



Environmental, Safety & Health Guidelines for Contractors



2022

Introduction

The 2022 edition of the Sikorsky Aircraft a Lockheed Martin Environmental, Safety, and Health (ESH) Guidelines for Contractors Handbook is designed to help communicate requirements intended to assist Sikorsky Aircraft in the implementation of best management practices to ensure the safety of our employees as well as the contractors working on behalf of Sikorsky Aircraft. We hope you will find this issue helpful and provide clear communication of the expectations and guidelines to meet our Contractor Safety Program goals and initiatives.

In particular you will find requirements established from recently promulgated regulator standards as well as Sikorsky Aircraft procedural requirements highlighted to emphasize these points. If you have any questions regarding any information contained within this document, please contact our Contractor Coordinator or your Site Contractor ESH Program Manager.

The rules and requirements covered within this handbook are not all inclusive as there may be additional requirements specific to a project or task.

We appreciate your cooperation and commitment to making Sikorsky Aircraft a safer place to work.



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Lockheed Martin Environmental Safety & Health Policy

Executive Summary

Lockheed Martin is committed to operating in a manner that prevents environmental, safety and health (ESH) accidents and incidents, actively manages risk, conserves natural resources, protects the environment, and ensures the safety of employees, contractors, and the public.

Our ESH Policy applies to all Lockheed Martin operations and outlines responsibilities for its successful implementation across all levels of the Corporation. Our ESH Policy outlines key processes and integration methods for managing the ESH aspects of our business, which include:

- Execution of the business in compliance with all relevant federal or foreign, state, local, customer, and corporate ESH requirements.
- Documented ESH policies, procedures, guidance documents, metrics, programs and continuous improvement performance goals.
- Institution of an ESH Management System is a systematic approach to the identification and mitigation of the risks or hazards of, as well as the realization of the opportunities provided by, the ESH aspects of Lockheed Martin's operations and services.
- Integration of ESH into sustainable business operations, including but not limited to product design, services, procurement, supplier selection, manufacturing, and property upgrade/renovation/rearrangement.
- ESH resources, including technology, best practices, lessons learned, and access to legal requirements of countries in which Lockheed Martin operates, including resources relevant to emerging legislative and regulatory requirements and industry trends.
- Commitment to the reduction of natural resource usage through efficiency, source reduction and recycling initiatives. Representation of Lockheed Martin on boards, committees, industry associations, and similar organizations that address ESH matters.
- Communication of Lockheed Martin ESH performance to shareholders and other external stakeholders, including the communities in which Lockheed Martin operates.
- Performance of ESH assessments for mergers, acquisitions, divestitures, joint ventures and real estate transactions.

Contractor ESH Requirements

Contractors are responsible for ensuring their employees, subcontractors and agents comply with this ESH Guidebook and applicable Federal, State and Local regulations at all times during performance of their work.

Each contractor will complete a Contractor ESH assessment prequalification process. The pre-qualification process will identify contractors, vendors, and service providers who have effective Environmental, Safety, and Health (ESH) programs with demonstrated leadership and performance in their industry. Refer to the “prequalification” section of this guidebook.

Sikorsky Aircraft reserves the right to verify that the contractor and all the contractors’ employees meet contractual requirements, including orientation, training, medical testing, and substance abuse screening.

A Contractor Coordinator will be assigned for each project. The Contractor Coordinator will be the Contractor’s will be the Contractor’s primary contact on all matters related to the task.

If there are any questions about the ESH *Guidelines for Contractor Handbook* or and ESH concerns related to an operation or activity, contact your supervisor or the Sikorsky Aircraft Contractor Coordinator.

The requirements of this *Guidelines for Contractor Handbook* are in addition to the terms and conditions of any Agreement or Purchase Order between the Contractor and Sikorsky Aircraft and form a material part thereof.

Contractors will conduct safety meetings with their employees to cover all applicable sections of this *Guidelines for Contractor Handbook* before any work is done on Sikorsky Aircraft property.

Each Contractor Shall

- Report all injures, spills, and near misses immediately to your Contractor Coordinator.
- Conduct routine inspections of work areas to ensure compliance with the requirements of this guide. Review findings and corrective actions with your Contractor Coordinator.
- Provide Site Specific Job Site Safety Plans as required and review with all contractor employees associated with the project that are affected by work being performed.

Sikorsky Aircraft reserves the right to request a copy of the contractor’s hazard control programs, health, and safety programs, training, certificates, injury logs, or other ESH-related program documentation to substantiate compliance with various regulatory requirements.

Prequalification

Avetta Registration

All contractors are required to be prequalified prior to performing onsite services. Sikorsky Aircraft uses Avetta to qualify all contractors. Avetta uses the following flag colors to determine and communicate the approval status for Sikorsky Contractors:

- **Red** – No approved, no access to the property.
- **Amber** – Variance Granted to provide site access
- **Green** – Meet at Avetta criteria and are cleared to

All Contractors must qualify every year by providing annual updated by the set deadline.

Conditional ESH Approval

On a case-by-case basis, contractors may apply for conditional ESH approval. Conditional approvals are reserved for one-time infrequent use and/or low risk contractors. The ESH department reserves the right to determine eligibility and revoke conditional approvals at any time for any reason. Contractors may request a conditional approval by contacting their contractor coordinator or current Sikorsky point of contact.

Housekeeping and Sanitation

Contractors shall always maintain a high stand of housekeeping on the job. Daily cleanup of work areas is required.

All equipment and materials shall be stored in an orderly manner.

Lumber shall be neatly stored when not used and nails shall either be removed or bent over to prevent puncture.

No material shall be stored outdoors without permission of the Contractor Coordinator. Materials shall be marked with the Contractor's name and contact information. All excess materials and equipment shall be removed and migration of noise, dust, and debris to adjacent work areas.

The Contractor Coordinator will notify the contractor immediately when inspections identify unsatisfactory clean-up efforts.

Do not lay electrical cords across aisles or walkways.

Report slipping or tripping hazards immediately to the area supervisor or Contractor Coordinator.

Do not store hazardous materials in office areas without approval from ESH.

Report all near misses to the Contractor Coordinator.

Working in a Manufacturing Unit

Contractors shall not access or perform any work on operating process or manufacturing equipment unless specifically directed by the Contractor Coordinator.

When construction work is performed in a manufacturing unit, work shall be coordinated with the operating supervision.

Contractor employees who perform process and manufacturing operations work shall be trained in the operation and maintenance of the machine they will work with prior to starting work.

Flight Field Access

Any contractors who need access to the flight to conduct work must receive prior approval from by the Sikorsky Aircraft Fire Department and/or Sikorsky Aircraft Air Traffic Control tower.

At the time access is needed, contractors must notify Sikorsky Aircraft Fire Department Dispatch via the non-emergency number or by radio for approval.

All FOD critical procedures must be followed when the contractor is on or near the flight field.

Emergency Response and Notification

Fires

In the event of a fire, locate and pull the nearest fire pull box or call the site emergency number specific to the site you are working. This will communicate the emergency directly to the dispatcher.

Do not attempt to extinguish a fire yourself unless you are trained and qualified to operate a fire extinguisher.

Evacuation

Evacuations are indicated by an audible signal followed by a specific announcement over the public address system. It is essential that all evacuation or shelter in place instructions be adhered to.

Exit quickly and in an orderly manner.

Your contractor coordinate will review evacuation routes and assembly areas with you.

Proceed to the nearest safe exit or shelter in place location in an orderly manner. Do not rush, push, stop, or attempt to retrieve personal item that are not in your immediate area.

When exiting the building, go the nearest assembly area and standby for further instructions. Follow the sweepers instructions.

Do not attempt to re-enter the evacuated area until you are directed to do so by a uniformed Sikorsky Aircraft emergency services representative or sweepers who have been directed by Incident Command.

Injures

In the event of an injury or illness, dial the site-specific emergency phone number from any internal phone, from a safe location.

Only properly trained Sikorsky Aircraft emergency response personnel are qualified to clean up injury sites involving body fluids.

Spills

- Chemicals may not be disposed of by dumping on the ground or into sanitary or storm drains.
- A spill is defined as an accidental release of any product, including water, outside of its normal container expect during use.
- All spills, including those that occur a building, shall be reported immediately by dialing the emergency response number applicable to the site where you are working.
- Contractors shall be responsible for all spills that result from their work at any Sikorsky Aircraft facility. However, the contractor cannot start cleaning up the spill until emergency services has authorized them to do so, unless failure to do so immediately poses an imminent risk to human health or the environment.

- If Sikorsky Aircraft determines that a spill clean-up is beyond the contractor's ability, or the contract has failed to clean up the spill adequately, Sikorsky Aircraft shall use its own personnel or hire spill clean-up specialist.
- In all cases, the contractors shall be responsible for all costs. These costs may include removal of contaminated materials as well as restoration of the area.

When reporting an emergency, provide the dispatcher with the following information:

- Nature of emergency (injury, spill, fire, etc.)
- Location (department name/number, building letter, column number, etc.)
- Your name and the name of the company for which you work.

