Lockheed Martin

Emergency Phone Numbers

<table>
<thead>
<tr>
<th>Service</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire-Waterton Main Plant</td>
<td>911 (or use FIRE ALARM BOX)</td>
</tr>
<tr>
<td>Medical Emergency</td>
<td>911</td>
</tr>
<tr>
<td>Occupational Safety &amp; Health</td>
<td>7-4444</td>
</tr>
<tr>
<td>Plant Protection</td>
<td>7-4646</td>
</tr>
<tr>
<td>Off-site for cell phone numbers use:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>303-977-4646</td>
</tr>
<tr>
<td></td>
<td>303-977-4444</td>
</tr>
</tbody>
</table>

Reminder

When reporting an emergency, remain calm, give your location, nature of the emergency, and your name. Stay in the immediate vicinity to direct emergency personnel responding to your call.

If you can not remember these numbers, dial “0” and an operator will report the emergency for you.

SAFETY REGULATIONS FOR
CONTRACTORS & SUBCONTRACTORS
WORKING ON LOCKHEED MARTIN PROPERTY

It is the policy of Lockheed Martin Astronautics that Contractors’ and Subcontractors’ employees abide by the safety procedures and regulations set forth in the LMA Safety Standards, the Occupational Safety and Health Administration (OSHA), and any other State or Local regulation or ordinance that may apply.

Revised: 10-14-99

Revisions 12
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>3</td>
</tr>
<tr>
<td>General Safety Regulations</td>
<td>3</td>
</tr>
<tr>
<td>Accident/Injury Reporting</td>
<td>3</td>
</tr>
<tr>
<td>Cease and Desist Order</td>
<td>4</td>
</tr>
<tr>
<td>Chemical Handling</td>
<td>4</td>
</tr>
<tr>
<td>Confined Space</td>
<td>4</td>
</tr>
<tr>
<td>Cranes &amp; Hoisting Equipment</td>
<td>4</td>
</tr>
<tr>
<td>Elevated Work Areas</td>
<td>5</td>
</tr>
<tr>
<td>Excavations &amp; Shoring</td>
<td>5</td>
</tr>
<tr>
<td>Explosives</td>
<td>6</td>
</tr>
<tr>
<td>Fire Safety Regulations</td>
<td>6</td>
</tr>
<tr>
<td>Hazardous Materials Notification</td>
<td>7</td>
</tr>
<tr>
<td>Housekeeping</td>
<td>7</td>
</tr>
<tr>
<td>Labeling</td>
<td>8</td>
</tr>
<tr>
<td>Lockout/Tagout</td>
<td>10</td>
</tr>
<tr>
<td>Material Safety Data Sheets</td>
<td>10</td>
</tr>
<tr>
<td>Process Safety Management</td>
<td>10</td>
</tr>
<tr>
<td>Protective Clothing &amp; Equipment</td>
<td>10</td>
</tr>
<tr>
<td>Vehicle Operation</td>
<td>11</td>
</tr>
</tbody>
</table>
INTRODUCTION

Lockheed Martin constantly tries to protect its employees by providing safe working conditions.

The purpose of the Safety Manual is to acquaint you with some of the requirements to be observed while working on Lockheed Martin property. Promoting safe working conditions and procedures is a Corporate wide policy. LMA is committed to preventing injury and illness to Contractor and Subcontractor personnel, as well as to LMA employees.

GENERAL SAFETY REGULATIONS

The Prime Contractor is responsible to ensure compliance by each subcontractor with the regulations set forth in this booklet. LMA will not provide safety equipment to Contractor personnel nor provide any safety training except in the case of training which is unique to the working conditions at the LMA facility. It is mandatory that the Contractor read this booklet and share its contents with personnel before assigning them to tasks at the LMA facility. In addition, appropriate Personal Protective Equipment (PPE) must be provided to employees before work begins.

Contractor personnel must exercise care to avoid injury to themselves or others by observing the condition of facilities, equipment and tools. If an unsafe condition exists, notify your supervisor immediately.

Contractors shall conduct weekly safety briefings with all their personnel to advise them of any hazardous operations to be performed, stressing special and general safety regulations pertaining to these operations. A record of attendance for each meeting plus the subject presented shall be recorded and made available for LMA. LMA Occupational Safety and Health (OSH) will attend Contractors’ safety meetings at the contractors request.

The Contractor shall provide proof of an implemented health and safety program. LMA OSH will perform oversight of the contractor in the form of periodic audits of Contractor operations to ensure compliance with their health and safety program. Any discrepancies will be called to the attention of the Contractor, and the Contractor shall take immediate action to correct such discrepancies.

