Engineering, Procurement & Construction Jobsite Safety Manual

Environmental, Safety and Health Contractor Manual

LOCKHEED MARTIN Energy

OSHA®

gogreen 2020
# Table of Contents

## Emergencies and Construction jobsites Protection
- General Evacuation .................................................. 4
- Medical Emergencies/Occupational Health Services ........ 4

## General Information
- ESH Policy Statement ............................................. 5
- ESH Contractor Program .......................................... 5
- Your Rights and Responsibilities ............................... 6
- Enforcement Policy .................................................. 7

## Environmental
- Air Emissions .......................................................... 8
- *Soil Disturbances .................................................... 9
- *Ground Water Impacts ............................................ 9
- Erosion and Sediment Control Measures .................... 9
- Waste: Hazardous, Sanitary & Solid .......................... 9
  - Hazardous Waste ................................................ 9
  - Solid and Sanitary Waste ....................................... 10
- Water Resources ..................................................... 11
- Storm Water Pollution Prevention Plan ...................... 11

## Natural Resources .................................................. 12

## Safety & Health ..................................................... 12
- Asbestos .................................................................. 12
- Compressed Gas Cylinders ...................................... 13
- Confined Space Entry .............................................. 13
- Cranes and Hoisting Operations ............................... 14
- Electrical Safety ..................................................... 15
- Electrical Safety ..................................................... 15
- Energy Controlled Procedures (LOTO) ....................... 15
- Process Safety Management .................................... 16
- Fall Protection ......................................................... 16
- Fire Sprinkler Impairment ........................................ 17
- Flammable, Combustible and Toxic Materials ............. 17
- Hazard Communication/MSDS/SDS ......................... 18
- Housekeeping and Material Storage ......................... 20
- Indoor Air Quality ................................................... 20
- Laser/Radiation Usage ............................................. 20
- Machinery, Tools and Equipment ............................ 20
- Noise ...................................................................... 21
- Painting and Spray Painting ..................................... 21
- Paint Containing Lead ............................................. 21

## Personal Protective Equipment (PPE) .......................... 22
- Eye Protection ......................................................... 22
- Foot Protection ........................................................ 22
Hand Protection 23
Head Protection 23
Portable Ladders/Ladders 24
Powder Actuated Tools 24
Roofing Operations 25
Sandblasting (Silica–Based Materials are Prohibited) 25
Scaffolds 25
Aerial Lifts and Other Personnel Lift Devices 26
Excavation and Trenching 27
Vehicle Operations and Powered Industrial Trucks 27
Warning Signs and Barricades 28
Working Alone 28

APPENDIX A – TERMS AND DEFINITIONS 29

Revision History – Effective with LM Energy Releases after 2/09/16 29
Emergencies and Construction jobsites Protection

General Evacuation

Lockheed Martin Energy Engineering, Procurement & Construction (LM EPC) has developed emergency response plans for all construction jobsites. Building owner led evacuation drills in preparation for an actual emergency, or actual emergency alarms may occur while you are working at the jobsite. When the fire alarm sounds or you are notified by the LM EPC Project Manager, you and your employees should:

- Stop all work;
- Shut off electrical equipment and machines and secure classified material, if possible;
- Walk to the nearest exit, including emergency exits with panic bar assemblies. Push the bar and exit the building;
- Account for all of your employees and move to the evacuation assembly area and wait there for your LM EPC Contract Monitor;
- Do not re-enter the facility until instructed to do so by LM EPC Construction jobsites Protection or the ESH office.

If your employees are not working in their normal work areas, or they are in hallways, restrooms, etc., they should use the nearest exit. Once outside the building, your employees should stay at least 200 feet away from the building while proceeding to the assembly area (if you are unaware of the assembly areas, ask your LM EPC Project Manager in advance of an emergency).

Your employees should become familiar with the evacuation routes in their work areas.

Medical Emergencies/Occupational Health Services

In the event that your employees are injured while on the LM EPC jobsite they should:

- Report the injury immediately to the on-site supervisor, appointed safety officer and Occupational Health Services (if available) as soon as possible.

- If the injury is serious and the employee is unable to report to Occupational Health Services, they should call or have someone else call the site emergency number and request emergency medical response. Your employees should be prepared to provide the location of the emergency, building number or name, floor and column number and details on the nature of the emergency.

On-site supervisors should report all injuries to the LM EPC Project Manager, no matter how minor, immediately. Copies of reports of all injuries must be given to the ESH office and documentation relative to incident investigation(s). ESH may request further information depending on the incident.

All contractors are encouraged to report Near Miss/Close Call incidents to the LM EPC Project Manager. Near Misses and Close Calls will be investigated to determine cause and mitigation of exposure.
**General Information**

**ESH Policy Statement**

MFC ESH Policy 1-1-003: The Environmental, Safety and Health (ESH) Policy of Engineering, Procurement and Construction Group is to operate our construction jobsites in a regulatory compliant, responsible manner that protects the environment and surrounding communities, commits to pollution prevention and prevention of occupational injury and ill health, conserves natural resources, and provides a safe and healthful workplace for employees, contractors, and visitors. This Policy Statement requires LM EPC employees to:

- Integrate ESH considerations into strategic business decisions, engineering design, procurement, and construction jobsites
- Continually improve the environmental aspects and safety and health performance of our business and establish and review ESH goals in applicable performance measurements
- Cultivate ESH responsibility by all employees' at all organizational levels and those who work on behalf of and under the control of the Company.

**ESH Contractor Program**

LM EPC is dedicated to ensuring that a safe working environment exists for both its own employees as well as for contractor and subcontractor employees. As part of our company-wide initiative, we have implemented a Contractor ESH Program to reflect the importance of environment, safety and health in our business.

Our program consists of five parts:

1. A complete review of the project's Environmental, Safety and Health (ESH) requirements;
2. A review of all contractor project implementation plans;
3. Orientation of all contractor employees of our local site requirements for emergency procedures, chemical usage and accident reporting;
4. Certification of required training as required;
5. Periodic work-site inspections to ensure compliance.

We expect all contractors or subcontractors working at our construction jobsites to be:

- Fully qualified and trained to OSHA requirements found in 29 CFR 1910 and 29 CFR 1926 as applicable.
Responsible for the safety of their employees as well as protection of LM EPC employees and property at their project site.

In compliance with all local, state and federal regulations, statutes and laws.

Compliant with the WorkSafe Program for non-routine activities.

Your cooperation and continued support of Environmental, Safety and Health (ESH) is greatly appreciated.