Injury and Illness Recordkeeping and Reporting

Contractors shall immediately notify their Contractor Coordinator of any injury, illness, and any loss of or damage to Sikorsky Aircraft property, including incidents related to their subcontractors.

Contractors shall immediately notify their Contractor Coordinator of any injury, illness, and any loss of or damage to Sikorsky Aircraft property, including incidents related to their subcontractors.

Contractors shall collaborate with the Contractor Coordinator in the incident investigation and root cause corrective action implementation.

An investigative report assessing the root cause and corrective action shall be submitted within 24-hours of the incident's occurrence to the Contractor Coordinator. An extension may be granted upon request.

Any unsafe conditions and activities shall be reported to the Contractor Coordinator and corrected immediately.

In the event a contractor requires medical attention for a work related or potentially work-related injury or illness, or periodic medical evaluations, the contractor must use the clinic selected by his or her company. The Sikorsky Aircraft onsite medical clinics (where available) provide clinical evaluation and treatment to contractors in the following situations:

- FAA mandated testing (e.g. drug and alcohol testing)
- In emergency medical situations when not transported directly offsite by the fire department/plant protection
- Hydrofluoric acid (HF) exposure

Accident and Incident Investigation

The Contractor Coordinator accompanied by the contractor must formally investigate all incidents, injuries and spills, including near misses, in order to prevent reoccurrence.

For all Incidents:

- Secure the area with barricades/caution tape to preserve the scene.
- Perform a walk-through, when cleared by emergency services, of the incident site; this may occur with Site ESH personnel as well as the Contractor Coordinator.
- Interview witnesses, where applicable.
- Submit a written incident investigation report to the Contractor Coordinator, within 24 hours of the incident occurrence.
- The report shall describe the incident and identify root cause and corrective actions, along with a timetable for implementing the corrective actions.
- With the assistance of the Contractor Coordinator, an incident report will be completed for all incidents that result in a recordable injury, environmental release deemed hazardous by the Environmental Health and Safety department, or significant property damage.

Training

Contractors shall instruct each of their employees and sub-contractors in the recognition and avoidance of unsafe conditions and of the regulations applicable to his/her work environment to control or eliminate any hazards or exposure to illness or injury.

All contractors and their subcontractors performing jobs on Sikorsky Aircraft premises shall ensure that all their employees assigned to perform work have been properly trained to the OSHA regulations applicable to the hazards associated with the work they will perform prior to permitting the employee(s) to begin work.

Training may include, but is not limited to, on-the-job (OJT) training, toolbox sessions, internal or external formal training, etc. The training must meet the minimum criteria set forth by the state, federal, national, provincial, and local requirements regarding the specific subject matter.

Contractors are required to work to the most stringent applicable sections of OSHA 1910 and 1926 at a minimum. The rules and requirements covered in this Sikorsky Aircraft Guidelines for Contractor Handbook are not all inclusive and there may be additional requirements specific to a project or task. Copies of OSHA standards can be obtained from OSHA website <http://www.osha.gov>

Actual documentation of training is subject to review upon request by Sikorsky Aircraft. Examples of actual training documentation include class rosters, toolbox notes and attendance, certificates, official letter of completion, etc.

Hazard Control Program

The remaining pages of this handbook contain specific environmental, health and safety requirements for Contractors working at Sikorsky Aircraft facilities within the United States. Contractors are responsible for being aware of and following these requirements.

Demolition Work

Utilities shall be marked (paint, tape, ribbon etc.) at the locations where they shall be disconnected. The marking shall occur at the time when zero energy is verified and/or pipes are cleared or flushed.

Every employee who will be involved with the physical disconnection of each utility shall witness the verification.

Steel Erection

Permanent floors will be installed as the erection of structural member progresses.

Temporary floors shall be solidly packed or decked over the entire surface except for access openings.

Contractor employees shall be provided the appropriate fall protection by the contractor when the fall potential is greater than six feet unless an exception is approved by the Sikorsky Aircraft ESH professional and contractor ESH professional.

During placement of steel members, the load shall not be released from the hoisting line until the members are secured with not less than two bolts, or the equivalent, at each connection and drawn up wrench tight.

Open web steel joists shall not be placed on any structural steel framework unless such framework is safely bolted or welded.

Where long span joists or trusses are used, a center row of bolted bridging shall be installed to provide lateral stability prior to slacking of hoisting line.

Tag lines shall be used for controlling loads.

Employees shall not be permitted to work under areas of steel erection unless protected by a solid floor or other equivalent protection.

Concrete Cutting, Coring, Drilling:

Saw, drilling, and/or coring operators shall set up a designated "Safe Zone" with appropriate warning barriers and signage to protect others.

In work areas where the exact location of underground electric power lines is unknown, employees who may contact a line shall be provided with insulated protective gloves.

Protective gloves need to be designed and manufactured according to ASTM standard D 120: Specification for Rubber Insulating Gloves

Insulating footwear should be rated "DI", for dielectric shoes, and rated according to ASTM F 1117: Specification for Dielectric Overshoe Footwear.

Each affected employee shall wear protective footwear when working in areas where such employee's feet are exposed to electrical hazards.

Aerial Lifts

Aerial lifts (boom, snorkel types, etc.) and other vehicle mounted elevated work platforms shall be used in accordance with applicable regulatory and industry recognized standards and shall meet Sikorsky Aircraft Powered Industrial Vehicle (PIV) requirements.

All employees operating aerial lifts shall be properly trained for the lift they use.

Employees working in aerial lifts shall wear hard hats or bump caps and shall be tied off in a restraint mode with a harness and lanyard. Restraint mode is achieved when the lanyard prevents the employee stepping up onto the mid-rail. Scissor lifts may be exempt from restraint mode fall protection requirements. Refer to your Contractor Coordinator regarding site requirements.

Employees shall work from the floor of the lift only. Climbing out of the aerial lift or on the handrails, mid-rails or brace members is prohibited unless an approval is authorized from ESH verifying an adequate anchor independent of the lift is used to tie off in a fall arrest mode.

Areas below overhead work will be clearly marked with safety stanchions, caution tape and signs to protect associates at grade level.

Major construction areas will be barricaded, and construction signs erected to keep out all unauthorized personnel.

Asbestos-Containing Materials

Some building materials throughout the facility may contain Asbestos Containing Materials (ACM). Furthermore, the building material may not be labeled as containing asbestos.

Assume that all thermal insulation (piping, elbows, joint insulation, etc.) floor and ceiling tile, window caulking, siding, and roofing materials, do contain asbestos, unless labeled as non-ACM. This list does not include every product/material that may contain asbestos. It is intended as a general guide to show which types of materials may contain asbestos.

Some buildings may have thermal insulation sprayed on ceiling structural components (e.g. decking, I & H beams, etc.).

The Contractor Coordinator designated Industrial Hygienist, or the site facilities department must be contracted before ceiling tiles are moved below areas that have not previously been confirmed to be free of sprayed on asbestos. Should the upper ceiling be insulated with sprayed on asbestos will be permitted to remove ceiling tiles and work above them, and only after authorization by the site facilities department or designation Industrial Hygienist. If the asbestos cannot be avoided to perform the work, it must be abated before the work is performed.

No new products containing asbestos or its synonyms (chrysotile, amosite, crocidolite, anthophyllite, actinolite) may be used in any facility. Some foreign country suppliers identify the names of the types of asbestos their product contains without using the word asbestos.

Tasks involving work on existing building material must be reviewed for ACM by the Contractor Coordinator and Site ESH personnel prior to commencing the task. Construction and demolition activities will require prior approval by means of the site Facilities/ESH department review procedure.

If ACM or suspect ACM material is disturbed/damaged encountered during construction or demolition, the contractor shall stop work immediately and call the Contractor Coordinator or the site emergency response number immediately.

Contractor personnel will not attempt to clean up any such debris or perform any repair to the suspected ACM material unless they are trained and qualified to perform asbestos abatement and are approved by Sikorsky Aircraft for asbestos abatement projects.

All contractors' employees will vacate the immediate area while Sikorsky Aircraft personnel assess the material and the area of concern.

Barricades

Barricades for Hazardous Work Area

Snow fencing, expandable gates or equivalent at least 42" high new construction area or unattended work area barriers.

Danger Tape: Work in progress that is continuously attended and supervised with a hazard that has a potential for moderate to severe injury (e.g., mounting hoist rails, hot work).

Caution Tape or Cones: Work in progress that is continuously attended and supervised with a hazard that has a potential for minor injury only (e.g., mounting a bulletin board, plumbing repairs on a water fountain).

Blocked main aisles require prior approval from the Contractor Coordinator and must have detour signs posted to re-route personnel to alternate emergency exits.

Major construction areas will be barricaded, and construction signs erected to keep out all unauthorized personnel. Curtain barriers must be made of flame retardant materials certified by Factory Mutual, Underwriters Laboratories or equivalent on the product label or the product specifications.