ACCIDENT/INJURY REPORTING

Emergency medical assistance and fire reporting numbers will be conspicuously posted adjacent to each telephone on the construction site.

In the event of an accident or injury, the Contractor shall:

Notify Lockheed Martin Occupational Safety & Health at 7-4444 immediately.

Make no attempt to disturb or remove equipment which caused or contributed to the accident/injury, until the area has been released by Lockheed Martin Occupational Safety & Health.

Submit to Lockheed Martin Occupational Safety & Health a complete report including causes and corrective action taken upon request.
Lockheed Martin will conduct an immediate investigation if deemed necessary.

**CEASE AND DESIST ORDER**

Under the provision of Lockheed Martin Safety Standard OP-40.0 entitled Construction/Safety and Health, the Occupational Safety & Health Department may, as the situation detects, issue a Cease and Desist Order stopping all or part of the work activity.

This provision will be used when a situation develops that would be considered as imminently dangerous, (as defined in Section 13 (a) of the OSH Act). If a Cease and Desist Order is issued, the OSH Department is the only agency that may rescind the order.

Additionally, the assigned Safety Engineer or Industrial Hygienist may issue a job site Inspection Deficiency List to the job superintendent and responsible Lockheed Martin agencies. This form will address issues of lesser gravity than the Cease and Desist Order but which if not corrected could lead to a Cease and Desist Order.

**CHEMICAL HANDLING**

Chemicals shall be stored in approved containers. Containers will be labeled as to content, strength, manufacturer, and part numbers.

Most chemicals used for cleaning, degreasing, and related operations are toxic and flammable. The Contractor shall be familiar with the safety precautions and protective equipment and clothing requirements when using these materials. Chemical vapors, gases, and dusts shall be controlled to prevent migration into occupied operational areas. The Contractor shall also be familiar with the safety precautions and protective equipment and clothing requirements when working around the commodities in the work area.

**CONFINED SPACE ENTRY**

Lockheed Martin has a permit required Confined Space Entry Program. Necessary entries into identified confined spaces by Contractors/Subcontractors will be by permit only, approved by the Lockheed Martin Occupational Safety & Health Department. Contractors/Subcontractors shall provide proof of a written confined space entry program and shall complete the permit before entry. Contractors/Subcontractors shall forward a copy of the permit to Lockheed Martin Astronautics Occupational Safety and Health for information purposes. If the area is posted or considered a confined space by Lockheed Martin Astronautics, the Contractors/Subcontractors shall consider the space as a confined space under their program. Contractors/Subcontractors are required to provide their own personal protective equipment and sampling/monitoring equipment as may be required. Call extension 7-4444 or coordinate with the appropriate Lockheed Martin Facilities Construction Manager.

**CRANES AND HOISTING EQUIPMENT**

Personnel required to operate cranes, hoists, and other lifting equipment shall be thoroughly trained in the use of this equipment before operating it.

Loads shall never be carried over personnel.
The Contractor shall be responsible and aware of utility lines. Booms are not to be operated within 10 ft of power lines.

Inspection records and proof load data shall be made available to Lockheed Martin Occupational Safety and Health upon request, for all cranes and lifting equipment.

**ELEVATED WORK AREAS**

Contractor personnel working in elevated work areas shall ensure that tools or other objects will not fall onto persons working below. This shall be accomplished by using either platforms with toe boards, barricading the site to prevent persons from entering or being in the area below the work, tethering tools and equipment, or any other positive means of ensuring no one working below can be injured by a dropped tool or article.

Tools shall not be dropped or tossed from elevated work areas. They shall be tethered and lowered to the floor, or baskets may be used to lower tools.

Lifelines, safety belts, harnesses, and lanyards shall be used to prevent personnel falls from unguarded work surfaces more than 6 feet above the floor. Safety devices such as these shall not be used to lower material or equipment from the elevated work area. All devices shall meet applicable regulations.

Safety nets must be used when work is more than 25 feet above grade or floor level and the use of safety belts, harnesses, guarded scaffolds or other means are impractical.

**EXCAVATIONS AND SHORING**

Excavation of over 5 feet in depth, unless in solid rock, hard shale, hardpan, cemented sand and gravel, or other similar materials, shall be either shored, sheeted and braced, or sloped to the angle of repose. All shoring and bracing shall be designed so it is effective to the bottom of the excavation. Sheet ing, sheet piling, bracing, shoring, trench boxes, and other methods of protection (including sloping) shall be based on calculation of pressures exerted by and the condition and nature of the materials to be retained, including surcharge imparted to the sides of the trench by equipment and stored materials.