**Your Rights and Responsibilities**

This manual provides you with standards that must become part of your everyday work on our construction sites. It does not supersede any standards set by any regulatory agency, nor does it eliminate the need for sound ESH practices beyond those given in this manual. The general information provided here may be superseded or supplemented by more detailed or more current requirements.

**LM Engineering, Procurement and Construction Group requires that you read this manual before you start work.**

On the job, you are expected to follow these and other ESH practices. Failure to do so may result in warnings and other appropriate actions to protect you and your employees. Repeat minor or a single serious infraction will result in restricted access or removal from the premises for contractor employees and possible contract termination.

Maintaining a safe and healthy work environment that is environmentally sound is a continuous effort that requires everyone's cooperation. The contractor is responsible for maintaining safe working conditions and for adherence to reasonable and prudent Environmental, Safety and Health practices while on LM EPC property.

It is the LM EPC policy to comply with all applicable local, state and federal laws and regulations affecting the health, safety and environmental liability and assuring the enforcement of those requirements on its contractors.

It is your responsibility (the contractor or contract employee) to:

- Learn about all applicable hazards in the workplace;
- Use proper practices and procedures;
- Properly use personal protective equipment;
- Use all personal and equipment safeguards;
- Observe the Tobacco-Free policy of the worksite premises. Premises may include property that Lockheed Martin owns, leases as a tenant, or operates for a customer-owner, including all buildings, spaces, grounds, parking lots, vehicles, and aircraft. Tobacco is any product including, but not limited to, cigarettes, E-cigarettes, cigars, cigarillos, pipes, chewing tobacco, or snuff;
- Promptly report any on-the-job accidents or unsafe conditions to your on-site Supervisor or foreman;
- Stop the job in the event of any accident involving personnel, production hardware or equipment and notify your on-site Supervisor or foreman;
- Maintain good housekeeping practices;
- Report any spills of chemicals or other hazardous materials immediately by calling the emergency number or contacting ESH; Then immediately notify the LM EPC Project Manager;
- Make certain you have the required training for the work you are performing;
- Wear the badge(s) provided to you visibly on the upper front part of your body at all times;
- Wear long pants and shirts with sleeves in accordance with work area requirements;
- Ensure that all have medical certifications in accordance with their job function and legal requirements;
- Conduct periodic safety meetings/tool box talks and submit to LM EPC upon request;
- Prohibit the use of cell phones and other electronic devices while operating a motor vehicle unless using a hands free device;
- Prohibit the use of LM EPC or building owner equipment (i.e., ladders, forklifts, tools etc.) unless a Third Party User Loaned Tool/Equipment Indemnity Agreement is allowed at the LM EPC construction site and proper signatures are obtained;
- Protect your work site with appropriate “Caution” and “Warning” signs and barricading;
- All operating vehicles on site shall follow all posted signage and DOT regulation for safe vehicle operation to include seatbelts, stop signs, turn signals, pedestrian right of way, etc;
- Provide upon request to your LM EPC Project Manager and/or ESH with the name(s) of the competent person(s) for each of the listed standards, as they may apply. This list should not be considered all-inclusive. The contractor is responsible for providing the name(s) of competent person(s) for standards that have been omitted from this list:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>29CFR1910.66</td>
<td>Powered platforms for building maintenance, including Appendix C, Personal Fall Arrest System</td>
</tr>
<tr>
<td>29CFR1926.32</td>
<td>Definitions</td>
</tr>
<tr>
<td>29CFR1926.53</td>
<td>Ionizing Radiation</td>
</tr>
<tr>
<td>29CFR1926.62</td>
<td>Lead</td>
</tr>
<tr>
<td>29CFR1926.450</td>
<td>Scaffolds</td>
</tr>
<tr>
<td>29CFR1926.500</td>
<td>Fall Protection</td>
</tr>
<tr>
<td>29CFR1926.650</td>
<td>Excavations</td>
</tr>
<tr>
<td>29CFR1926.705</td>
<td>Requirements for lift-slab operations</td>
</tr>
<tr>
<td>29CFR1926.803</td>
<td>Compressed Air</td>
</tr>
<tr>
<td>29CFR1926.1101</td>
<td>Asbestos</td>
</tr>
<tr>
<td>29CFR1926.1127, 40 CFR Part 82, Subpart F</td>
<td>Cadmium Protection of Stratospheric Ozone</td>
</tr>
</tbody>
</table>

If you have any questions about any ESH provisions or meanings, you should address them with your employer, the LM EPC Project Manager, site Safety Manager, or the ESH office.

**Enforcement Policy**

Our goal is to prevent injuries and losses attributed to unsafe work practices or conditions. To ensure our expectations for compliance are being met, LM EPC has developed the following enforcement policy:
Any noncompliance issues voluntarily disclosed to the ESH Department by the contractor or a contract monitor would not be considered for enforcement provided corrective action is taken in a timely manner.

Enforcement actions are based on severity and frequency of infractions. LM EPC reserves the right to restrict access of contractor employees and/or to terminate the contract if, in the Company’s discretion, contractor infractions are sufficiently serious to warrant such action.

Examples of environmental, safety and health violations include, but not limited to the following:

- Failure to wear personal protective equipment (PPE)
- Failure to follow construction site traffic regulations
- Failure to follow smoking regulations
- Failure to obey posted safety signs
- Possessing alcohol, narcotics, and/or firearms
- Failure to report an accident involving personnel or property
- Failure to supply an MSDS/SDS for a hazardous material
- Improper use of ladders or ladders that are in poor condition
- Failure to take appropriate precautions to minimize a fire hazard
- Improper weight loading on equipment
- Failure to obtain a “Hot Work Permit” prior to welding and / or flame cutting
- Failure to provide fire watch
- Failure to follow established lock-out and tag-out policies
- Performing work or impairing a fire suppression system without prior notification
- Failure to use proper (inspected) fall protection equipment

**Environmental**

**Air Emissions**

All air emission sources (e.g. chemical operations, combustion units, etc) must be reviewed and authorized by LM EPC ESH department prior to use. Contractor must coordinate any regulatory notifications and/or permits with LM EPC ESH. In accordance with LM EPC policy on ozone depleting compounds [e.g. Chlorofluorocarbons (CFC)], all site contractors must comply with the following standards:

a) Fluorocarbon refrigerants may not be vented to the atmosphere.
b) All refrigerants must be recovered using an EPA certified recovery unit.
c) All refrigerant leaks must be repaired and integrity verified in accordance with 40 CFR 82. Written documentation or leak repair efforts and follow-up verifications must be provided to the LM Contract monitor for all units greater than 50 lbs. of CFC charge.
d) Written documentation reporting all refrigerant used or charged into equipment must be provided to the LM Contract monitor for all units greater than 50 lbs of CFC charge.
e) All personnel performing refrigeration system installation, maintenance, and disposal must provide a photocopy of their EPA refrigeration certification card to the LM Contract monitor. A copy will be retained for the Project File.

f) All equipment and tools must be supplied by the contractor and/or its subcontractors, and shall be maintained in a safe operating condition, free from defects or wear which may constitute hazard to any person or property.

g) No generators greater than 50KW shall be employed on-site without prior LM EPC ESH approval.