Barricades for Trenches, Holes, and Pits

If four feet or more in depth - standard rail system that meets OSHA 1910.23(e) specifications, four feet from edge of opening (less than four-foot distance must be approved by the Contractor Coordinator).

If workers are exposed to falls greater than six feet when inside the barricade, additional approved fall protection will be required for the workers.

If under four feet but greater than one foot - Snow fencing, expandable gates, or equivalent at least 42" high, four feet from edge of pit.

If under one foot and unattended (i.e. work is not in progress), caution tape four feet from edge of pit.

If the barrier will interfere with a main aisle or completely block the only means of egress of a department aisle, the four-foot minimum distance from the edge is waived. If this creates a greater hazard to personnel working inside the barrier however, alternate barricading methods may be used if authorized by the Contractor Coordinator and/or the ESH department.

Barricades for Overhead Work

Contractors shall secure area with safety stanchions or caution tape and post warning signs to alert pedestrians and area occupants of overhead work. Ground spotters may also be required. The distance the barricade is set up away from the work area must take into consideration the length of materials in use and the potential for materials to be projected horizontally or to rebound from the ground surface or surrounding structures if they fall from overhead. The setup distance should allow for these types of hazards to be contained within the barricaded area.

When work is limited to a visual inspection without tools, caution tape, or safety cones at a minimum of two feet from the work (no potential for falling objects) may be used.

Barricades for Live Electrical Troubleshooting

Barricades shall be used whenever authorized individuals are working on exposed live parts; the barricade distance will be no closer than ten feet from the live parts.

Barricades shall be used with safety signs where it is necessary to prevent or limit unqualified or other employee access to work areas containing live parts. Unauthorized crossing boundaries shall not be permitted.

Barricades for Altered Walking or Working Surfaces

Whenever a walking or working surface is altered, it shall be barricaded with danger tape or other sufficient effective methods until the surface is restored to its original conditional or better.

Barricades and Signage for Roads

Locations where work is being performed on roads and parking areas will be, at a minimum, identified and barricaded with cones. In addition, signs that identify the road work shall be erected at locations where work is being performed that may be potentially injurious to workers and motor vehicle operators.

Signs shall be designed and constructed of materials/devices that provide the highest degree of visibility to motorists and can withstand prolonged exposure to inclement weather conditions.

Hand-written signs are not acceptable.

The placement of cones and signage shall consider traffic patterns and flow to ensure they alert motor vehicle operators of the road work and provide them with sufficient time and space to manipulate their vehicles away from and around the identified hazard(s) in a safe and timely manner.

Chemical Handling, Storage, and Hazard Communication

Contractors shall have a written hazard communication program and shall inform their employees of the location and availability of their program.

Contractors shall train their employees on the physical, chemical, and biological agents in the workplace.

Safety Data Sheets (SDS) shall be available at the work site for materials supplied and used by the contractor.

The Contractor Coordinator will communicate hazards inherent to the work location and provide the contractors with access to SDSs for materials at this site.

All chemicals used by contractor personnel (including fuels, paints, coatings, coolants, cleaners, flooring materials, etc.) must have prior approval via the site ESH approval process.

Chemicals will be properly labeled and segregated to prevent potential hazardous mixing.

Approved metal safety cans with self-closing lids and flame arrests shall be used for handling flammable liquids.

All containers must be properly labeled as to their contents and potential chronic health and target organ effects.

Flammable and combustible liquids shall not be used or stored in any proximity to open flames and ignition sources.

All unused, flammable, and combustible liquids must be stored in a flammable-storage closet or removed from the premises daily.

Flammable and combustible liquids and other hazardous materials shall be kept in closed containers when not in use.

Upon completion of the project, all unused materials will be taken off site.

Storage and transfer of flammable liquids will be grounded and bonded where necessary.

Emergency safety showers and eyewash units are provided in various areas of the facility. Your Contractor Coordinator will identify their locations for you. In the case that there is not an immediate eyewash station available, you own portable eyewash station may be required.

All affected contractor employees shall wear appropriate personnel protective equipment per their Hazard Communication Program and the SDS of the product in use

Clean Fill Materials (Soil, Sand)

Any fill materials being brought onto Sikorsky Aircraft property must be free contaminants. This may be accomplished by any of the following methods:

- Certify in writing by the contractor that the fill is free of contamination.
- Taking reasonable steps to ensure fill material is clean such as composites sampling and analysis, review of fill source disclosure, or photo ionization screening of fill material, etc.
- Visual inspection of the fill material when it is placed on Sikorsky Aircraft property.

Compress Gas Cylinders

Compressed gas cylinders shall always be fastened securely in the proper position to appropriate carriers or restraints for the cylinder contents.

Cylinders shall be kept away from welding or cutting operations so that sparks, hot slag, or flame will not impinge on them. When this is impractical, fire-resistant shields will be provided. Cylinders will not be placed where they can contact an electric circuit.

Cylinder valves shall be closed, and valve protection caps shall be in place when compressed gas cylinders are transported, moved, stored or otherwise not in use.

If a leak develops in a cylinder, follow emergency procedures. Call Emergency Services from any telephone within the facility from a safe location.

Gas cylinders that are damaged or have a buildup of scale or rust, which could weaken the container, will not be used, and shall be removed from this site as soon as possible.

Cylinders will be permanently labeled, marked, or stenciled to identify the gas in the cylinder. Cylinders shall be mounted and stored with the content labels facing out.

When storing compressed gas cylinders, flammable gas such as acetylene and hydrogen will be separated from oxidizing gas such as oxygen and nitrous oxide by 20 feet, or by a fire-rated barrier.

Cylinders shall be moved by tilting and rolling them on their bottom edges or cylinder carts must be used for their transportation. All cylinders will be handled with care.

Cylinders shall not be transported horizontally on the forks of a fork truck.

Compressed gas cylinders shall not be taken into confined spaces unless they are supplying breathing air.

Oxygen cylinders in storage (approved by Contractor Coordinator) shall be separated from fuel-gas cylinders or combustible materials (especially oil or grease), by minimum of 20 feet or a noncombustible barrier at least five high having a fire resistance rating of at least one-half hour.

Confined Spaces

Confined spaces shall be identified, and written procedures established and followed for entry.

Contractors entering confined spaces shall provide training documentation to demonstrate competency to enter confined spaces.

Contractors who will enter Confined Spaces must obtain a copy of the space’s evaluation (if applicable) from the ESH department or conduct a risk analysis with the site personnel that defines the hazards associated with the space. It shall be attached to their confined space entry permit posted near the entry.

Contractors must use own permit, monitoring and rescue equipment, unless authorized by the Sikorsky Aircraft ESH professional.

Contractors shall follow their own confined space entry procedure when entry into a Sikorsky Aircraft designated permit-required confined space is necessary. Contractors shall provide their procedure to the Contractor Coordinator for review and approval prior to entering a permit required confined space.

Contractor shall review the completed entry permit with their Contractor Coordinator or site ESH personnel prior to entry.

A copy of the permit shall be sent to Site ESH or emergency services.

Sikorsky Aircraft will retain a copy of permit for 1 year.

“Permit Required Confined Spaces” are identified and marked by a sign near the entrance stating (or equivalent):



Before entering a “Permit Required Confined Space,” proper training in Confined Space Entry and Lock Out/Tag Out is required.

Sikorsky Aircraft ESH personnel and Contractor Coordinators reserve the right to deny entry.

Confined Space – Excavations

In certain cases, trenches and excavations may be considered a Permit Required Confined Space base on known or potentially hazardous conditions such as a hazardous atmosphere. When this occurs, compliance with the confined space program is also required.

Workers must be confined space trained and only enter space under a confined space permit.

The contractors competent person shall access the excavation to determine potential hazards which may qualify the trench and excavation as a confined space.

Control of Hazardous Energy Lockout Tagout

Before working on machines or equipment Contractors shall isolate all forms of hazardous energy, secure them with locks and tags, then verify Zero Energy State.

Contractors shall restrict access to work areas by unauthorized employees where energy sources have been de-energized.

All affected employees shall be notified. Where applicable, the area shall be secured, and signs posted to alert employees that a deenergizing activity is in progress.

Contractors shall obtain specific site lockout instructions from the energy control procedures.

Standardized lockout devices and "Danger" tags shall be used to prevent the operation of switches, valves, pieces of equipment, etc., where personal injury may occur, or equipment may be damaged.

For work that involves multiple trades and or contractors:

- During multiple trade lockout tagout events, a Primary Authorized employee must be designated to oversee the event, and each employee who will perform work that exposes them to the controlled energy must verify or witness zero energy state for each hazardous energy sources he or she will be exposed to.
- A lead authorized employee shall be designated for each party that is part of the group.
- Each lead shall verify that a zero-energy state has been achieved for each hazardous energy source that must be locked out that is associated with his or her party's work.
- If any party does not have an employee that is qualified to perform the verification (e.g. an employee qualified to assess electrical hazards), then the lead employee and each member of his/her party must witness the verification performed by a designated qualified employee of one of the other parties or qualified Sikorsky Aircraft employee.
- The Contractor shall add verification of these completed steps before work may begin to their Site Safety Plan.
- Contractor Coordinators should coordinate these requirements at a pre-job hazard review.