Material used for sheeting piling, bracing, shoring, and underpinning shall be in serviceable condition, and timbers used shall be sound and free from large or loose knots.

Excavated or other material shall not be stored nearer than 2 feet from the edge of any excavation, and shall be stored and retained to prevent it's falling or sliding back into the excavation and to prevent excessive pressure on the sides of the excavation.

Sides and slopes of excavations shall be maintained in a safe condition by scaling, benching, or barricading.

Foundations adjacent to where the excavation is to be made below the depth of the foundation shall be supported by shoring, bracing, or underpinning as long as the excavation remains open.

Additional precautions, such as shoring and bracing, shall be take to prevent slides or cave-ins, or when trenches are made in locations adjacent to backfilled excavations that are subjected to vibrations from railroad or highway traffic, the operation of machinery, or other sources.
Temporary guardrails or barricades and lights maintained from sunset to sunrise shall be placed at all excavations that are exposed to paths, walkways, sidewalks, driveways, or thoroughfares.

Where employees are required to be in trenches 4 feet deep or more, ladders extending from the trench floor to at least 3 feet above the top of the excavation shall be provided and located to provide an exit without more than 25 feet of lateral travel.

Trenches, ditches, etc., that men or equipment are required or permitted to cross shall be provided with walkways or bridges with handrails.

Tunneling shall be performed in accordance with local, State, and Federal laws.

**USE OF EXPLOSIVES**

No explosives other than those approved by Lockheed Martin are allowed on Lockheed Property, and then only after LMA OSH approval.

The Contractor is responsible for complying with all applicable Federal, State, local and Lockheed Martin regulations pertaining to the storage, handling, and transport of explosives. The term “explosive” includes any or all of the following:

- Dynamite, black blasting power, ANFO pellet powder, blasting caps, electric blasting caps, and detonating fuse. The term “electric blasting cap” includes both instantaneous electric blasting caps and all types of delay electric blasting caps. The term “primer” means a cartridge of explosion in combination with a blasting cap or an electric blasting cap. (Other types of explosives not specifically identified herein will not be permitted on Lockheed Martin premises without prior approval).

The term "explosive" is further defined as any chemical compound, mixture, or device, the primary or common purpose of which is to function by explosion (i.e., with substantially instantaneous release of gas and heat).

**FIRE SAFETY REGULATIONS**

1.) The Lockheed Martin Fire Department, responsible for Fire Safety, will give Contractors and their employees specific instructions concerning any operation which tends to compromise fire safety practices.

2.) Smoking is not permitted in any building on Lockheed Martin property. Smoking is permitted outdoors only - away from doorways and smoking materials shall be disposed of in containers provided for that purpose.

3.) Welding equipment used on the premises must be of an approved type and in first class operating condition. When overhead welding operations are to be performed, arrangements should be made through the Facilities Construction Manager for removal of combustible materials and flammable trash to a safe location. Contractors are responsible for furnishing a fire blanket to cover materials which cannot be removed from the work area and which might be damaged by overhead welding operations.
4.) When welding operations are performed with oxygen and acetylene tanks, the tanks must be properly secured and equipped with shutoff wrenches. Each oxygen and acetylene tank must be shut off at the tank when operations are completed for the day. Electrical arc welding equipment must also be shut off when not in use.

5.) Prior to working on any fire protection system, or drawing water from a fire hydrant, arrangements must be made through the Facilities Construction Manager to obtain authorization from the Lockheed Martin Fire Protection Office.

6.) During painting operations, drop clothes must not be suspended from, or draped over, sprinkler pipes.

7.) All sprinkler heads in the vicinity of the job must be properly covered with paper bags prior to the start of a spray painting operation. These bags must be removed immediately upon completion of the painting operation.

8.) Fire extinguishers and other special equipment must be covered prior to start of a painting operation and must be uncovered immediately upon the completion of each operation.

9.) Flammable waste materials must be disposed of at the end of each day in accordance with EPA requirements.

10.) Tools used for cleaning operations in flammable vapor or combustible residue areas must be of the non sparking type. Extension cords and electrical equipment used in stacks, tanks, or other areas where flammable vapors may be present must have Underwriter’s Approval for class I, Group D Hazardous Location.

11.) All fire lanes, aisles, exits and stairways must be kept clear and in good repair at all times.

12.) The Contractor shall coordinate any activities that would impede the flow of traffic (vehicular or pedestrian) with Plant Protection to ensure safety/emergency response has been considered.