*Soul Disturbances*
All activities that will disturb the existing condition of the soil (e.g. trenching, directional boring, excavations, post hole digging etc.) and or the alteration / creation of a swale drainage system must be reviewed and authorized by LM EPC Project Manager prior to commencement of activities. Contractor must coordinate any regulatory notifications and/or permits with LM EPC Project Manager.

*Ground Water Impacts*
All activities that will disturb the existing condition of the underground water table (e.g. trenching, directional boring, drilling, excavations, dewatering, spills, etc.) and or the alteration / creation of a swale drainage system must be reviewed and authorized by LM EPC ESH department prior to commencement of activities. Contractor must coordinate any regulatory notifications and/or permits with LM EPC ESH.

Erosion and Sediment Control Measures
- Burn-off of the ground cover is not permitted unless specifically authorized by LM EPC and properly permitted. Contractor shall comply with all applicable burn permit requirements established by LM EPC.
- 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.
- Follow the applicable sediment and erosion control plan. ESH must approve the sediment and erosion control plan prior to commencement of work.

Waste: Hazardous, Sanitary & Solid

Hazardous Waste
Any generation of hazardous wastes (solid or liquid) must be coordinated with the ESH office prior to generating the waste. All wastes generated must be identified with the proper project name & number on the container. The proper non-hazardous or hazardous waste label shall be affixed to the container. Storage, labeling and handling of hazardous waste must meet state and federal requirements.

- Store hazardous waste in approved containers (49 CFR 178) properly labeled to identify the type of waste. Contact LM EPC ESH to take receipt of containers. For oil and hazardous material spills, notify LM EPC ESH immediately.
- Conduct the fueling and lubricating of equipment and motor vehicles to protect against spills and evaporation. Contact LM EPC ESH for proper disposal of discarded lubricants and all excess oil. No fueling, lubricating, or maintenance of equipment or motor vehicles shall be allowed onsite; exceptions may be granted by ESH prior to starting work.

- All pole and pad mounted electrical transformers that are taken out of service must be tested by LM EPC ESH prior to disposal.

- Keep dust down at all times, including during on-working periods. Sprinkle or treat, with dust suppressants, the soil at the site, haul roads, and other areas disturbed by operations. Dry power brooming will not be permitted. Instead, use vacuuming, wet mopping, wet sweeping, or wet power brooming. 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 concrete blocks, concrete, and bituminous concrete. Do not unnecessarily shake bags of cement, concrete mortar, or plaster. Construction materials shall be transported and stored so as to protect them from inclement weather.

- Handle generated hazardous waste in accordance with 40 CFR 262 & LM EPC site procedures.

- Properly dispose of electrolyte solution from lead-acid batteries. Do not dump electrolyte onto the ground or into storm drains or sanitary sewers.

- The Contractor will make arrangements with the LM EPC ESH department for the characterization, handling, storage and disposal of all hazardous waste generated by the project. No hazardous waste generated on property can be disposed of by contractor. Contact the LM EPC Construction contract monitor and LM EPC ESH to coordinate disposal.

**Solid and Sanitary Waste**

Pick-up solid wastes and place in containers that are regularly emptied. Follow all site recycling practices, including but not limited to the recycling of paper, glass, plastic, metals, woods, cardboard, and concrete.

- Do not prepare or cook food on the project site.

- Prevent contamination of the site and other areas when handling and disposing wastes. Upon completion, leave the areas clean. Control and properly dispose of waste.

- Dispose of rubbish and debris in accordance with the requirements specified.

- Place garbage in approved containers and move to a pick-up point or disposal area, where directed.

- For any soils brought to the facility from off-site, the contractor must supply a “clean fill certification” to LM EPC ESH for approval prior to land application.
**Water Resources**
Chemical and chemical-containing substances may **not** be discharged through any storm or sanitary sewer system, or disposed of on any outside grounds. All potential discharges must be reviewed and authorized in advance by LM EPC 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 (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 LM EPC ESH.
- No dredging, filling or dewatering may occur on-site until LM EPC ESH receives appropriate dewatering and/or dredge/fill permits. Contractor shall comply with all permit conditions of the dewatering and/ or dredge and fill permit if required.
- Sanitary sewer connection cannot be made without authorization from LM EPC ESH. Connections to sanitary sewer may require appropriate industrial wastewater permit modification or notification.

**Storm Water Pollution Prevention Plan**
- All contractors and/or subcontractors conducting construction activities from which run-off goes into or adjacent to any surface water in the state must 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, contractors and/or subcontractors are required to comply with all aspects of the general permit including the implementation of a storm water pollution prevention plan.

Approval is required from LM EPC ESH before any equipment will be permitted to ford live streams or storm water conveyance systems or swales.

No site work can begin until LM EPC ESH receives appropriate storm water permit modification and/or construction discharge permits. Contractor shall comply with all permit conditions of the storm water permit if required.

Runoff from pressure washing shall not be allowed to enter storm drains or swales unless approved by the Customer or via formal permit.

**Natural Resources**

The contractor is responsible for preserving the natural resources within the project boundaries and outside the limits of permanent work. The contractor must restore the natural resources to an equivalent or improved condition upon completion of work. They must confine construction activities to within the limits of the work indicated or specified.

Except in areas to be cleared, the contractor is not to remove, cut deface, injure or destroy trees or shrubs without the permission of LM EPC ESH. The contractor is not to fasten or attach ropes, cables, or guy wires to existing nearby trees for anchorages, unless authorized by LM EPC ESH. Where such use of attach ropes, cables, or guys is authorized, the contractor shall be responsible for any resultant damage.

The contractor shall protect existing trees which are to remain and which may be injured, bruised, defaced, or otherwise damaged by construction operations.