Each contractor and subcontractor employee performing operations where equipment or systems require de-energizing shall place his/her own lock and tag on each energy source requiring de-energizing; each employee shall sign and date the tag. The tag shall include the employee's name, the name of the contractor they work for, the date the lock is installed and the reason for lockout is required.

Only standard "Danger - Do Not Operate" (black, red and white) tags will be used.

If equipment for de-energizing is in a confined space, the confined space will be cleared of all employees prior to testing the energy source for deactivation.

Stored energy systems and equipment, such as electrical capacitors, mechanical springs, steam lines, and hydraulic systems, shall be put in a "zero energy" state.

Contractor employees shall remove only their own locks and tags when they complete their work.

Used danger tags will be destroyed; tags will not be reused unless designed for reuse.

Extended lock out requirements shall be coordinated with the Contractor Coordinator.

Line Breaking

Whenever authorized employees intend to perform work associated with the intentional opening of a pipe, line, or duct that is or has been carrying flammable, combustible, corrosive, or toxic material, or any fluid at a volume, pressure, temperature, or unknown substance capable of causing injury, a line breaking permit is required.

Line Breaking Permits

The line breaking permit shall be properly filled out by the authorized employee performing the work and posted in a close visible location to where the line breaking work is occurring.

The permit will be valid for the duration of the job or until the shift changes, whichever occurs first.

The line breaking permit is to be cancelled whenever a condition changes the original scope of work, or a hazard is identified outside of the controls established in the line breaking permit

Gas line purging permit required for all work done to lines containing flammable gasses.

Line Breaking Permit Issuer

The line breaking permit must be approved by the line breaking permit issuer. The line breaking permit issuer is an authorized employee. However, the line breaking permit issuer cannot be the authorized employee performing the work requiring a line breaking permit.

Upon completion of the line breaking permit required work, the line breaking permit shall be submitted to the Site ESH LOTO program owner for proper filing and record retention.

Cranes and Hoisting Equipment

Contractors shall operate and maintain cranes and hoisting equipment in accordance with manufacturer's specifications and limitations.

Operator must be certified to operate cranes.

Equipment will be maintained and inspected in accordance with regulatory requirements.

The Contractor Coordinator shall be notified of all proposed crane use at least one day in advance of the actual lift to facilitate a pre-work review with ESH, Emergency Services and impacted area supervision.

Mobile cranes, including portable crane derricks, power shovels, or similar equipment, shall not be operated within 10 feet of overhead electrical power lines.

Riding on crane hooks and headache balls is prohibited.

Eyes on crane hooks shall have a safety latch.

Outriggers must be fully extended, and pedestals lowered for any lift.

Crane components used for overhead work must be rated for the load. No self-fabricated lifting devices/components shall be used.

Cranes and derricks shall not be refueled while in operation.

Cranes and derricks not in use shall be properly secured.

Rated load capacities and recommended operating speeds, special hazard warnings or instruction shall be conspicuously posted on all equipment.

Accessible areas within the swing radius of the rear of the rotating superstructure of the crane shall be barricaded to prevent an employee from being struck or crushed.

If a crane exceeds the height of the tallest structure on site it shall have a flag in place at the apex and or equipped with a flashing beacon.

Critical Lifts

The following critical lifts must be proceeded by, and conducted under the guidance of a written plan developed by a qualified person and reviewed by the lift director:

- Lifts which exceed 2 tons over critical equipment or occupied buildings
- Lifts which exceed 75% of the rated load chart crane capacity rating
- Hoisting of personnel by crane (man basket must be approved by manufacturer or a professional engineer)
- Multiple crane tandem lifts
- Work under power lines closer than 20 feet

When making a lift with a crane

One person shall supervise the lift. One person, proficient in hand signals, shall perform signaling. Signals will comply with ANSI standards for the type of crane used. An illustration of the signals will be posted at the job location.

Crane operator and signal person will maintain continuous visual contact during lifting operation.

Area shall be cleared and roped or barricaded off.

No one shall stand or pass under suspended loads.

See section on Elevated Work for fall protection requirements.

Slings

Slings shall not be loaded in excess of their rated capacities. Annual inspection tags shall be affixed to chain slings.

All slings other than wire rope slings shall be labeled for their load capacity.

Slings shall be padded or protected from sharp edges of loads and will not be pulled from under a load when the load is resting on the sling.

Each day, prior to use, slings and all fastenings and rigging attachments shall be inspected for damage or defects. Damaged or defective slings will be immediately tagged "Do Not Use" and removed from service.

Wire rope and synthetic web slings shall be removed from service and destroyed when they become worn damaged, or their load markings become illegible.

Chain-Falls and Come-Along

Safety latches shall be installed and functional on hanging hooks and load hooks.

Chains, cables, and hooks shall be in good physical condition. Hanging hooks shall be free to pivot when lifting or pulling a load.

Load chains and cables shall not be used as slings.

Capacities of chain-falls and come-along shall be adequate for the load to be lifted or pulled. "Cheaters" shall be not used on the handles of the come along.

Chain falls and come along shall be inspected annually, and the most recent inspection date shall be clearly indicated on the equipment.

Ground Preparation

Prior to conducting a crane operation, the ground conditions must be deemed adequate by the controlling entity, to ensure the use of the crane, loads, and supporting materials.

Ground preparation which may penetrate/compromise or destabilize the surface must include plans for underground piping electrical, water or gas. Ground penetrating radar will be used as necessary to identify underground hazards, and to determine ground stability when necessary.

Inspections

Cranes must be inspected daily on each shift prior to use by a competent person.

Safety Devices and Operation Aids

The following safety devices are required on all cranes operating on Sikorsky Aircraft property:

- Signal Chart
- Fire extinguisher
- Crane level indicator

- Boom and jib stop
- Integral holding device/check valve on hydraulic outrigger jacks and hydraulic stabilizer jacks
- Horn
- Rated load capacity
- Operating speed
- Any special hazard warnings

Control Areas

Prior to commencing a crane operation, a defined work area and controls for the hazards of the area must be established.

The control area must be defined with control line, warning lines, railings, or similar barriers to mark the boundaries of the hazard areas.

Rigging and Managing the Load

All rigging of material must be conducted by a trained and qualified rigger.

Fabricated rigging system designs shall:

- Have a safety factor of 2.5
- Be approved by a structural engineer if the system will attach to a building structure engineer if the system attaches to a building structure
- Shall account for accidental side loading of up to 60 degrees from vertical even if the designed is for a vertical lift only.

Crane Operation

All crane operations must have operational procedures (either manufacturer procedures or procedures always developed by a qualified person) readily available (in the cab if applicable). Procedures pertaining to capacities must be signed by a registered professional engineer.

Whenever there is a concern as to safety, the operator has the authority to stop and refuse to handle loads until a qualified person has determined that safety has been assured.

Every crane operation must have a dedicated signal person whenever, the point of operation is not in full view of the operator, when traveling, or anytime the operator or the person handling the load determines that it is necessary.

When working around power lines, determine if any part of the equipment, load line or load if operated up to the equipment's maximum working radius in the work zone could get closer than 20 feet to a power line. If so, one of the below must be met:

- De-energize the ground. Confirm from utility owner/operator that the power line has been de-energized and visibly grounded at the work site.
- 20 Foot Clearance: Ensure that no part of the equipment load line or load gets closer than 20 feet to the power line.
- Determine the lines voltage and the minimum approach distance permitted.

Dumpster Management

Dumpster must not be stored over a storm drain

Dumpsters must be provided with an impermeable cover such as a tarp or be maintained under a roof at all times to prevent entry of storm water.

Dumpsters must be labeled for the materials they are permitted to contain and the name of the contractor who owns them.

If a dumpsters' cover is damaged, it must be replaced immediately.

Drain plugs must remain intact.

Dumpsters must be structurally sound (no puncture holes, severe dents, etc.)

Drain covers must be of a design that sheds water.

Dumpsters must be always covered when not being actively filled.

Electrical Safety

Contractors must always provide ground-fault circuit interrupters (GFCI's) when using electric power cords to protect employees from ground-fault hazards.

The requirements of NFPA 70E shall be followed for all live electrical work. This covers requirements for PPE, flash clothing, insulated tools, live work permits and establishing a blast radius for all work to be performed (refer to barricade section of this Guidebook).

Exposed live electrical parts will be de-energized and locked out before working on or near them whenever practical.

If determined by the Contractor Coordinator that de-energizing exposed live electrical parts introduces additional hazards or is not feasible due to equipment design or operational limitations, specific safety related energized work practices will be developed by qualified contractor personnel and the Contractor Coordinator. Work practices will protect against direct body contact or indirect contact by means of tools or materials and be suitable for work conditions and the exposed voltage level.