**NOTICE**

Welding and open flame permits are required to be obtained from the Lockheed Martin Fire Department prior to the start of any work. Call extension 7-4646.

**HAZARDOUS MATERIALS NOTIFICATION**

The Contractor is hereby notified that asbestos containing materials such as insulation floor tiles, ceiling tiles, and equipment are located throughout LMA Facilities. If suspected asbestos containing materials are encountered, all work shall stop and the LMA OSH department shall be notified immediately. Provisions for asbestos control will be arranged by LMA.

The Contractor is notified that certain painted surfaces throughout LMA facilities may contain lead. If suspected lead containing materials are encountered, all work shall stop and the LMA OSH department shall be notified immediately. Provisions for lead control will be arranged by LMA.

The Contractor shall be responsible for notifying Subcontractors of all the requirements related to potential hazards such as asbestos, lead, or chemicals that may be encountered in the project.
Any use of radiation producing equipment such as x-ray machines, radiation sources, density gauges, lasers, and/or high intensity lights by the Contractor and its Subcontractors shall be approved by LMA OSH prior to use on LMA property.

The use of all potentially hazardous materials (i.e. solvents, paints, epoxies, etc.) by the Contractor and it’s Subcontractors must be approved by LMA OSH. Conditions of approval may require the Contractor to employ ventilation controls and/or use or apply these materials during off-shift hours.

**HOUSEKEEPING**

Good housekeeping shall be maintained at all times. At the end of each shift, areas shall be swept and materials stacked in an orderly manner. The work area shall be kept clean and free of loose tools, boards, wood tailings, metal scraps, and other debris. This eliminates the creation of tripping hazards. In addition, hoses and extension cords shall be bridged as appropriate and shall be removed and coiled at the end of the task.

Good housekeeping is the best protection against fire. Dispose of oily rags or other objects that have become saturated with flammable liquids, in appropriate containers.

Sharp objects, such as nails, which protrude from packing materials, equipment, or other construction debris shall be removed or bent.

Lumber and bagged materials shall be stored as to prevent them from falling or protruding into aisles and walkways. Flammable materials shall be stored in approved safety containers. These containers shall be isolated from combustible materials such as wood, paper, trash, etc. These areas shall also be kept free of weeds and other vegetation.

**NOTE:** No eating or drinking shall be allowed in areas in which hazardous materials are used.

**LABELS**

This section has been designed to help Contractors understand the chemical labeling system at LMA. The purpose of the chemicals labels is to provide information on chemical identity, manufacturer name, and primary hazard warning. This has been accomplished through the use of two types of labels: Manufacturer labels and LMA chemical labels.

**Manufacturer Labels**

By law, the manufacture's label is required on all chemicals when received at LMA. If this label is not removed, covered or destroyed, it is the only label required on the chemical.

The label shall contain:

1.) Material/Chemical Name;  
2.) Manufacturer's name;  
3.) Primary Warnings.

**Astronautics Chemical Label**

The Astronautics label is required on containers only when a chemical is transferred to a secondary container or when a manufacturer's label is accidentally removed, covered, or destroyed.
The Astronautics Chemical Label Shall Contain:

1.) Material/Chemical Name;
2.) Manufacturer’s Name (Trade Name Products Only);
3.) Primary Hazard Warning;
4.) Data Sheet (DS) Number.

UNDERSTANDING THE ASTRONAUTICS CHEMICAL LABEL

The chemical label will have the following elements, and the location of each of the elements is shown in figure 1.

1.) Material Chemical Name;
2.) Hazard warning: This is a 5 digit numeric code that indicates the severity of the hazard. **NOTE:** The larger the number, the greater the hazard. There are codes for three hazards: Health, Flammability, and Reactive. The criteria for this coding may be reviewed at the Occupational Safety and Health Department at 7-4444.
3.) DS Number: This is the data sheet number used to access the MSDS in the Lockheed Martin Chemical Information System Handbook.
4.) Date: The date the label was printed;
5.) Appropriate Warning Statements;
6.) Manufacturer’s name - if other then a generic chemical;
7.) EPA HWN: Number used by Environmental Management for proper EPA handling.