**Safety & Health**

**Asbestos**

If any work involves any potentially Asbestos Containing Material (ACM) as governed by 29 CFR 1926.1101, stop the job and contact LM EPC Project Manager or the ESH Department.

DO NOT disturb or dispose of ACM without ESH approval.

Materials that may contain asbestos at our site are:

- Pipe elbows, tee's, valves – hard packed cement
- Hi pressure steam lines – some straight runs
- Most valve and stem packing – rope type braid
- Gaskets – valve flanges
- Floor tile – all floor tile and mastic is suspect
- Fire doors – lining inside of older doors
- Under wooden floors – felt and mastic
- HVAC insulation wrap – in our fan rooms
- Roofing material
- Old window caulking

**Compressed Gas Cylinders**

- Chain or secure cylinders in an upright position at all times whether in storage or in use.
- 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 at all times when the cylinder is not in actual use. Cylinder must be properly labeled 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 a non-sparking cylinder wrench or other tightly fitting wrench to tighten the regulator nut and tube connections.
- Store and properly secure cylinders in a well ventilated location. The use and storage of flammable/combustible gases is restricted in the facility. Advance approval by the LM EPC ESH office is required.
- All cylinders utilized on-site shall be free of corrosion and inspected/tested per Department of Transportation (DOT) requirements. Any cylinder that does not meet DOT inspection requirements must be tagged “Do Not Use” and removed from LM EPC property.
- Keep oxidizing gases separate from fuel gases by distances required by the National Fire Protection Association (NFPA)/OSHA.
- Cylinders should be tagged and capped when empty. It is recommended that full and empty cylinders be stored separately.

**Confined Space Entry**

When the operations or work activities involve confined space entry, contractors are required to supply LM EPC a copy of their confined space entry program and receive job specific orientation about potential hazards associated with specific permit required confined spaces. Contractors will issue their own entry permits and provide a copy to the LM EPC site contract monitor and/or ESH prior to entering the confined space for approval.

Confined spaces include, but are not limited to, storage tanks, water meter pits, sewers, boilers, ventilation ducts, tanks, tunnels and open top spaces that are more than four (4) feet in depth such as pits, vaults and equipment.
Permit required confined spaces are marked with caution signs that remind the contractor that a permit is required before entry.

Contractor and subcontractor personnel shall notify the LM contract monitor prior to performing any work in confined spaces. Contractor shall coordinate all work activities involving confined space entry with LM EPC ESH. All personnel associated with such activities shall be trained by their employer to perform those responsibilities defined in 29 CFR 1910.146.

- Any such work may be performed once the Contractor has submitted a “Confined Space Entry Permit” with all the pertinent and required documentation to include training certification and rescue procedure.
- Contractor is responsible for having a site applicable rescue plan or employees properly trained for rescue in the event of an emergency.
- Contractor is responsible to have a watch person in continual visual contact with personnel in confined spaces.

**Cranes and Hoisting Operations**

All proposed helicopter or crane operations involving movement over the roof of any LM EPC construction site shall be coordinated through your LM EPC Contract Monitor.

- *A lift plan or other form of communication shall be submitted to the LM EPC ESH prior to the commencement of lifting activities.*
- The erection, operation or dismantling of any boom-type lifting or hoisting equipment, or any part thereof, closer than 15 feet from energized overhead high-voltage lines is prohibited.
- Mobile cranes shall not be operated or moved within 3 feet of any open trench.
- Hoist and rigging equipment and associated attachments must have the required manufacturer’s label that includes its rated working load capacity.
- All hoisting machinery operated by the contractor shall be documented by a competent person, or by a government or private agency recognized by the U.S. Department of Labor showing an annual inspection within the prior 12 months.
- Maintain hoist and rigging equipment inspection records and provide these as part of your lifting plan.
- NOTE: Contractor may not use LM EPC hoist and rigging equipment without prior written approval by LM EPC ESH.
- All personnel associated with the crane activity shall be appropriately trained pursuant to federal, state and local requirements applicable to that activity.
- Proof of training must be submitted as part of the lifting plan to LM EPC ESH.
Electrical Safety

Any contractor that will be installing or repairing electrical equipment or electrical distribution systems shall be qualified and have the appropriate training by their employer before commencing work at our construction jobsites. The minimum requirements for training are contained in the OSHA Electrical Construction standards, 29 CFR 1926.400. Proof of training must be available upon request by LM EPC.

Do not work on any LM EPC electrical equipment until the equipment has been de-energized and locked out.

Work that requires electrical equipment to be energized for proper installation, test or service must be reviewed and cleared by the ESH office prior to actual installation, test or service. All such hot work will require the contractor to have safety related procedures, appropriate personal protective equipment, specialized training and adequate working clearance in the work area. All work carried out on energized electrical circuits greater than 50 volts shall be conducted in accordance with National Fire Protection Association (NFPA) 70E. Electrical circuits cannot be shut down without the authorization of the Construction jobsite’s Maintenance office.

Electrical extension cords used on LM EPC projects must be free from splices or other damage. The extension cords must be manufactured from UL listed components and must be one continuous assembly. Daisy chained cords are not permitted. Multiple outlet extension cords are allowed if properly sized for the load. Extension cord sets used with portable electric tools and appliances shall be of the three wire type and designed for hard or extra hard service. Flexible cords used with temporary and portable lights shall be designed for hard or extra hard service.

Electrical Safety

Flexible power cords and extension cords shall be protected from mechanical damage. Sharp corners and projections shall be avoided. Flexible cords and extension cords may pass through doorways or other pinch points, if protection is provided to avoid damage and the cords do not create a hazard.

 Contractors shall use either ground fault circuit interrupters or an assured equipment grounding program as specified in 29 CFR 1926.404 to protect employees on construction sites. The program shall cover all cord sets, receptacles that are not a part of the building and equipment connected by cord and plug that are available for use or used by employees on the construction site.

All electrical work sites in aisles or other areas accessible to LM EPC residents 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.

Energy Controlled Procedures (LOTO)

- Contractors are required to provide Lock-out/Tag-out (LO/TO) programs and training to their employees as required by OSHA standard 29 CFR 1910.147.
- Contractors are to provide all locks, warning tags, and lock-out/tag-out devices necessary to safely perform the job.
- Notify Construction job sites and /or ESH prior to performing lock-out/tag-out and to coordinate/communicate the Energy Control Program to achieve compliance with the on-site Lock-out/Tag-out program.