Working on or near live electrical parts other than troubleshooting requires a Live Work Permit.

Extension cords will be listed or approved as assemblies by a nationally recognized testing agency.

Extension cords will not be used in a manner that could cause damage to the outer jacket or cause tripping hazards.

When crossing over aisles with extension cords appropriate overhead clearance must be maintained.

Never route extension cords through door or window openings.

Portable electric equipment and extension cords will be approved for the work environment and kept in good condition.

Outlets (120 volts) on construction sites that are not a part of the permanent wiring of the building or structures will have approved ground fault circuit interrupters (GFCI).

The exclusion zone and limited approach boundary shall be in compliance with NFPA 70E.

Energized panels will be closed after normal working hours and whenever they are unattended.

Temporary wiring will be de-energized when not in use.

Suspended temporary lighting will be festoon listed.

Only qualified electrical contractor employees may enter substations and/or transformer vaults and only after being specifically authorized by the Contractor Coordinator. All others must always be accompanied by Sikorsky Aircraft qualified personnel.

Use of electrical tape for temporary repair of frayed cords is prohibited.

Extension cords shall not be fastened with staples, hung from nails, or suspended by wire.

Temporary illumination of construction areas, ramps, corridors, offices, and storage areas shall be lighted to satisfy the minimum illumination intensities listed in 29 CFR 1926.56, Table D-3.

All lamps for general illumination shall be protected from accidental contact or breakage. Metal-case sockets must be grounded.

Temporary lights shall not be suspended by their cords unless they are so designed. Temporary lighting circuits shall be used for lighting only. Extension cords must not be used for more than 90 days.

Elevated Work

For any employee working four feet or more above an exposed work surface, contractors shall provide primary fall protection whenever possible and secondary fall protection only when primary fall protection is not practical.

Fall protection must be utilized when working within 15 ft of a leading edge.

For work that requires disconnection from an anchorage point, a full body harness with two shock absorbing lanyards and locking snap hooks shall be used. Contractors must attach the second lanyard to a suitable anchorage point prior to disconnection from the original anchorage point.

The anchorage point must be at waist level or higher; and capable of supporting at least 5,000 lbs. per employee attached.

Primary Fall Protection System

Primary fall protection systems (e.g. guard rails) provide protection for walking and working surfaces in elevated areas with open sides, including exposed floor openings.

Primary fall protection systems include, but are not limited to, fixed guardrails, as well as scaffolds, aerial lifts and other approved personnel lifting devices.

Secondary Fall Protection Systems

A secondary fall protection system consists of an approved full body harness and two shock-absorbing lanyards.

A secondary fall protection system shall be worn when primary fall protection is not practical or feasible.

Use of a secondary fall protection system shall include the prior establishment of a rescue plan for the immediate rescue of an employee in the event they experience a fall while using the system.

Lifeline Systems

Vertical lifeline systems shall be made from materials (including the line itself) designed specifically for fall protection.

Vertical lifeline systems must be capable of supporting at least 5,000 lbs. for one person only.

Lifelines may be mounted either vertically or horizontally and are generally intended to provide mobility to personnel working in elevated areas.

Horizontal lifelines must withstand at least 5,000 lbs. impact and pulled tight enough to prevent deflection.

Horizontal lifelines shall be positioned to provide points of attachment at waist level or higher.

Vertical lifelines used for vertical mobility will be equipped with sliding rope grabs or may consist of self-retracting reel type lanyard/lifeline attached directly to a safety harness.

Retractable lifelines shall be attached to supports capable of 5,000 lbs. impact loading.

Sliding rope grabs, approved for the size rope used, are the only method for securing a safety lanyard to a vertical lifeline. Lanyards shall not be attached to lifelines by means of knots and loops.

All fall protection devices used in elevated work shall be inspected by a competent person prior to initial use (and annually thereafter) and by the user prior to each use.

Defective equipment shall be tagged "Do Not Use" and immediately removed from service.

All contractor employees who will be required to perform elevated work shall be fully trained in elevated work practices and the care and use of safety equipment.

Safety nets shall be used only with prior approval of the Contractor Coordinator.

Fire Protection and Prevention

Do not block emergency exits unless authorized by Contractor Coordinator.

Access to firefighting equipment, fire control and emergency vehicles shall be maintained at all times.

Contractor shall familiarize employees with the method used at the facility for reporting a fire, the location of fire alarms and the requirements for the conduct of employees in the event of an alarm.

Contractors shall provide their own fire extinguisher for protection against hazards they introduce to the job location.

Contractor fire extinguishers shall be inspected annually by a certified person, and visually inspected monthly and documented by the contractor.

Flammable and combustible liquids dispensed at one time in quantities greater than 5 gallons shall:

- Be dispensed in an area separated from other areas of operation by 25 feet or by construction having at least a one-hour fire resistance rating.
- Be stored in approved safety cans or drums.
- Be controlled with ventilation to prevent the development of concentrations above 10% of the lower flammable limit.
- Be only transferred between containers that are electrically interconnected.

Flammable liquids shall be kept in closed containers when not in use and shall not be allowed, under any circumstances, within 50 feet of an open flame or ignition source.

In the event of an alarm, contractor shall evacuate the area. Contractors are also required to evacuate during drills.

All barriers/sheeting/tarps shall be flame/fire retardant and marked accordingly.

Smoking and Tobacco is not permitted anywhere on Sikorsky Aircraft property

Floor & Walls Openings

A cover or a standard railing and toe board shall guard floor openings. The railing shall be provided on all exposed sides, except entrances to stairways.

Wall openings, from which there is a drop of more than four feet, and the bottom of the opening is less than three above the working surface, shall be guarded.

A standard railing or equivalent shall guard every open sided floor or platform four feet or more above an adjacent floor or ground level. A toe-board shall be provided wherever persons can pass beneath the open side or there is moving machinery or equipment which falling material could create a hazard.

Employees shall be protected at all open sides and edges during the performance of built-up roofing work on low-pitched roofs.

Contractors will post, install, and maintain signs, signals and barricades to detour passage of person and vehicles at locations where potential hazard exist.

Barricades shall be placed where necessary to warn employee against hazardous conditions and activities, such as overhead work, floor and wall openings and trenches.

Foreign Object Damage (FOD)

Any damage attributed to a foreign object that can be expressed in physical or economic (monetary) terms which may or may not degrade a product's required safety and/or performance characteristics.

Many of our products are sensitive to debris that can be produced during contractor work activities in manufacturing areas.

The following requirements must be implemented for all work performed in manufacturing areas to protect our products from FOD:

- All items brought into the work area should be accounted for; this includes personal items (watch, jewelry, cell phone, food, etc.).
- All hand and power tools should be accounted for during work. At the end of the day or operation, ensure that all tools, bits, fixtures are accounted for and returned to proper storage locations.
- Tool breakage should a tool break or be determined to be missing (or an personal items), contact the Contractor Coordinator to ensure that the tool and all parts can be located.

Parts/Materials

All product or otherwise critical surfaces near work areas must be properly protected against debris or contact.

Debris that is produced during work needs to be cleaned at logical intervals to preclude migration to sensitive areas.

Control of parts, nuts, bolts, straps, tie-wraps, should be contained to prevent spillage and should be monitored to prevent migration.

Consumables, rags, sanding materials, nails, etc. should be used and discarded during cleaning intervals with debris, including end of shift.

Every effort should be taken to prevent contractor work items from migrating or mingling with shop tools, parts, and compartments. Should this occur, work should cease and control and/or separation of contractor/shop materials should take place.

- Do not move any shop parts or equipment
- Do not place any items on surfaces used for Sikorsky Aircraft processes
- Do not remove any items from areas posted as quarantine

When performing elevated work including scaffolds, cranes, hoists, aerial lifts, and overhead work increased diligence regarding the above will be required. No tools, parts or materials should be taken overhead that are not needed or accountable since their descent will make relocation of those parts even more difficult.

Every effort should be made to prevent all debris or parts to fall from overhead/aerial work areas.

At the completion of work, all items are cleaned and accounted for. All work areas are cleaned of debris and consumables that were produced during work.

Hot Work Permits

Contractors shall comply with the facility's hot work permit requirements as described below.

A hot work permit shall be requested from the site department designated by the Contractor Coordinator for any activity that produces a source of ignition. Such activities include but are not limited to:

- Gas welding and cutting
- Electric arc welding
- Heating torches and other open flames
- Tar pots and kettles
- Other activities that produce a spark.

In some work activities, other hazards must be addressed before hot work may be safely undertaken. These hazards may involve:

- Energized equipment
- Pressurized or contaminated piping
- Entry into confined spaces.

Hot work permits are issued for one contractor's continuous work shift for a specific operation and will be displayed at the job site. Hot work permits are not transferable across Contractor shifts.

Suitable fire extinguishing equipment (e.g., fire blankets, noncombustible heat shields, flash curtains and fire extinguishers) shall be provided by the contractor and shall be immediately available in all welding, cutting and brazing locations.

