (29CFR1926.1419 and 1926.1428)
  - Crane annual inspection
  - Rigging, wire ropes capacity certificates, and inspection reports for all lifting equipment
  - Crane load charts
    - Boom and/or jib, (if applicable) length in feet
    - Crane rotation capacity (e.g., 360°)
    - Load radius in feet
    - Boom angle at pick (in degrees)
    - Boom angle at set (in degrees)
    - Required counter weights
    - Crane capacity for configuration
  - Crane setup, staging area and boom length impact radius map
  - Rigging/Lifting Sketch
  - Load technical specifications data
  - Certificate of insurance, if required
  - Job Hazard Analysis (JHA)
  - Vehicle and pedestrian traffic control
- Personnel working below the swing radius and the horizontal boom length impact radius of the crane shall be evacuated before overhead work is performed
- The area around the crane base shall be barricaded to prevent unauthorized personnel from entering the hazard zone.
- Never lift a load over people.
- Always use tag lines to control all loads and take precautions to prevent them from becoming entangled with other obstacles during the lift.
- Mobile cranes shall not be operated or moved within 10 feet of any open trench.
- The erection, operation or dismantling of any boom-type lifting or hoisting equipment or any part thereof, closer than 20 feet from energized overhead high-voltage lines is prohibited.
- Hoist, rigging equipment and associated attachments shall have the required manufacturer's label that includes its rated working load capacity.
- DO NOT operate under adverse weather conditions.
- Lifting operations and equipment shall comply with OSHA and/or State OSHA standards

## **Cryogenics**

Prior to working on cryogenic systems, Contractor shall provide evidence of training certifications and/or proof of experience working on high pressure systems that are designed to meet the requirements of the ASME Boiler and Pressure Vessel Code

- Specific project work activities involving cryogenic sources shall have a current Risk Plan approved prior to start of any work on that system or integrated systems
- During construction, supervision shall be at the work site and shall be fully aware of the proposed work activities, potential hazards, and know where/how to quickly isolate active cryogenic systems
- Contractors and in-house personnel shall maintain effective communications during work activities on active systems where hazardous energy sources are present or when conditions change that affect the ongoing work

## **Demolition**

Contractor shall:

- Coordinate with LMS POC and LMS FO&S that all utilities (electrical, natural gas, water, etc.) are shut off, capped, or otherwise controlled
- Ensure demolition work, always is under the immediate supervision of the competent person
- Prior to start of demolition operations, contractor shall evaluate the space and the condition of the structures that will be demolished and assess the possibility of an unplanned collapse of any portion of the structure or presence of any regulated material. Any adjacent structures where LM employees may be exposed shall also be similarly checked

## **Dust Control**

Dust caused by soil excavation, roadway construction, hauling on unpaved roads, demolition, and other dust-producing activities shall be controlled by the Contractor using covers, water spray, and/or other industry best practices

- Oils and binders shall not be used on LMS premises to control fugitive dust
- Keep dust down always during work performance, sprinkle or treat with dust suppressants the soil at the site, haul roads and other areas disturbed by operations
- Dry power sweeping will not be permitted. Instead, use vacuuming, wet mopping, wet sweeping or wet power sweeping
- Non-compressed gas/air blowing will be permitted only for cleaning non-particulate debris such as steel reinforcing bars
- Indoor work areas shall incorporate dust suppression/control techniques (i.e., vacuum cleaning instead of sweeping, separation of work area from occupied space using plastic barriers, provide construction duct particulate filters, etc.) to minimize emission/spread of dust into occupied space

- Only wet cutting will be permitted for cutting or grinding concrete blocks, concrete and bituminous concrete
- DO NOT unnecessarily shake bags of cement, concrete mortar or plaster

### **Electrical Safety**

Electrical work performed on LMS premises shall meet the following criteria:

- Energized electrical circuits and equipment shall be put into an electrically safe work condition only by LMS (or LMS authorized personnel) before performing electrical work. This activity shall be coordinated with LMS POC in advance
- Electrical equipment shall be properly maintained and in safe operating condition
- Contractor shall use either ground fault circuit interrupters (GFCI) or an assured equipment grounding program as specified in 29CFR1926.404
- Electrical work performed in corridors, aisles or any other areas accessible to LMS employees shall be barricaded such that anyone outside the barricade will be at least three (3) feet from any electrical hazard
- No work site with exposed, energized parts shall be left open at the end of the work day
- Protective covers, enclosures or Lockout/Tagout shall be used to protect against accidental contact
- Only approved explosion-proof electrical equipment (Class II, Division I) shall be used in areas containing hazardous concentrations of flammable dust
- Contractor is prohibited from performing live work on energized electrical circuits greater than 50 volts

### **Equipment/Machine Guarding**

Contractor shall ensure all equipment, machines, power tools, etc. shall have the required guarding as specified by manufacturer and regulatory requirements.