Explosives
Use of explosives will not be permitted for any activity unless LM EPC ESH has granted specific advance written approval. This will not be granted until LM EPC ESH, LM EPC Project Manager, and designated Construction jobsite Protection have reviewed a detailed Health and Safety Plan (HASP).

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. The requirements of a Process Safety Management Program are outlined in 29 CFR 1910.119.
- PSM applies to contractors performing maintenance or repair, turnaround, major renovation, or specialty work on or adjacent to a covered process. It does not apply to contractors providing incidental services which do not influence process safety, such as janitorial work, food and drink services, laundry, delivery or other supply services.” Please contact ESH if you are unsure if PSM applies to the work you will be performing while on-site.

Fall Protection
The contractor shall ensure all scaffold safety rules are followed as required by 29 CFR 1926.501, 29 CFR 1926.502 and any other federal, state and local applicable regulations and standards.

1. Fall protection systems and fall protection equipment are required on any working surface six feet or greater above a lower level, or on any operation where a reasonable probability of injury may be prevented by the use of such systems and equipment.
2. Only personal fall arrest equipment (harness systems and lifelines) appropriately rated by the manufacturer for the type or work under consideration will be used.
3. “Body Belts” are not permitted.
4. All shoe sole materials must provide adequate sole-to-surface friction to prevent slip and/or fall injuries.
5. Head protection; such as hard hats, are to be worn in all areas in which there exists the possibility of falling objects from above.
6. Employees are to be protected from falling objects by toe-boards; screens or guardrail systems erected to prevent objects from falling from higher levels, or be protected by a canopy structure erected to deflect falling objects. The area to which objects could fall may be marked with signs or barricaded so those employees are prohibited from entering the area.
7. No employee shall encroach within 6ft of the leading edge without proper guardrail system, safety net, or personal fall arrest system.
8. The contractor is responsible for supplying the required fall protection equipment appropriate to the task being performed.
9.* The contractor is responsible for providing the required training for their employees pursuant to current federal and state regulations to include high angle emergency rescue and suspension trauma.

10.* Contractors fall protection plan shall be made available to LM Contract monitor or LM EPC ESH upon request.

### Fire Sprinkler Impairment
- Construction materials or other equipment shall not be placed upon or suspended from any fire sprinkler pipes, valves, or supports, either temporarily or permanently.
- No work shall be performed, or any valve opened or closed, on any fire suppression system without the prior approval of Construction jobsites Protection and/or ESH.
- Coordinate any planned sprinkler system impairments with Construction jobsites Protection, Construction jobsites and ESH as soon as possible prior to beginning work.
- Construction jobsites Protection, Construction jobsites and/or ESH along with the contractor is responsible for ensuring that all notifications are made and all precautions are taken before work is performed on the fire sprinkler system.
- * Construction material shall not be stacked within 18 inches of fire sprinkler heads.
- * Construction materials or other equipment shall not be placed upon or suspended from any fire sprinkler pipes, valves, or supports, either temporarily or permanently. Cutting, welding or other hot work is prohibited in all areas where fire protection is impaired by a total or partial shutdown of the sprinkler system.

### Flammable, Combustible and Toxic Materials
All ESH pre-approved flammable liquids brought onto LM EPC construction sites must be stored in properly labeled, approved containers and in areas approved by the ESH office and Construction jobsites Engineering or Construction jobsites Protection. Notify your LM EPC Project Manager in advance of any use of flammable materials within LM EPC construction grounds and buildings.
Every effort will be made to use the safest product with the lowest flammability range. This includes alternate methods of construction and design.

The contractor will also provide a safe storage area outside of the building(s). This area will be in compliance with all applicable codes and shall have adequate secondary containment.

Flammable and combustible liquids must be dispensed from metal safety cans bearing a Factory Mutual (FM) or Underwriters’ Laboratory (UL) listing.

Metal cans shall have the perforated metal screen (flash arrestor) in place.

When using flammable and combustible materials, additional ventilation may be required to control ignition sources.

Ventilation equipment used to exhaust flammable vapors must be rated for the type of hazardous location.

*The use of flammable and combustible materials must follow all OSHA and NFPA requirements.

Hazard Communication/MSDS/SDS

Under the Hazard Communication Standard, each contractor is required to have an SDS/MSDS for each material for each of the materials the employees may be exposed to.

Contractors/Vendors must submit SDS/MSDSs to the ESH office for review prior to bringing the chemical on site.

Hazardous materials include, but are not limited to, adhesives, solvents, acids, caustics, paints, floor covering, coating, cleaners, detergents, flammable and combustible liquids, and insulation materials.

If the materials have not been previously reviewed by the ESH office, the contractor will not be allowed to bring the products/materials on LM EPC property until the LM EPC ESH office has been contacted and clearance is arranged. Clearance is never automatic, many substances that are highly toxic or damaging to the environment are never allowed on LM EPC construction sites. It is always best to request clearance prior to any required use date.

If any contractor is found using materials on-site that have not been reviewed by the ESH office, corrective action may be taken to remove the materials. Further action may include work stoppage or contract cancellation. SDS/MSDSs must be kept where they are readily accessible to all employees who might come into contact with the hazardous material.
Contractors are responsible for ensuring that all of their employees, agents or subcontractors who work with hazardous materials have received Hazard Communication (Right to Understand) training by their employer. Proof of training must be available upon request by LM EPC.

The spill or release of any substance must be immediately reported to LM EPC through established LM EPC emergency procedures. Stop the source of leak or spill if it is safe to do so and follow the local LM EPC construction jobsite’s emergency procedures.

**Health & Safety Plan (HASP)**

In some instances, a job HASP will be required. Examples of jobs that would require a job specific HASP would include, but are not limited to, asbestos abatement, environmental remediation, confined space activities and any other activities that pose a significant impact to the environment or the health and safety of personnel. A HASP shall provide the following:

- an outline of the requirements of each project;
- a description of how the project will be completed;
- specific training requirements for the project and a listing of personnel required to be so trained;
- certification of training for those employees who have received applicable training and medical surveillance;
- copies of certificates of insurance;
- emergency response plans and telephone numbers; and
- the methods for assuring contractor and subcontractor compliance with regulatory requirements.

Copies of HASPs shall be retained on site and available to LM EPC ESH or the LM Contract monitor.

**Historical and Archeological Resources**

Carefully preserve and report immediately to LM EPC items having possible historical or archeological interest that are discovered in the course of work. Protect monuments, markers and works of art.