The following fire prevention activities shall be completed before hot work can begin:

- Combustibles shall be moved at least 50 feet from the hot work operations. If combustibles cannot be removed, they shall be protected using flame-retardant covers or curtains.
- Flammable liquids shall be removed from the area or totally isolated from the vicinity of the hot work.
- Emergency Services is to be notified if any fire extinguishing equipment has been discharged.
- Tarpaulins used as hot work barriers will be flame resistant.
- Lines previously containing a flammable or combustible fluid or powder must be purged, protected by inert gases, and verified safe for exposure to ignition sources.
- Floor, wall, and other openings shall be closed or covered, including floor drains.
- Combustible dust shall be cleaned from the vicinity of the hot work operations.
- Surrounding floors made of combustible construction shall be protected with a flame-retardant cover.
- Where electrical equipment is not involved, the floors may be swept clean and wetted with water.
- Contractor's employees shall be informed of the location of the nearest fire alarm pull box.
- Contractors are required to bring their own fire extinguishers of the appropriate class for the hazards involved.
- Fire watch and operator shall be trained in use of portable fire extinguishers.
- Emergency Service shall be notified if a fire extinguisher is used in response to an incident directly related to hot work in progress.

- For hot work involving open flame or high heat generation, a fire watch may be required during the conduct of the work as determined by Emergency Services. A fire watch is required for a minimum of 60 minutes after completion of the job, as directed by our insurance carrier with checks occurring each 30 minutes for a total of four hours after the completion of the work. The contractor shall provide the manpower for the watch.

Ladders

A stairway or ladder shall be provided for access where there is a break in elevation of 19 inches or more and no ramp, runway, sloped embankment, or personnel lift is provided.

Portable metal or conductive ladders shall not be used near energized lines or equipment.

Fabricated ladders are prohibited.

Conductive or metal ladders shall be prominently marked as conductive, and all necessary precautions shall be taken when used in specialized work.

No ladders other than Type 1 or Type 1A shall be used. Fiberglass or non-conductive ladders are mandatory for electrical tasks or when working near electrical services where accidental electrical contact is a foreseeable event.

Ladders will be secured to keep them from shifting, slipping, being knocked, or blown over.

Ladders will never be tied to facility services piping, conduits, or ventilation ducting.

Ladders will be lowered and securely stored at the end of each workday.

Ladders will not be placed in front of doors or door openings unless the door is either monitored by an attendant or blocked open to prevent contact with the ladder. If all traffic around the ladder work area cannot be re-routed, the ladder must be secured to prevent accidental knock down. The Contractor Coordinator will arrange closure of aisles, walkways, and selection of alternative traffic routes. Appropriate warning signs, tape and cones will be deployed around ladder work to define exclusion zones.

Stepladders will not be used as straight ladders. The top or first step below the top of ordinary stepladders will not be used as a step or a stool.

Ladders will only be used for the purposes for which they are designed.

The following requirements shall apply to the use of all ladders:

- Ladders used for access to an upper landing surface shall have side rails that extend at least three feet above the landing surface.
- Ladders shall be maintained free of oil, grease, and other slipping hazards.
- Non-self-supporting ladders shall be tied off or otherwise secured to prevent accidental displacement.
- Non-self-supporting ladders shall be used at an angle where the horizontal distance from the top support to the foot of the ladder is one quarter of the working length of the ladder.
- When ascending or descending a ladder, the user shall face the ladder and shall use at least one hand to grasp the ladder; user shall not carry any object or load that could cause him/her to lose balance and fall.
- Ladders will be visually inspected by a competent person and approved for use before being put into service. Each user shall inspect ladders visually before using.
- Ladders with structural defects shall be tagged "Do Not Use," immediately taken out of service, and removed from the site by the end of the day.
- Wooden ladders shall not be painted.
- Any employee working on a ladder at a height greater than 20 feet shall use appropriate fall protection equipment.

Motor Vehicle Safety

Contractor employees shall park their personal vehicles only in those areas designated by Sikorsky Aircraft Emergency Services or the Contractor Coordinator. Sikorsky Aircraft assumes no responsibility for vehicles, or articles in vehicles, parked on Sikorsky Aircraft property.

Vehicles and equipment shall not block exits, walkways, loading areas, fire hydrants, fire lanes or emergency equipment.

Operators of vehicles with high overhead clearance must pre-plan travel routes on site to ensure overhead utilities, obstructions and or personnel will not be at risk of impact.

Contractor diesel and gas-powered vehicles are prohibited inside buildings unless prior approval and arrangements for ventilation have been made with the Contractor Coordinator, Emergency Service and the ESH department.

Contractors will not perform maintenance or repairs of vehicles while on Sikorsky Aircraft property unless approved by the ESH department.

Drivers shall obey all traffic regulations and signs and carry a current driver's license for any vehicles they operate.

Drivers shall not use mobile phones while operating vehicles on company property. Hands free devices are not allowed.

All vehicles are subject to inspection when entering or leaving the location.

Mobile sources (i.e. delivery vehicles, construction equipment, security vehicles, and even personal vehicles) cannot idle for more than three consecutive minutes when not in motion.

Idling is only allowed during the following situations:

- Vehicle is motionless due to traffic conditions
- Mechanical difficulties
- Operation of defrosting equipment, heating or cooling equipment
- Operate auxiliary equipment that is located in or on the vehicle (e.g. crane operation, lift gate operation)
- When the outside temperature is below 20°F
- The vehicle is undergoing maintenance
- To warm the engine up to manufacturer's recommended operating temperature

Passengers are not allowed to ride in beds of pick-up trucks.

Drivers shall be always mindful of pedestrian traffic.

Equipment, including rentals, brought to this facility, used inside or outside, will be identified with the name of the contractor utilizing the equipment.

All accidents will be reported immediately to the site emergency number.

Vehicles brought on site carrying equipment must be inspected daily.

All cargo and equipment on vehicles shall be properly loaded and secured. Vehicles shall not be overloaded.

Overhead Work

Loads shall not be suspended over any persons or over occupied building areas.

Contractors shall secure area with safety stanchions or caution tape post warning signs to alert pedestrians and area occupants of overhead work and may be required to provide a ground spotter.

The distance the barricade is set up away from the work area must take into consideration the length of materials in use and the potential for materials to be projected horizontally or to rebound from the ground surface or surrounding structures if they fall from overhead. The set-up distance should allow for these types of hazards to be contained within the barricaded area.

When work is limited to a visual inspection without tools, caution tape, or safety cones at a minimum of two feet from the work (no potential for falling objects) may be used.

Personal Protective Equipment

Contractors shall furnish and require the use of personal protective devices and equipment (PPE) by their employees and by their subcontractor employees.

PPE shall not be modified or used in any manner other than which it was designed.

Long pants and shirts with sleeves are required

Employees shall wear US Coast Guard approved life jackets or vests when the danger of drowning exists (when working over or near water).

Minimum PPE Requirements:

Employees shall wear safety glasses with side shields that meet the specifications of ANSI Z87.

Safety glasses with side shields shall be worn under welding hoods and face shields.

Safety glasses with side shields shall be worn under chemical goggles unless the goggles are manufactured with high impact lenses.

Safety glasses with side shields shall be worn throughout the manufacturing facility and in outdoor work areas, except in the office and cafeteria areas, unless performing work activities.

Tinted safety glasses are not permitted indoors, unless needed for the job hazards.

Hearing Protection

Hearing Protection is required in designated and posted high noise areas and when performing high noise producing activities.

Respirator Protection

Contractors shall have a Respiratory Protection Program that includes proper training of employees if employees are at risk of exposure to airborne contaminants.

Contractors shall provide their employees with respiratory protection to protect them from exposure to harmful dust, mist, fumes, gases, or vapors when engineering and administrative controls are not adequate.

Site ESH representatives will advise the contractor of specific location requirements for respiratory protection.

Gloves

Contractors shall ensure that their employees wear gloves to protect their hands from lacerations, chemical agents, heat, cold, etc.

Gloves should not be worn around moving machine parts such as belts, pulleys, and gears.

Protective Footwear:

ANSI Z-41 rated safety shoes or work boots are required for construction and maintenance activities.

Due to the various hazards in shop areas and the different types of shop floor material, footwear worn in shop areas must:

- Be closed toe
- Be closed heeled
- Have a substantial sole (e.g. no moccasins)

- Have a maximum heel height of 2 inches, including the sole.
- Have a minimum heel floor contact dimension of 1.5 inch by 1.5 inch

Hard Hats

ANSI Z-89 rated hard hats are required on all construction sites and shall be worn as designed, unless an exemption is approved by ESH.

Roadwork, Parking, Material Loading and Unloading Areas

Individuals performing work in roads and parking areas as well as performing material loading and or unloading shall don high visibility safety apparel in accordance with ANSI/ISEA 107-2004.

Powered Industrial Vehicles (PIVs)

Operators must be properly qualified / authorized and abide by all traffic rules.

Be aware of surroundings and always yield to pedestrians.