### **Excavation and Trenching**

Before performing excavation and trenching work on the property, the Contractor shall:

- Complete an LMS ESH Excavation Permit for all excavation activities (except shallow trenching associated with landscaping activities). Permit shall be submitted to LMS POC and LMS ESH for review prior to start of excavation.
- Locate and mark underground utilities such as sewer, telephone, fuel, electric, water, or other underground installations that may be encountered prior to opening an excavation.
- All excavations shall be protected against hazardous ground movement by shoring, sloping or benching, when required.
- Equipment adjacent to trenches shall not be moved until all personnel are evacuated from the trench area.
- Environmental permits may be required prior to the work start date. Environmental sampling may be required prior to soil disposal. Soil piles shall not be removed from site without LMS approval.
- The Competent Person shall inspect all excavations before work begins, during and as conditions change.

- Prior to entry into excavations and/or trenches, the space shall be evaluated to determine if confined space requirements apply.
- If evidence of a hazardous condition is found, exposed employees shall be removed from the hazardous area immediately until the necessary precautions have been taken to ensure their health and safety.
- All excavations, regardless of depth, shall be barricaded or covered with a standard guard rail or an alternate method approved by the LMS ESH Office. Any excavation that shall remain open past the normal work shift shall be equipped with appropriate protection to prevent accidental access and will include reflectors and lights.
- Barricades shall be sufficiently rigid that a person cannot displace them by walking into them at a normal speed.
- Walkways shall be provided where employees or equipment are required or permitted to cross over excavations. When walkways are utilized, a guardrail system shall be in place.
- Any liquid entering an excavation that requires disposal (dewatering) shall be removed in a manner approved by the LMS ESH.
- Soils shall be considered C type soils unless deemed otherwise by a competent soils engineer.
- Submit, prior to start of excavation/trenching a Cal/OSHA Annual Permit to LMS POC and LMS ESH, for trenches that are 5 feet or deeper, if workers will be entering the trench. (California only).
- Daily inspections of excavations shall be conducted and documented by the competent person. Inspections shall be conducted as often as necessary.
- The atmospheres shall be tested prior to workers entering trenches that are 4 feet or deeper, when there is a potential for hazardous atmosphere to exist in the trench. The atmosphere shall be tested as often as necessary.
- Spoil piles shall be placed at least 2 feet away from the excavation to prevent back filling and surcharge loads.
- Waste asphalt and cement shall be shipped off-site or recycled but not used as fill.
- If the total project-disturbed acreage approaches one acre, Contractor shall provide Phase II Storm Water Construction Permit. A copy of this signed permit shall be forwarded to ESH.
- Projects crossing streams and construction in a streambed or wetland shall require Army Corps 404 permitting. Crossing streams is discouraged. Contact ESH prior to crossing/working in streambeds and/or wetlands.
- Groundwater monitoring wells shall not be disturbed. Damaged wells will require immediate repair or replacement. Contact ESH if any wells are disturbed or damaged.

### **Explosives**

Contractor shall coordinate with LMS POC and LMSCC when brining, handling, installing, etc. explosives or ordnance devices (defined by DOT and BATF regulations) on LMS premises.

## Fall Protection

- Utilize an adequate fall protection system for activities including, but not limited to, construction, maintenance and roofing, occurring within 10 feet of a 6 foot or higher elevated surface.
- Evaluate fall protection hazards for working at heights and provide a fall protection plan developed by a “Qualified person” prior to beginning work. The plan will be maintained at the work site, prior to beginning work. The plan shall be provided to LMS POC and/or LMS ESH upon request.
- Develop a comprehensive plan for prompt rescue of employees in the event of a fall or shall assure that employees are able to rescue themselves in accordance with 1926.502(d)(20).
- Provide and inspect fall protection equipment before each use.
- Ensure employee and subcontractor compliance with fall protection requirements.
- Do use only personal fall arrest equipment appropriately rated by the manufacturer for the type of work that will be performed.
- Do not use “Body Belts.
- Effectively implement a work rule prohibiting employees from going past the warning line.
- Warning Line Systems and Controlled Access Zones (CAZ) may be used; provide the Fall Protection Plan to the LMS ESH for review prior to beginning work.
- The Contractor will not use safety monitoring systems as defined in 29CFR1926.502(h) unless written approval is obtained from ESH. ESH approval is contingent on the following: there is no other fall protection system that can be safely used to complete the work and a completed written risk assessment has been performed that effectively manages the increased risk associated with safety monitoring systems.
- Ensure protection from falling objects by toe-boards; screens or guardrail systems erected to prevent objects from falling from higher levels or use a canopy structure erected to deflect falling objects. The area to which objects could fall may be marked with signs or barricaded so employees are prohibited from entering the area.
- Install and/or place floor covers capable of supporting at least twice the intended load. Hole covers shall be placed over floor holes 2” or greater that present a hazard to the workers, pedestrian traffic or public at lower levels. They shall be secured against movement and clearly marked as “OPEN HOLE”, “HOLE COVER” OR “DO NOT REMOVE”.