1. Material Chemical Name
   ACETONE

2. Hazard Warning
   Blue
   HEALTH
   Red
   FLAMMABLE
   Yellow
   REACTIVITY

3. Data Sheet Number
   C00007
4. Print Date
11 Mar 88

5. Warning Statements
Keep Away From Fire, Sparks, and open Flame
Avoid Contact with Eyes, Skin, or Inhalation of Dust or Vapor

6. Storage
Flammable

LOCKOUT/TAGOUT
Lockout/Tagout will be accomplished in accordance with 29 CFR 1910.147, The Control of Hazardous Energy. Contractors will exchange information with their LMA contract representative regarding their respective lockout/tagout procedures. LMA requires that all Lockout/Tagout tags contain contact information such as Contractor name, phone number, and name of person applying the Lockout/Tagout.

MATERIAL SAFETY DATA SHEETS
Contractors are required to provide LMA OSH with advance copies of Material Safety Data Sheets (MSDS) for all hazardous materials used on the job. The prime Contractor is responsible for supplying MSDS and all other pertinent safety and health information to its Subcontractors. OSH may at times, request documentation showing that the contractor has provided their employees, agents, and/or Subcontractors with the information required herein.

These materials include, but are not limited to, adhesives, cleaners, coatings, caustics/corrosives, paints, primers, resins, sealants, solvents, welding rods, or lubricants. Materials will be approved for use prior to being brought onto the job site.

Material Safety Data Sheets (MSDS), for the chemicals you may come in contact with at Lockheed Martin, have been supplied to the prime Contractor for your contract. Copies of these MSDS can also be found in the Chemical Information System Handbook (CISH). The CISH for the area you are working in can be located by contacting the Occupational Safety and Health Department at 7-4444. In addition, copies of Contractor MSDSs must be available at the work site for Contractor employee availability.

If the use of hazardous materials, not previously supplied to LMA becomes necessary during the job, the MSDS for those products must be forwarded to LMA OSH for review and approval prior to those materials being brought on site.

PROCESS SAFETY MANAGEMENT
Contractors required to work in an area with processes covered by OSHA 1910.119, Process Safety Management (PSM) will be required to supply LMA OSH with detailed information. This documentation may include, but is not limited to injury and illness rates, Contractor qualifications and references, training records, detailed work plans and/or Health Safety plans. LMA OSH shall provide the appropriate process safety management training to Contractors for LMA specific PSM issues.
PROTECTIVE CLOTHING AND EQUIPMENT

Contractor personnel shall wear appropriate safety equipment, and the contractor shall furnish safety equipment for their employees to use. LMA shall not provide safety equipment. The Contractor shall ensure its personnel are trained in the use, cleaning, and storage of all PPE.

Eye, face, head, hand, and foot protection shall be approved by the appropriate ANSI standard. Respirators shall be NIOSH approved. Hearing protectors shall have a Noise Reduction Rating (NRR) assigned to them and shall reduce noise levels to meet the requirements of the permissible noise exposures as outlined in 1910.95, Hearing Conservation Program.

Most construction jobs require hard hats, due to the possibility of personnel being stuck by falling objects, such as nuts, bolts, tools, etc. When working in close proximity to electrical circuits, hard hats shall be constructed of a non conductive material.

Safety shoes shall be worn when required. Sandals, open-toe shoes and sneakers are prohibited. Leather work shoes 6 inches or higher, with soles sufficiently heavy to give adequate foot protection and with safety toes are recommended.

Gloves may be required. The type of gloves to be used depends on the job. Generally, rubber, plastic, or similar gloves are used for handling chemicals, corrosives, and related products; leather and cloth gloves are used for handling sharp, rough, or abrasive-type materials; electrical lineman gloves are used for working in close proximity to electrical circuits. Gloves should never be worn while working on, around, or in close proximity to moving machinery.

Different types of glasses, goggles, and shields have been designed to minimize eye hazards. Eye protection for welding operations require safety cup-type goggles with the proper tinted lens for the type of welding being done, and a welders helmet with the properly tinted lens; chipping and grinding jobs require clear lens cup-type goggles and a clear plastic face shield; jobs involving hammering, sawing, etc., require clear lens safety spectacle-type glasses.

If your assignment requires you to work in a close proximity to storable propellants, LMA will identify the hazardous commodity and will provide information on potential use or protective equipment. But it is the Contractor's responsibility to provide the appropriate compatible protective equipment, and determine the level of protection for their employees based on their function and potential exposure.

VEHICLE OPERATION

Contractor vehicles which have limited visibility must be equipped with back-up alarms or a flagman must accompany the vehicle when backing to clear the way.

Vehicles powered by internal combustion engines (except properly tuned propane) shall not be used, parked, or stored inside buildings or confined spaces, unless gases are piped outside the building. Specific exceptions for short term intermittent operations require OSH approval.