Contractors must provide their own PIVs that are in proper working order and comply with safety standards.

Contractors are not permitted to use Sikorsky Aircraft vehicles without authorization from the designated manager for that facility (extension of requirement in tools section). Also, Hold Harmless Agreement must be signed.

Powered industrial vehicles include, but are not limited to, fork trucks, electric buggies, aerial lifts, stackers, motorized hand trucks, earthmoving equipment, cranes, and hoisting equipment.

PIV Registration Requirements

Contractors must follow the PIV registration requirements for each Sikorsky Aircraft division, found in the Appendices section of this guidebook.

PIV Operators Must

Operators of PIVs shall be trained in their safe operation and shall carry proof of training with them in some form (a permit, wallet card, copy of a training record, etc.) and provide such proof upon request.

PIV operators must abide local rules (e.g., speed limits, restricted areas).

PIV operators are not allowed to talk on a cell phone, use ear buds or wear headphones while operating any PIV to avoid distracted driving. However, noise protection devices such as earmuffs or earplugs are permitted where required.

PIV operators shall wear their seat belt at all times during operation when their PIV is provided with one by the manufacturer.

PIV Inspections

PIVs shall be checked by the operator at the beginning of each shift to ensure that all parts, equipment, and accessories that affect safe operation are in proper operating condition and free from defects.

The Contractor ESH inspection process will verify compliance with this requirement. All defects shall be corrected before the vehicle is placed in service.

Any vehicle found deficient must be removed from the site and will not be allowed back until the items have been repaired and a new inspection and maintenance report has been presented.

This requirement applies to all contractor vehicles whether owned, rented, or leased.

All PIVs shall have periodic maintenance and maintain a record of the PM in accordance with manufacturer's requirements

PIV Operational requirements:

PIV speed will be limited to 5-6 mph/10-kph (approximately twice walking speed) inside the building including but not limited to manufacturing areas, high pedestrian areas, and areas with other potential significant risks.

Contractor equipment brought in for temporary use only is exempt from speed limiting control devices but the PIV shall have administrative controls in place to control speed (speedometer) and operations must comply with the 6 MPH speed limit.

All buggies, flatbeds, fork trucks, stackers and golf carts including those used in parking lots and roadways must have a yellow flashing (non-strobe) light that indicates that it is in operation.

All fork trucks, electric buggies, carts, and earth moving equipment must have an audible alarm when operating in reverse. Audible alarms must be of sufficient sound level to be heard over ambient noise.

LPG tanks shall be stored outdoors at a location specified by the Contractor Coordinator. All LPG tanks on PIV's must be replaced outside.

Diesel and gas-powered vehicles are prohibited inside buildings unless prior approval and arrangements for ventilation have been made with the Contractor Coordinator, Emergency Services and the ESH department.

Areas within the facility where vehicles will be operated shall be assessed for hazardous conditions, and only vehicles designed for use under any identified hazardous conditions may be used in that area.

All fork trucks that have a sit down, non-elevating operator position are required to have a restraint system (such as a seatbelt) installed and available for use.

All fork trucks shall have protective overhead guards to prevent objects from falling onto the operator.

Parked forklifts shall have forks resting at ground level and parking brake set.

Vehicles shall not be left running while unattended.

In the event of an indoor facility emergency notification, vehicles shall be pulled over to the side of the aisle and motors switched off.

Actively leaking vehicles and equipment are prohibited from exiting the facility.

The contractor is responsible for repair and containing any leaking vehicle or equipment before exiting the facility. Emergency response personnel shall be notified by dialing the emergency phone number for the facility.

Riding construction equipment as a passenger is prohibited.

Towing or otherwise pulling loads with the forks on a forklift is prohibited.

PIV use shall be restricted or minimized during shift changes to minimize pedestrian exposure to PIV traffic.

PIVs (propane, diesel) shall not be allowed to idle for 3 minutes or more.

PIVs must be equipped with non-marking for inside operation.

Modifications to PIVs are prohibited unless approved by the manufacturer of the PIV. Documentation must be kept with the PIV.

Makeshift fork extensions and use of C-clamps are prohibited.

PIVs are not allowed in parking lots or roadways without prior written permission from ESH.

Roof Work and Access

Roof Work/Access requires prior authorization from your Contractor Coordinator.

Contractors and employees are not permitted on the roof in severe weather unless authorized by a Contractor Coordinator.

Refer to the Elevated Work section of this guidebook for fall protection requirements and acceptable fall protection methods.

Personnel accessing roofs with an unprotected edge to perform work must proceed directly to their work area. While in transit, they shall focus their immediate attention on staying as far away from unprotected edges as possible and continue moving toward the designated work area without stopping until they arrive. Once they reach the work area, they must comply with an acceptable means of fall protection.

Scaffolding

Fall protection must be used during erection and dismantling of supported scaffolds. Exemptions by competent person in accordance with OSHA Scaffold Standard require prior authorization from Contractor Coordinator and ESH.

The footings or anchorage for scaffolds shall be sound, rigid, and capable of carrying the maximum intended load without settling or displacement.

Guardrails and toe-boards shall be installed on all open sides and ends of scaffold platforms that are more than four feet above the ground or floor.

Scaffolds shall be provided with an access ladder or equivalent safe access. Employees shall not climb or work from scaffold handrails, mid-rails, or brace members.

When freestanding, manually propelled scaffolds are used, the height shall not exceed four times the minimum base dimension.

Employees shall not ride on mobile scaffolds when they are being moved.

After a scaffold has been erected, and before any employee or contractor can begin working on that scaffold, the scaffold shall have a scaffold information tag completed and attached to the scaffold.

The scaffold information tag shall be signed by a contractor competent person and attached conspicuously to the lower level of the scaffold. A tag shall be good for a maximum of 30 days. A new tag must be reissued after 30 days.

A contractor competent person, before each work shift, shall inspect scaffolds and scaffold components for visible defects, and after any occurrence, which could affect the structural integrity of the scaffold.

Any scaffold part or component that is in poor condition shall be taken out of service and tagged out of service until it has been repaired or replaced by a qualified person.

Stacks and Drains

Operational exhaust systems shall not be compromised in any way without prior approval from your Contractor Coordinator.

Stacks and drains shall not be painted, installed, relocated, or altered in any manner or their identification changed without prior approval from your Contractor Coordinator and the Environmental Health and Safety Department.

Jobs that require removal or installation of stacks require coordination with the ESH department for proper stack identification management.

Tools

Hand tools shall be kept in good condition, i.e., sharp, clean, oiled, dressed, and not abused.

Tools subject to impact (chisels, star drills, and caulking irons) tend to "mushroom" and shall be kept dressed to avoid flying spalls. Any tool that has already mushroomed shall be taken out of service.

Tools shall not be used beyond their capacity, e.g., extending the handle using a piece of pipe or other means. Use the proper tool for the job.

Tools and other materials shall not be left on stepladders, scaffolds, roofs, or other places where they may be dislodged and fall.

Non-sparking tools are required in areas where flammable solvents are handled and where sparks could create an explosion.

Wooden handles of tools shall be kept free of splinters and cracks and be kept tight in the tool.

Contractors shall maintain all portable power tools, electrical cords and pneumatic hoses in good condition and proper working order.

Faulty or damaged tools and hoses shall be tagged "Do Not Use" and removed from service.

When powered tools are designed to accommodate guards, they shall be equipped with the manufacturer's guards in operable and original condition, when the tool is in use.

Contractors must provide ground-fault circuit interrupters (GFCI's) at all times when using portable handheld electric power cords in order to protect employees from ground-fault hazards.

Cords and hoses shall be protected from damage and shall be routed through the job area in a manner that prevents tripping hazards and cord or hose damage.

Portable electric power tools shall be double-insulated or electrically grounded using three-conductor cord and three-prong plugs.

Double-insulated tools shall be clearly marked.

Pneumatic power tools shall be secured by some positive means to prevent the tool from becoming accidentally disconnected.

Tools shall not be hoisted or lowered by their hoses/cords.

All pneumatically driven nail guns, staplers and other similar equipment provided with automatic fastener feed, which operate at more than 100 psi of pressure at the tool, shall have a safety device on the muzzle to prevent the tool from ejecting fasteners, unless the muzzle is in contact with the work surface.

Powder actuated tools require advanced written approval prior to use, and users shall possess a certificate for operation.

Warning signs shall be posted when powder actuated tools are in use.

Powder actuated tools shall never be left unattended. When not in use, they shall be secured under lock and key.

Powder actuated tools shall not be used in explosive or flammable atmospheres.

Contractors are not permitted to use Sikorsky Aircraft tools and equipment without authorization from your Contractor Coordinator.

Trenching, Excavating and Drilling

Exterior trenching, excavating, or drilling:

Some State Laws requires the contractors to contact “Call Before You Dig” (or similar programs) prior to any trenching, excavating, digging, or drilling activities.

The Contractor and Contractor Coordinator shall clearly mark on the surface grade in paint the boundary limits of the planned work area with “CBYD”.