**Hot Work**

If your work requires welding, cutting, gas heaters, flame cutting, or any spark producing activity, you must obtain a “Hot Work Permit” from the appropriate Construction jobsites Protection or ESH office and/or its designated representative (for further information contact the LM EPC Contract Monitor), and strictly follow site procedures. All welding and cutting operations must be conducted in accordance with ANSI Z49.1.
Housekeeping and Material Storage

Maintain good housekeeping at all times. Keep work area clean and organized. Store tools and materials neatly and away from public at the end of each work shift, and maintain area clean as work progresses throughout the day. Remove combustible material (e.g., trash, wood, rags, cardboard, paper) at the end of each day appropriately.

Electrical panels, emergency equipment, means of egress, aisles and passageways may not be blocked. Materials may not be stored on scaffolds, runways, loading docks, or roofs in excess of materials needed for immediate use. Storage within electrical rooms, stairwells is not permitted.

Enclosed non-combustible disposal chutes are required whenever solids waste materials are dropped greater than ten feet.

Storage of chemicals outside is prohibited unless adequate secondary containment is used and the chemicals are protected from contact with precipitation.

Indoor Air Quality

Only electric powered equipment is allowed inside the building without prior approval of the ESH office. Gasoline, diesel and liquefied petroleum (LP) gas powered internal combustion engines shall not be used inside LM EPC buildings unless prior written approval is obtained from LM EPC ESH. Such equipment includes, but is not limited to, Powered Industrial Vehicles, pressure washers, concrete saws, generators, and other like equipment and /or vehicles.

Laser/Radiation Usage

Lasers and/or radiation sources are not to be used on LM EPC construction site without prior written approval from the LM EPC ESH department. NOTE: For ceiling leveling lasers, trained personnel and warning signs are required. LM EPC ESH permission is not required for these types of lasers.

Machinery, Tools and Equipment

Any machinery or equipment used in the work area must have appropriate guarding, interlocks or controls to ensure safe operation including, but not limited to, emergency stops, power drop outs/zero start controllers, and point of operation guards. Machinery and equipment must be inspected for defects in the guarding and operation before each use.

Never remove, make inoperative or reduce the effectiveness of any equipment or machine guard.

Never override any safety interlock or attempt to operate any piece of equipment or machinery without guards or other required safety devices in place and fully functional.

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 found in disrepair must be must be repaired, prior to further use, or removed from the premises.

Occasionally, during installation of equipment or demolition of an existing area, there may be times when a piece of equipment must be left in an incomplete state. It may be potentially hazardous to operate the equipment or to enter the area during this time. When such situations occur, the equipment must be locked & tagged out or the area must be identified with yellow tape that reads “Caution – Do not Enter.”
**Noise**

- Operations involving high noise producing equipment are not to be conducted in populated areas.
- Noise levels must be within safe limits and/or employees must be provided proper hearing protection.
- Hearing protection equipment must be used in the event safe noise levels are exceeded. Make the maximum use of low-noise emission products, as certified by the EPA.

**Painting and Spray Painting**

If painting on roofs, contact your LM EPC Project Manager for closing of air intakes for air handling systems to prevent intake of vapors into the ventilation system.

Ensure that all paint containers are properly stored and properly labeled.

The use of adhesives, paints, or other odor emitting products regardless of their MSDS/SDS approval for use on-site are not to be used on any task during normal working hours, or in any occupied areas, unless approved by the designated LM EPC Project Manager or ESH department.

These measures are being taken as a result of the sensitive nature and negative perceptions often associated with the odors that are emitted during the product “off-gassing” process. This has the potential to cause disruption to production, as employees in adjacent areas may become concerned about the effects of any odors.

**Paint Containing Lead**

Construction work activities where personnel may be occupationally exposed to lead must follow OSHA’s construction standard “Lead Exposure in Construction,” 29 CFR 1926.62 and conform to LM EPC contractual obligation and its scope of work.

- Prior to performing construction or disturbing paints and undercoatings on steel structures or any other substrate potentially known to contain lead, contact the designated LM EPC Project Manager and the LM EPC ESH department to determine the presence of lead immediately.
- If potential lead-based paint is observed during construction activities, stop the job and immediately contact your designated LM EPC Project Manager and/or the ESH department immediately.
- Meanwhile, secure the area and provide proper warning signs and barricades until these areas been properly assessed, abated and cleared by LM EPC Project Manager and/or the ESH department.
- Lead-containing paint shall be disposed of in accordance with all site disposal requirements.
- Lead based-paint abatement will only be performed by a qualified abatement contractor retained by LM EPC unless it is part of your contractual obligation to LM EPC.
Personal Protective Equipment (PPE)

If your work exposes your employees to potential hazards, they should be furnished with the appropriate personal protective equipment. If you do not have the appropriate personal protective equipment, you may not work on LM EPC construction sites. Personal protective equipment includes, but is not limited to, such items as safety glasses, goggles, face shields, respirators, hearing protection, gloves, plastic aprons, arm guards, hard hats and foot protection.

If your Safety Program requires the use of personal protective equipment within the work area, appropriate warning signs shall be in place to notify any person entering the area the PPE is required. Any person, LM EPC employee, visitor or contractor, inside a work area that has PPE requirements, shall wear the appropriate equipment.

Eye Protection

Your employees are required to wear adequate eye protection when exposed to the risk of eye injury or when in areas which present eye injury hazards.

- On all construction or demolition projects ANSI Z87.1 safety glasses will be worn; no exceptions.
- An eyewash station must be within 100’ of any work involving chemicals.
- Watch for signs indicating that eye protection is required. For example,
  - Safety glasses, Safety goggles, Full face-shields, Welding hoods, etc.
- Approved double eye protection, such as face-shields, or goggles must be worn when welding, burning, grinding, chipping, jack hammering, power sawing and first-breaks of flanges and equipment.
- Safety glasses must be worn under the welding hood; and
- Dark tinted safety glasses must not be worn indoors or enclosed structures or at night as they are only suitable for outdoor work.
- Prescription eyewear will have the ANSI Z87.2 stamp and side shields. If prescription eyewear is not duly rated, the employee will wear ANSI Z87.1 overprotection. Overprotection will not interfere with fit or vision.

Foot Protection

Safety shoes must meet ANSI Z41 minimum compression and impact performance standards. Steel and/or non-metallic hard toe (Composite kevlar, plastic, or carbon fiber) safety shoes are required whenever material handling equipment is used or if your employees may come in contact with dangerous work surfaces such as nails, rolling stock or any other foot crushing hazards.