## Fire Sprinkler Impairment

Contractor involved in modification and/or impairment of the facility Fire Suppression System shall comply with the following:

- Supply a fire sprinkler modification and/or impairment plan to the LMS POC and LMS Fire Safety Officer for review.
- No work shall be performed, or any valve opened or closed on any fire suppression system without the prior approval of LMS FPS, Security, Facilities or the ESH Office.
- LMS FPS representative Security, Facilities and the ESH along with the Contractor are responsible for ensuring that all notifications are made, and all precautions are taken before work is performed on the fire sprinkler system.
- Material shall not be stacked within 18 inches of fire sprinkler heads.

- Material or other equipment shall not be placed upon or suspended from any fire sprinkler pipes, valves or supports, either temporarily or permanently.
- Ceiling tiles and escutcheons shall be put back or replaced if needed when work is complete or on-hold to ensure that the automatic fire suppression system activates as designed.

Any work performed on fire protection equipment is to be done only with consent of the LM Responsible Authority (e.g. ESH, LM Site Fire Department, or LM Plant Protection). Opening and closing valves in fire protection lines shall be done by or only in the presence of an LM Responsible Authority or designated representative. Construction materials, ladders, or other equipment shall not be supported by, placed upon, or suspended from any fire sprinkler system, either temporary or permanently. All Contractors must provide adequate fire protection for their work areas as required by applicable codes and regulations

### **Hand and Power Tools**

- Tools shall be supplied by the Contractor and shall be operated per manufacturer's manual, maintained in a safe operating condition, free from defects or wear which may constitute a hazard to any person or property
- Electric power operated tools shall be grounded or double-insulated with proper assured equipment grounding inspections or Ground Fault Circuit Interrupter (GFCI) protection at all work areas
- Contractor shall not issue or allow the use of unsafe hand tools
- Pneumatic power tools shall be secured to the hose to prevent accidental whip
- Contractor shall provide documentation indicating calibration/maintenance of equipment to the LMS upon request

### **Hazard Communication**

Contractor shall:

- Make available and readily accessible, on LMS premises, SDSs for hazardous materials which there may be an exposure to
- Submit Safety Data Sheets (SDS's) to LMS POC and LMS ESH for all hazardous materials (e.g. adhesives, solvents, acids, caustics, paints, floor covering, coating, cleaners, detergents, flammable, combustible liquids, insulation materials, etc.) to be used on site, prior to start of work
- Utilize the Global Harmonizing System for signage and chemical labeling. Chemical containers must be clearly labeled with the material identity and appropriate health and physical hazard warnings
- NOT bring on LMS premises chemicals that have not been reviewed by LMS ESH or ones that are prohibited by LMS

### **Hazardous Materials: Flammable, Combustible and Toxic Materials**

Contractor shall

- Submit Safety Data Sheets (SDS's) to LMS POC and LMS ESH for all hazardous materials (e.g. adhesives, solvents, acids, caustics, paints, floor covering, coating,

cleaners, detergents, flammable, combustible liquids, insulation materials, etc.) to be used on site, prior to start of work

- Make every effort to use the safest product with the lowest toxicity and flammability ranges
  - Provide safe storage areas for hazardous materials and comply with all applicable codes for flammable materials.
  - Provide adequate secondary containment (e.g. secondary containment with 110% of container size) for all liquid hazardous materials brought on site and stored for more than 8 hours
  - Dispense flammable and combustible liquids from metal safety cans bearing a Factory Mutual (FM) or NRTL listing
  - Provide metal cans with perforated metal screen (flash arrestor) in place
  - Ensure adequate ventilation is provided when using flammable and combustible materials
  - Ensure ventilation equipment used to exhaust flammable vapors is rated for the type of hazardous material
  - Safely handle all chemicals brought on LMS premises
  - Provide portable eyewashes and/or safety showers, as required by law, when bringing corrosive liquids on LMS premises
  - Properly segregate incompatible materials
  - Not discharge hazardous materials through any storm water system or sanitary sewer system or disposed of on any outside grounds
- LMS reserves the right to prohibit or limit the use of any chemical on LMS premises.

### **Housekeeping and Material Storage**

- Maintain good housekeeping and a clean work area throughout the day
- Store tools and materials away neatly at the end of each work shift
- Remove combustible materials (e.g., trash, wood, rags, cardboard, paper) at the end of each day and dispose of appropriately
- Do not store materials on scaffolds, runways, loading docks or roofs more than materials needed for immediate use
- Do not block electrical panels, emergency equipment, means of egress, aisles and passageways
- Lumber and bagged materials shall be stored to prevent them from falling or protruding into aisles and walkways
- Do not store items in electrical rooms, elevators, and stairwells
- Enclosed non-combustible disposal chutes are required whenever solids waste materials are dropped greater than ten (10) feet
- Outside storage of chemicals is prohibited unless adequate secondary containment is used, and chemicals are protected from contact with precipitation
- Hoses and extension cords shall be bridged as appropriate and shall be removed and coiled at the end of the task
- Sharp objects, such as nails, which protrude from packing materials, equipment, or other construction debris shall be removed or bent to remove the hazard

## Hot Work

Contractor involved in welding, grinding, cutting, torching, brazing, soldering work and use of any type of open flame and spark-producing equipment shall:

- Plan any Hot Work activity well in advance of the project so appropriate approval can be obtained and work stoppages avoided.
- Obtain a Hot Work Permit from the LMS Fire Prevention Services, prior to commencing work.
- Post HOT WORK permit in the work area.
- Adhere to the instructions for site preparation and the safety and fire precautions printed on the Hot Work Permit.
- Supply fire extinguisher(s) for the hot work to be performed. Portable fire extinguishers shall be serviceable with appropriate current service tags attached and clearly labeled as belonging to the Contractor.
- Provide employees who have been designated to use firefighting equipment (e.g. fire extinguisher) as part of an emergency action plan with training in the use of the appropriate equipment.
- Remove all flammables and combustibles a safe distance away from where the work will be performed. If this is not possible, Contractor shall protect all exposed combustibles with fire resistant sheeting or blankets before beginning hot work operations and to provide a fire watch.
- Ensure that there are no openings in walls or floors where sparks or slag could fall and ignite combustibles.
- Explosive magazines shall be covered with fire resistant sheeting or blankets prior to beginning hot work.
- Only store oxygen and acetylene bottles on welding carts when in use.
- NOT perform Hot Work activities in any area where the fire protection sprinkler system is shut down unless prior approval has been obtained from the LMS POC and LMS Fire Prevention Services, and Hot Work Permit Issuing department.
- Monitor the work area for at least one-half hour following completion of the hot work and when complete, sign and date in the Name and Date fields located on the back of the Hot Work Permit.
- Hot work permits will not be issued for areas where there are active sprinkler system impairments. Any exception to this policy shall be granted by the site Fire Prevention representative or LMS ESH Office.
- Contractor personnel are prohibited from performing any hot work (work involving electric or gas welding, cutting, brazing, or similar flame or spark-producing operations) without first obtaining a "Hot Work Permit" from LM (e.g., ESH, LM Site Fire Departments, Facility Operations & Services, or Security).
- Personnel performing the hot work must provide a fire watch, who is trained in extinguisher use, with an appropriate fire extinguisher to monitor the hot work area.
- After completion of the hot work, the permit shall be signed off by Contractor and returned to the permit issuer.
- Under no circumstances shall Contractors burn any materials, except as a routine consequence of welding or cutting operations or when applying flame-activated coatings.

### **Indoor Air Quality**

- Contractor shall perform work in a manner that will minimize and control the production and migration of chemical vapors, gases, dust and dirt into adjacent areas.
- Work that may negatively affect indoor air quality (IAQ) shall be adequately ventilated.
- Only electric powered equipment is allowed inside the building without the prior approval of the LMS ESH.
- Use of adhesives, paints or other odor emitting products regardless of their SDS approval for use on-site are not to be used for any task during normal working hours or in any occupied areas unless approved by the designated LMS POC or ESH.
- Chemical containers should be covered when not in use to restrict any emissions to the atmosphere.
- Any identified or suspected microbial growth observed in/on LMS buildings or property shall be reported to LMS POC and LMS ESH for assessment. Contractor shall not disturb the observed growth.