- Foot/toe/metatarsal guards must be worn when jack hammering and/or using ground compacting equipment.
LM EPC has foot protection required areas in most manufacturing areas and your site contract monitor or ESH can cover those locations with you prior to commencing work.

If working in an LM EPC foot protection required area, the contractor will be required to wear appropriate foot protection.

Hand Protection
There are many types of gloves available today to protect against a wide variety of hazards. In order to mitigate and/or prevent any possible hand and finger related injuries in our workplace, contractors shall perform a thorough glove selection assessment as part of their Job Hazard Analysis (JHA).

- Select the right type of glove when hands are exposed to known hazards such as cuts, scratches, skin irritations, abrasions, punctures, thermal burns, chemical burns, chemical absorption through the skin and/or biological exposure before starting work.
- Never immerse hands in chemicals, even when wearing protective gloves.
- Never use torn or “holed” gloves.
- Do not wear jewelry while performing electrical tasks or when operating or servicing rotating equipment.

Head Protection
Hard hats may protect you from overhead hazards, impact, flying objects, penetration hazards as well as electrical shock and burns. All protective headgear must meet ANSI Standard Z89. Contractors shall ensure that their employees wear head protection if any of the following apply:

- It is the Contractors policy to wear the protective headgear as part of their overall safety program,
- Performing work on a regulated construction areas,
- Performing demolition activities,
- Objects might fall from above and strike them on the head,
- They might bump their heads against fixed objects, such as exposed pipes or beams,
- There is a possibility of accidental head contact with electrical hazards, or any time the employee may be exposed to potential overhead hazards.
Portable Ladders/Ladders

1. Manufactured portable wood ladders shall be labeled as being designed and manufactured in accordance with the provisions of the American National Standards Institute, A14.1 – 1982.
   - Manufactured portable metal ladders shall be labeled as being designed and manufactured in accordance with the provisions of ANSI A14.2 – 1982.
   - Ladders made by fastening cleats across a single rail shall not be used.

2. Ladders shall be maintained in good condition at all times, the joint between the steps and side rails shall be tight, all hardware and fittings securely attached, and the movable parts shall operate feely without binding or undue play.

3. Frayed or badly worn rope shall be replaced.

4. Safety feet and other auxiliary equipment shall be kept in good condition to ensure proper performance.

5. Ladders shall be inspected frequently and those found defective and/or in disrepair shall not be used on LM EPC construction sites.

6. Ladders shall not be used if the manufacturer identification, rated capacity and warning are labels missing or not legible.

7. Rungs shall be kept free of grease, lubricants, and other materials.

8. Ladders shall not be placed in front of doors opening toward the ladder unless the door is blocked open, locked or guarded. Ladders shall not be placed in passageways, driveways, or any location where they may be displaced by activities being conducted in any other area, unless protected by barricades or guards.

9. Portable metal ladders shall NOT be used in the vicinity of electrical circuits in places where they may come in contact with energized equipment.

10. Ladders shall not be used to gain access to any elevated platform or roof unless the top of the ladder extends at least three (3) feet above the point of support at the eave, gutter, or platform line.

11. Sitting or standing on the top two steps of a ladder is prohibited.

12. Store ladders in a safe manner when not in use. Place them where they will not obstruct traffic and secure them as necessary.

Powder Actuated Tools

- You must be trained and qualified by the tool manufacturer before using powder-actuated tools. You must carry a valid operator’s card issued by the tool manufacturer and present it to your LM EPC Project Manager and ESH upon request.

- You must not leave these tools unattended or available to unauthorized persons.

- Powder-actuated tools must meet the design requirements in “American National Safety Requirements for Explosive Actuated Fastening Tools” (ANSI A 10.3 – 1977). Only tools which meet these design standards may be used.

- Use of powder-actuated tools in explosive or flammable atmospheres is strictly prohibited.
Roofing Operations

- Any roofing work must be in complete compliance with OSHA construction standard, 29 CFR 1926.500, which requires fall protection and a fall protection plan.

- The use of open flames on roofing will require you to obtain a “Hot Work Permit” and post a fire watch.

- It is your responsibility to make all arrangements with the Fire Safety Officer office to obtain a hot work permit.

Sandblasting (Silica–Based Materials are Prohibited)

- Provide tarpaulin drop cloths and windscreens under and around blasting operations to confine and collect dust, sand, paint, and other debris for disposal in accordance with the requirements specified below. ESH must pre-approve work practice and materials prior to the commencement of work.

- Perform work involving removal of hazardous material in accordance with 29 CFR 1910.94. Collect abrasive blasting waste containing lead or other heavy metals in approved containers. Contact LM EPC ESH to take receipt of containers. Dispose of non-hazardous abrasive blasting debris in accordance with paragraph title, “Disposal of Rubbish and Debris.”

- Collect dust, sand, paint, and other debris resulting from sandblasting operations and store in drums with watertight lids. LM EPC ESH will take a representative sample of this material, and test it per Resource Conservation and Recovery Act requirements. If material is hazardous, LM EPC ESH will handle the disposal of such hazardous materials. If the material is non-hazardous, Contractor shall handle the disposal of non-hazardous materials.

Scaffolds


- All scaffolds will be built and inspected by a competent person per OSHA requirements.

- Scaffolds shall be erected, moved, dismantled, altered and inspected only under the supervision and direction of a 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 four times its minimum base dimension unless guys, ties, or braces are used (Follow the manufacturer’s instructions and recommendations).
- Scaffolds must be fully decked with no more than 1 inch gaps between planks.
- 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 you to trip or fall.
- Daily inspections of scaffolds shall be made available to the ESH department upon request.
- Hardhats are required when employees are exposed to a possible bump hazard or when falling objects could cause a serious injury.

**Aerial Lifts and Other Personnel Lift Devices**

Contractors must follow the Manufacturer's operator manual when operating manually or self-propelled aerial lifts, (i.e. Genie Personnel Lifts, Boom Lifts, etc.).