### **Ionizing Radiation**

- Use of ionizing radiation-producing equipment (e.g., x-ray machines, radiation (alpha, beta, gamma, or neutron emitters)) requires approval from the LMS POC and LMS ESH
- Contractor shall provide copy of their Radioactive Materials License and/or X-ray registration to LMS POC and LMS ESH, prior to performing operation
- Radiation sources shall not be stored overnight or left unattended on LMS premises without prior authorization by LMS POC and LMS ESH. If permitted, equipment shall be stored in accordance with all local regulations and shall be disabled via key removal, electronic keypad lock or other equally effective means

### **Noise**

Contractor shall conduct high noise activities (e.g. saw cutting, grinding) that may adversely impact LM employees working nearby, during afterhours and weekends.

### **Non-ionizing Radiation (Lasers)**

- Use of Class IIIb (3B) and Class IV (4) lasers, ultraviolet lights, microwave or RF and/or high intensity lights by Contractor approved by LMS POC and LMS ESH prior to use.
- Use of CDRH Class I, II, IIa, and IIIa lasers, (I.E.C. Class 1M, 2, 2M, and 3R) laser requires notice signs posted. LMS POC and LMS ESH approval is not required.
- Contractor servicing laser systems require LMS POC and LMS ESH approval, prior to starting work.
- Contractors using ceiling leveling lasers shall be trained and warning signs shall be posted always.
- Contractor suspected of being exposed to laser operations shall seek medical attention and report the exposure to their supervisor, LMS POC and LMS ESH.

### **Overhead Power Lines**

Contractor shall notify LMS POC and LMS ESH prior to working on or around power lines, and shall adhere to the following:

- When working under or near overhead power lines, contractor shall maintain a safe distance to the lines and for very high-voltage lines, ground any equipment such as cranes that can become energized
- If working on power lines, Contractor shall ensure that the lines have been de-energized and grounded by the owner or operator of the lines. Protective measures like guarding or insulating the lines also helps prevent accidental contact
- When operating equipment near overhead lines, Contractor standing on the ground shall not contact the equipment unless it is located so that the required clearance cannot be violated even at the maximum reach of the equipment
- Contractor shall designate a person to observe clearance of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means
- Overhead wires shall be considered energized lines until the owner of such line or the electrical utility authority indicates that it is not
- Erection, operation or dismantling of any boom-type lifting or hoisting equipment or any part thereof, closer than 20 feet from energized overhead high-voltage lines is prohibited
- Employees unqualified to work with electricity, as well as mechanical equipment such as lifts, should remain at least 10 feet away from overhead power lines.
- If the voltage is more than 50, 000 volts, the clearance increases by 4 inches for each additional 10,000 volts as referenced in the table below - Minimum Clearance Distances

#### **Clearances from Live Electrical Lines**

Nominal Voltage, Kv	Minimum Clearance ft. (m)
0 – 50	10 (3.05)
51 – 200	15 (4.60)
201 – 350	20 (6.10)
351– 500	25 (7.62)
501 – 750	35 (10.67)
751 – 1,000	45 (13.72)

#### **Paint Containing Hazardous Metals**

- Contractors shall not perform sampling, abatement, etc. activities that involve paint containing hazardous metals (e.g. lead, cadmium) unless approved by LMS ESH
- Painted surfaces shall be assumed to contain hazardous metals until confirmed by the LMS ESH
- Prior to performing demolition, construction or any activity (e.g. sanding, burning, cutting, drilling, abrasive blasting or welding on coated or painted steel structures or members) disturbing paints and/or undercoating on steel structures or any other substrate potentially known to contain lead, immediately contact the LMS POC and LMS ESH to determine the presence of lead
- If potential lead-based paint is observed, secure the area and provide proper warning signs and barricades to keep employees from entering areas until the areas are properly assessed, abated and cleared by the LMS POC and LMS ESH
- Contractor shall not introduce any material with any amount of lead without LMS ESH approval
- Any Contractor activity that may disturb or introduce any material with any amount of

Cadmium shall not commence work until the Contractor has received approval from ESH

- Abatement contractor shall submit an abatement plan for review and approval by ESH prior to start of work. Only LMS-approved subcontractors shall be used by Contractor for sampling and abatement

### **Painting and Spray Painting**

The following safety precautions shall be considered:

- When using adhesives, paints or other odor emitting products on a roof, ensure proper safeguards are in place to prevent the intake of vapors/spray into ventilation systems
- If painting in a confined space, evaluate the area for hazards and follow confined space entry requirements
- Ensure that all paint containers are properly stored, and paint-related wastes are properly disposed
- DO NOT leave any open paint containers unattended
- Use of adhesives, paints or other odor emitting products regardless of their SDS approval for use on-site, are not to be used during normal working hours or in any occupied areas unless approved by LMS POC and LMS ESH
- DO NOT attempt to “air-dry” or cure any residual paint remaining inside the containers. Every effort shall be made to ensure used paint containers are completely empty (pouring, scraping, wiping, etc.)
- DO NOT attempt to dry any residual paint by adding a chemical or other product to the paint which would constitute as “treatment”
- Lids shall be securely placed back on empty paint containers
- Contractor shall coordinate with LMS POC the disposal of empty paint containers and paint related debris

### **Personal Protective Equipment**

Contractor shall be responsible for providing Personal Protective Equipment (PPE), such as head protection, eye protection, face protection, hand protection, hearing protection, foot protection, respiratory protection, fall protection, and ensuring that they are worn for the hazards associated with the work being performed.

Contractor shall perform a Job Hazard Analysis (JHA) for the work to be performed and provide their employees with appropriate PPE and enforce its use.

PPE shall be worn in accordance with the manufacturer instructions and recommendations. It shall be in a suitable, serviceable condition and appropriate for the task being performed.

Contractor shall post signs at the work site entry point(s) informing personnel the specific PPE required to access the work area.

## **Portable Ladders**

Ladders shall be selected based on the nature of the work, the load and the height to be reached.

Contractor shall:

- Inspect the ladder frequently to identify any defects prior to each use. Inspections shall be performed by qualified person
- Maintain the ladder's safety feet and other auxiliary equipment in good working condition to ensure proper performance
- Keep the rungs free of grease, lubricants and other materials.
- Set-up extension ladders with the base away from the wall at a 1 to 4 ratio
- Use the ladder in a fully extended configuration and do not use if the ladder is leaning against walls/structures
- Store ladders in a safe manner when not in use. Place ladders where they will not obstruct traffic and secure them as necessary
- Identify each company-owned ladder with the company name and without concealing any structural defects

Contractor shall NOT:

- Use a ladder if the manufacturer's identification, rated capacity and warning labels are missing or illegible
- Use any ladder found in disrepair and/or non-compliant. In this instance, the ladder shall be marked defective, be withdrawn from service, and removed from LMS premises.
- Place any ladders in front of door openings unless the door is blocked open, locked or guarded
- Place the ladder in passageways, driveways or any location where the ladder become displaced by other work activities unless protected by barricades or guards.
- Use a ladder to gain access to any elevated platform or roof unless the top of the ladder is secured and/or tied-off to prevent lateral movement. The ladder shall extend a minimum of 3 feet above the next level (point of support at the eave, gutter or platform line)
- Load any ladders beyond the maximum rated capacity
- Allowed any employee to sit or stand on the top cap or top step of any step ladder
- Utilize portable metal ladders near electrical circuits or energized equipment

## **Powder Actuated Tools**

Contractor shall:

- Notify LMS prior to work involving the use Powder Actuated Tools on LMS premises
- Meet the tool design requirements in American National Standard Institute (ANSI), A 10.3 – 1977 for Explosive Actuated Fastening Tools
- Test the tool daily before use and all defects discovered before or during use shall be immediately corrected
- NOT load tool until immediately before use
- NOT leave loaded tools or powder loads unattended or available to unauthorized persons
- NOT use powder-actuated tools in explosive or flammable atmospheres

- Keep the tool, studs and cartridges in a safe area. Only authorized Contractor shall have access to the storage area
- Keep boosters and cartridges in a storage container under lock and key
- Identify, isolate and properly dispose of any misfires
- Always clear the work area on all sides and post appropriate warning signs
- Inspect the barrel to make sure that it is free from obstructions prior to using
- Always unload a powder-actuated before disassembling, assembling, replacing the barrel or cleaning
- NEVER operate any piece of equipment or machinery when it is functioning improperly or at any time when operation would constitute a hazard. Any piece of equipment that does not meet this requirement or that is found in disrepair shall be repaired, prior to further use or removed from the premises

### **Process Safety Management**

The purpose of Process Safety Management (PSM) is to prevent or minimize the consequences of catastrophic releases of toxic, reactive, flammable or explosive materials in various industries. Contractor required to work in an area with processes covered by OSHA 1910.119, PSM, shall comply with the PSM standard.

PSM applies to contractor performing maintenance or repair, major renovation or specialty work on or adjacent to a covered process. It does not apply to contractor providing incidental services which do not influence process safety such as janitorial work, food and drink services, laundry, delivery or other supply services.

To commence work in these areas, Contractor shall, at a minimum, be trained on appropriate PSM and provide relevant information to LMS.

### **Protruding Steel**

Contractor personnel working at the same level or above grade exposed to protruding reinforcing steel or similar projections shall be protected against the hazard of impalement by guarding the exposed ends with protective cover, troughs, caps, or other adequate means

### **Roofing Operations**

Contractor performing roofing operations such as new roof construction, alteration or repair shall:

- Evaluate fall protection hazards when working at heights and provide a Fall Protection and Rescue Plan developed by a "Qualified Person," to LMS POC and LMS ESH, prior to beginning work
- Prior to demolition, confirm from LMS POC and/or LMS ESH that all roofing material to be disturbed or removed is free of asbestos
- Utilize temporary guardrails as primary fall protection to reduce the need for continued monitoring of the edge, when feasible
- NOT utilize gasoline powered leaf blowers to blow off debris
- Take adequate steps to prevent chemical odors from entering the buildings through the HVAC system (e.g. shutting down air handlers, sealing air intakes)
- Store chemicals away from air handling equipment

## **Scaffolds**

Contractor shall ensure all scaffold safety rules are followed.

- Scaffolds shall be erected, moved, dismantled, altered and inspected only under the supervision and direction of a competent person who is qualified in scaffold erection, moving, dismantling or alteration.
- Ensure work is performed only by experienced and trained personnel selected for such work by the Competent Person.
- The feasibility and safety of providing fall protection for personnel erecting or dismantling supported scaffolds is to be decided by a Competent Person
- Fall protection shall be provided when erecting or dismantling scaffolds where the installation and use of such protection is feasible and does not create a greater hazard.
- Scaffolds and scaffold components are to be inspected by a Competent Person for visible defects before each work shift and after an occurrence which could affect a scaffold's structural integrity.
- Daily documentation of the scaffold inspection shall be maintained on the scaffold system by the Competent Person.
- All casters used with baker mobile scaffolding shall be provided with a positive locking device to hold the scaffold in position when the scaffold is stationary or while employees are on the scaffold.
- The height of the scaffold should not be more than 3-4 times its minimum base dimension unless guys, ties or braces are used (follow the manufacturer's instructions and recommendations).
- Scaffolds shall be fully decked with no more than 1-inch gaps between planks.
- Scaffolds shall be able to support its weight and 4 times its maximum load.
- "Walking" a scaffold (moving a scaffold from the work platform via shuffling, riding or pulling/pushing) is prohibited.
- Keep scaffold platforms and the area around the scaffold free of debris and unnecessary material or other hazards that could cause a trip or fall

## **Use of LMS Equipment**

Use of LMS equipment such as ladders, aerial work platforms, cranes, hoisting equipment, rigging attachments, forklifts, tools, machinery, etc., by Contractor is prohibited. Where necessary to use LMS equipment, Contractor shall submit "LMS Indemnification Agreement" to the LMS POC and LMS ESH.

## **Utility Shutdown**

All utility shutdowns shall be conducted by LMS. LMS POC and LMS Facility Operations & Services shall be informed, in advance, of utility shutdown requirements, prior to performing maintenance, modifications or repairs. Contractors shall follow local site requirements as it relates to utility shutdowns. In the event of an unplanned emergency shutdown, contact LMS Security and LMS POC.

## **Vehicle Operations and Powered Industrial Trucks**

Only electric-powered equipment is allowed inside of buildings. Gasoline, diesel and liquefied petroleum (LP) gas-powered internal combustion engines shall not be used inside any LMS building unless approval is obtained from LMS POC and LMS ESH. Such equipment includes,

but is not limited to, powered industrial trucks (PITs/Forklifts), cranes, earthmoving equipment, pressure washers, concrete saws, generators and any other equipment having a gas-powered/combustion engine.