- 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 are allowed to use.
- Do not exceed maximum weight limit listed on the equipment.
- Be sure the base is level at all times. Never adjust leveling jacks when a person is elevated in the platform.
- Do not climb, sit, stand or hang on the guardrails or midrails.
- Ensure that the “EMERGENCY STOP BUTTON” is depressed anytime the equipment is at rest to prevent accidental movement of the equipment while performing the required task.
- Employees must wear a full body harness with a lanyards attached to the anchor points provided by the manufacturer on all self-propelled elevating platforms and vehicle mounted work platforms when work is being performed.
- Do not move personnel aerial lifts or vehicle mounted work platforms when elevated as it may strike overhead objects or may tip over.
- Stay clear of overhead electrical lines and obstructions. Maintain the minimum safe approach distances to power lines in accordance with OSHA requirements, the manufacturer’s safety warnings and equipment labels.
Excavation and Trenching

*The contractor shall ensure all excavation safety rules are followed as required by 29 CFR 1926.650, 29 CFR 1926.651, 29 CFR 1926.652 and other federal, state, and local applicable regulations and standards.

Before performing excavation work on the property, the contractor must:

- Locate underground utilities such as sewer, telephone, fuel, electric, water, or other underground installations that may be encountered prior to opening an excavation in accordance with 1926.651(b)(1).
- Approval of any excavation must be obtained from the LM EPC ESH office or the LM EPC Project Manager prior to starting work.
- All excavations must 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 work start date. Environmental sampling may be required prior to soil disposal. Contact LM EPC ESH department for specific requirements.
- Adequate physical protection barriers and warning lights shall be provided at all excavations and trenches. Barricades must be sufficiently rigid that a person cannot displace them by walking into them at a normal speed.
- Any excavation that must remain open past the normal work shift must be barricaded with a standard guard rail or an alternate method approved by the LM EPC ESH office.
- Any liquid entering an excavation that requires disposal (dewatering) must be removed in a manner approved by the ESH office.

Utility Shutdown

LM EPC ESH, LM EPC Project Manager and Security need to be informed 72 hours prior to any utility shutdown.

Vehicle Operations and Powered Industrial Trucks

All equipment brought on-site must comply with applicable OSHA standards. Only electric powered equipment is allowed inside the building without prior approval of the ESH office. Motor vehicles, forklifts and other equipment powered by flammable/combustible liquids are not allowed inside building(s).

Operators of powered equipment must be trained and certified by their employer. Proof of training must be available upon request by LM EPC. Safe and proper practices must be followed at all times or vehicle operating privileges will be suspended or revoked at the discretion of Construction Jobsite Security Protection, LM EPC ESH or site contract monitor.
Personal or contractor vehicles shall not be serviced (e.g., oil changes, tune-ups, washing/detailed, brake changes, etc.) while on company property except in emergency situations (e.g., towing for repairs, flat tire repair, jump start, windshield replacement, etc.)

All vehicles that enter a building shall announce their presence with an audible and visual alarm.

**Warning Signs and Barricades**

The Contractor must barricade the construction sites to prevent all unauthorized personnel from walking through the construction area. Barricades can be, “A” frame barricades, stanchions, etc. Barriers shall be substantial. Overhead work conducted in aisles where objects could fall and possibly strike passerby must have sufficient safeguards in place (i.e., overhead protective barrier (netting, hard barrier, detour routes or consider working off-shifts).

Signs must also be posted to indicate to unauthorized personnel that entry through the construction area is strictly prohibited. In addition, a detour route must be pre-selected and marked appropriately.

Floor and wall openings must be guarded by substantial barriers, railings, netting, fences, guardrails, steel plates and covering material to prevent slip, trips and falls.

* Hole covers must be placed over floor holes 2” or greater that present a hazard to the workers, pedestrian traffic or general public at lower levels. They must be secured against movement and clearly marked as “OPEN HOLE”, “HOLE COVER” OR “DO NOT REMOVE”.

**Working Alone**

When working in a hazardous location, it is mandatory that at least two (2) persons be assigned to work within voice or visual contact of each other.

- When it is necessary to work off-shift, weekend or holiday hours, arrangements must be made with the LM Contract monitor two days in advance of such work.
- Contractors and/or subcontractors are not permitted to work alone while conducting hazardous activities.
- Examples of hazardous activities include, but are not limited to; electrical, machinery and equipment operation, confined space entry and sprinkler work.
- The LM Contract monitor and the LM EPC ESH department will determine what is considered a hazardous activity.
- It is the Contractors’ responsibility to inform the LM Contract monitor as to when off-shift, weekend or holiday work that is planned and to inform the LM Contract monitor as to the type of work to be conducted.
APPENDIX A – TERMS AND DEFINITIONS

- Chemical Waste: This includes, but is not limited to, salts, acids, alkalis, herbicides, pesticides, and organic and inorganic chemicals.
- Contractor/Subcontractor: Any agent or agency or their subcontractors who provide personnel under their immediate supervision to fulfill a written agreement with Lockheed Martin Engineering, Procurement and Construction (LM EPC) or LM EPC owned, leased or customer site locations. Contractor and subcontractor efforts include but are not limited to construction, maintenance, security, office equipment repair, furniture and equipment moving, and administrative and clerical support. Not included are contractor employees who work under direct supervision of LM EPC; these employees are governed by the Company’s internal ESH programs.
- Debris: Combustible and noncombustible wastes such as ashes and waste materials resulting from construction or maintenance and repair work, leaves and tree trimmings.
- ESH: Lockheed Martin Environmental, Safety and Health Department
- EPC: Lockheed Martin Environmental, Procurement & Construction Group
- Garbage: Refuse and scraps resulting from preparation, dispensing and consumption of food.
- Hazardous Waste: Hazardous substances as defined in 40 CFR 261 or as defined by applicable state and local regulations.
- Health and Safety Plan (HASP): A job specific health and safety plan, giving detail to the specifics of the job.
- Lockheed Martin (LM) Contract monitor: Lockheed Martin employee expressly designated as the LM Contract monitor or if no such designation is made, the employee in charge of a project.
- Personnel: Any contractor employee, subcontractor employee, Lockheed Martin employee, customer or visitor.
- Rubbish: Combustible and noncombustible wastes such as paper, boxes, glass, crockery, metal, lumber, cans and bones.
- Sediment: Soil and other debris that have eroded and have been transported by runoff water or wind.
- Sewage: Waste characterized as domestic sanitary sewage.
- Solid Waste: Rubbish, debris, garbage, and other discarded solid materials, except hazardous waste as defined in paragraph entitled “Hazardous Waste”, resulting from industrial, commercial, and agricultural operations and from community activities.

Revision History

Effective with LM Energy Releases after ~2/09/16

IMPORTANT NOTICE: A hard copy of this procedure/form may not be the document currently in effect. The current version is always the version on the Lockheed Martin Engineering, Procurement and Construction – ESH Forms Directory.