- If a Contractor requires the use of a non-electric-powered piece of equipment inside a LMS building, the Contractor shall submit TO LMS POC and LMS ESH, a written plan that includes:
  - Work to be performed
  - Duration of time anticipated to be inside of the building
  - Mitigating controls utilized to maintain a safe work environment/area
  - Equipment to be used
  - Other additional environmental hazards
  - Identification of methods of ventilation
- For non-electric powered equipment operated indoors, Carbon Monoxide (CO) emissions shall be managed at or below the most stringent exposure limits as established by OSHA, National Institute of Occupational Safety and Health (NIOSH) and/or American Conference of Governmental Industrial Hygienists (ACGIH).
- Copies of the written plan shall be provided to the LMS POC and LMS ESH, upon request.
- At all times, operators shall possess proof of training during operation of equipment.
- The use of cell phones and other electronic devices is prohibited while operating motor vehicles, forklifts and other vehicles as described in “Your Rights and Responsibilities” section unless the vehicle is parked in a safe and legal location or a hands-free device is used. Secure vehicles and remove keys from the ignition before leaving the vehicle unattended.
- Safe and proper practices shall be followed always, or vehicle operating privileges will be suspended and/or revoked at the discretion of LMS Security and/or LMS POC and/or LMS ESH.
- Seatbelts are required to be worn if the vehicle has Roll-Over Protection Structures (ROPS).
- Daily inspections and scheduled preventive maintenance records shall be available upon request.
- Modified PIT attachments other than those approved/certified by the Original Equipment Manufacturer (OEM) shall not be used.
- Modifications or additions that affect capacity or safe operation shall not be performed without prior written approval from the forklift truck manufacturer. Capacity, operation, and maintenance instruction plates, tags or decals shall be changed accordingly. [29CFR1910.178(a)(4)]
- Operators must be trained in the proper use of attachments because they alter the performance of the forklift. Attachments affect the truck's performance by changing its center of gravity, visibility and capacity. Operators will be trained in the fork and attachment adaptation, operation and use limitations.
- Slings, cables or chains attached to the forks to lift materials or objects are prohibited
- Vehicles that enter a building shall use an audible alarm and operate at a speed no faster than a brisk walking pace.

- Contractor vehicles to be considered for a compound pass shall show proof of the operability of all applicable safety features of the vehicle to include golf carts and Personal Owned Vehicles (POV).
- Contractor vehicles shall not be serviced (e.g., oil changes, tune-ups, washing/detailing, brake changes, etc.) while on LMS property except in emergency situations (e.g., towing for repairs, flat tire repair, jump start, windshield replacement, etc.). These occurrences shall be immediately reported to LMS Security.
- Contractor shall follow all traffic regulations, postings, signs and designated parking areas.
- Contractor vehicles must be in good repair and roadworthy.
- Vehicles that have limited visibility must be equipped with back-up alarms or a flag person must accompany the vehicle to clear the way when backing up.

### **Warning Signs and Barricades**

Contractor shall put up and properly maintain necessary safeguards to protect LMS employees, visitors, and the public from unauthorized entry to designated construction areas:

- Contractor shall barricade the construction sites to prevent all unauthorized personnel from walking into the construction area
- Barricades can be barrier tape, "A" frame barricades, rope and/or stanchions, and shall be complete, rigid, and strong enough to withstand the loads or conditions they may face
- Signs shall also be posted to indicate to unauthorized personnel that entry through the construction area is strictly prohibited. A detour route shall be pre-selected and marked appropriately
- Overhead work conducted in aisles where objects could fall and possibly strike passer by shall have sufficient safeguards in place (i.e., overhead protective barrier, netting, hard barrier, detour routes or consider working off-shifts)
- Floor, wall, roof, and road openings shall be sufficiently protected by barricades, guards, signs, and signals to adequately warn personnel of the hazards and prevent slips, trips, and falls
- Hole-covers shall be placed over floor holes 2" or greater that present a hazard to the workers, pedestrian traffic or public at lower levels/ They shall be secured against movement and clearly marked as "OPEN HOLE", "HOLE COVER" OR "DO NOT REMOVE"

### **Working Alone**

Contractor shall evaluate work tasks to determine when a 2-person process is required to ensure the safety of the employee performing the work.

Arrangements shall be made in advance with the LMS POC and LMS Security when necessary to perform construction, abatement, renovation, and/or other potentially hazardous operations during off shift, weekend or holiday hours.

Contractor is not permitted to work alone when performing potentially hazardous operations. It is the Contractor's responsibility to inform the LM POC when potentially hazardous off shift, weekend or holiday work is planned and to inform the LM POC as to the type of work to be conducted.

Examples of hazardous activities include, but are not limited to:

- Electrical
- Welding operations where a fire watch is required
- Machinery and equipment operation
- Confined space entry
- Trenching and excavation
- Isolated work on rooftops
- Emergency rescue operations
- Quick-acting acutely toxic material/chemicals
- While using supplied air respiratory equipment or self-contained breathing apparatus
- Sprinkler work