Prior to commencing any subsurface excavation, digging, trenching activity the Contractor Coordinator and the contractor shall verify that subsurface surveys have been completed upon receipt of appropriate documentation and or field marking of surface grade by a scanning professional.

All CT Sites: CT State Law requires the contractor to contact “Call Before You Dig” 1-800-922-4455 two full working days prior to any trenching, excavating, digging, or drilling activities.

Subsurface excavation includes cutting, drilling, boring, or trenching in concrete, asphalt, or other surfaces.

Check with your Contractor Coordinator for state requirements.

Trenching, Excavating, or Drilling into Concrete (Interior/Exterior):

Prior to commencing any subsurface excavation/digging/ trenching/drilling activity into a concrete surface a 3-dimensional scan shall be performed by a scanning professional.

General Requirements

Underground lines, equipment and electrical cables shall be identified and located by the Contractor Coordinator prior to beginning work that involves trenching, excavating, or drilling into structures.

Contractors will not initiate work without prior approval/authorization to proceed by the Contractor Coordinator.

Contractor shall assign a competent person to all trenching and excavation work. This person shall be clearly identified to all employees assigned to the job.

Walls and faces of trenches and excavations, four or more feet deep, shall be shored, sloped, or shielded as required by the type of soil encountered. All loose dirt shall be a minimum of two feet from the edge to prevent falling back into the trench.

Prior approval from the Contractor Coordinator and ESH personnel is required before commencing, or continuing, with trenching deeper than four feet.

A confined space entry permit shall be required where oxygen deficiency or a hazardous atmosphere exists or could exist.

A stairway, ladder, ramp, or other safe means of egress shall be located in trench excavations that are four feet or more in depth so as to require no more than 25 feet of lateral travel for employees.

Daily inspections shall be conducted by a competent person for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems or other hazardous conditions.

Employees shall not be permitted underneath loads handled by lifting or digging equipment.

Employees shall be protected from excavated or other materials and equipment that could cause a hazard by falling or rolling into the excavation.

Physical barriers shall be placed around or over trenches and excavations. See “Barricades” for details. Flashing light barriers shall be provided at night.

Erosion control measures to minimize storm water pollution shall be reviewed approved by the Contractor Coordinator prior to implementation.

Waste Management

Contractors shall have a waste management policy that ensures they do not adversely affect the health and safety of contractor employees, Sikorsky Aircraft employees, the public, or the environment.

Contractors must have pre-approval from their Contractor Coordinator and ESH for processes that will generate waste of any kind, discharged water, or will result in air emissions.

Waste material will be categorized as hazardous and/or non-hazardous with the assistance of site ESH personnel and placed into appropriate containers as instructed by site ESH personnel.

No waste material shall be disposed of or transported off-site without the approval of the Contractor Coordinator and ESH.

Contractors shall provide trash removal containers for construction debris and general trash.

All waste generated on location shall be disposed of as approved by the Contractor Coordinator and site ESH.

For waste approved for disposal by the contractor, a report must be issued to the Contractor Coordinator indicating date, a description of the waste, the amount in weight (lbs.), the transporter and the destination facility, including their name, address, and phone number.

Wastes (includes rinse from washing of equipment, PPE, tools, etc.) are not to be poured into sinks, drains, toilets, or storm sewers, or onto the ground.

Solid or liquid wastes that are hazardous or regulated in any way are not to be disposed of in refuse dumpsters.

All spent (used) or unused chemicals must be disposed of in accordance with all applicable solid waste and hazardous waste regulations.

Contractor may be responsible for handling and offsite disposal of nonregulated construction debris (e.g., concrete, steel, wood, plastic) that they generate. Disposal method shall be approved by ESH.

Regulated materials generated will be placed in pre-labeled, DOT approved containers provided by Sikorsky Aircraft through the Waste Operations departments.

Exceptions to this include roll-off or other containers specifically arranged through the job's contract.

Site ESH personnel will manage the removal and disposal of regulated materials or chemicals unless specifically arranged otherwise.

Waste containers brought on site by the contractor shall be identified with the contractor's name.

Sinks in restrooms and drains will not be used for disposal of any materials.

Deliberate and/or unauthorized discharges and releases to the environment are prohibited.

When a contractor uses a Sikorsky Aircraft waste container (indoor or outdoor), the contractor shall ensure that it be kept closed at all times.

When the container is full, the contractor shall write in the "Full Date" on the container's label and notify their Contractor Coordinator for removal and storage of the full container. Contractor will be asked for the container's location and number located on the lower right side of the white label.

Waste materials that no longer have use such as paints, spray paint cans (including empty ones), used varnish, thinners, other types of solvents, oil, antifreeze, kerosene, or rags contaminated with any of

these materials are controlled waste. Contact your Contractor Coordinator for more information on their disposal.

Containers stored outdoors shall be covered at all times to keep out precipitation, except when actively in use. This includes roll-off containers. The following are key factors for meeting this requirement:

- Containers shall be covered upon delivery and until removed from site. The party that supplies the container (Contractor Coordinator, Contractor, etc.) shall provide the cover.
- If the cover is flexible (e.g., a tarp), it must be kept taut to minimize pooling of precipitation. Any pooling that does occur must be eliminated before the cover is removed.
- All dumpsters with a drain plug shall have the plug secured and an attached cover.
- Containers shall be in areas that minimize the risk to storm drains in the event leakage occurs and/or the area storm drain must be protected against any unplanned leakage during storage or transfer.
- Immediate responsibility for maintaining protection belongs to the Contractor while the project is underway. When the project is completed or is not manned, the Contractor Coordinator assumes the responsibility until the container is removed from the site or the contractor mans the project again.

Removal of soils from, or adding soils to, storage areas require approval from Sikorsky Aircraft for each job. Soil removed and placed in these areas is characterized for specific uses and is subject to tracking. Dumping of concrete and debris in these areas is not allowed. Contact your Contractor Coordinator or the ESH department for guidance.

Welding, Cutting, and Brazing

A hot work permit must be obtained prior to welding, cutting, soldering, brazing operations, open flame work, and use of spark/ heat producing equipment or powder actuated tool operations.

The permit must be countersigned by the Contract Coordinator.

Suitable fire extinguishing equipment shall be immediately available in all welding, cutting and brazing locations.

Objects to be welded, cut or heated shall be moved to a designated safe location, or, if they cannot be readily moved, all movable fire hazards in the vicinity shall be taken to a safe place. If fire hazards cannot be removed, a pre-job assessment shall be performed, and control measures established to protect the immovable fire hazards from heat, sparks and slag.

Personnel working around or below the welding, burning, or grinding operation shall be protected from falling or flying objects.

Should a pre-job assessment identify that an unsafe accumulation of contaminants could develop, then suitable mechanical ventilation or respiratory protective equipment shall be provided.

Gas Welding and Cutting

All hoses and torches carrying acetylene, oxygen, fuel gas, or any substance that may ignite or be harmful to employees shall be inspected at the beginning of each shift.

Defective hoses and torches shall be tagged "Do Not Use" and immediately removed from service.

Acetylene cylinders shall not be stored on their side.

Torches shall be lighted from friction lighters and not by matches or from hot work.

Directional gas flow fittings (back-flow valves) shall be provided on hoses to prevent reverse gas flow or back flow.

- Torches shall be turned off and removed from confined spaces when not in use.

Arc Welding and Cutting

Arc welding and cutting operations shall be shielded by noncombustible or flame-retardant screens to protect employees and other persons working in the vicinity from the direct rays of the arc. When curtains or other barriers may not be feasible, "Don't Watch the Arc" or similar signage shall be used at safe approach distances to warn passersby about the hazards of looking into the arc.

Arc welding and cutting cables shall be of the completely insulated, flexible type, capable of handling the maximum current requirement of the work in progress. Cables in need of repair shall not be used.

The power supply switch to the equipment shall be opened when the welder or cutter must leave the work or to stop work for any appreciable length of time, or when the welding or cutting machine is to be moved.

All ground return cables and all arcs welding and cutting machine grounds shall be in accordance with regulatory requirements.

Ground connections shall be made directly to the material being welded.

Contractor Review Board

When a contractor has been observed violating any Sikorsky Aircraft, Lockheed Martin, or regulatory requirement, they shall be confronted by a Contractor Coordinator to cease activity, if immediately necessary. Contractor serious violation and injures, serious incidents, or serious near misses that were a result of a contractor violation must be reported to a Sikorsky Project Coordinator and the ESH Department.

The contractor Review Board (CRB) consist of the ESH Management, Facility Management, Project Coordinators, etc. The CRB will review contractor incident reports and assign corrective actions, as necessary. Assigned actions will be determines by the board based on the nature and circumstances of the incident or violation.

In addition to corrective actions, the CRB may determine that a contractor will be placed under a probationary period and/or suspended from site access. Sikorsky Aircraft reserves that right to suspend individual contractors and/or contractor employees from Sikorsky property.

Review and Compliance

Please review the requirements within this guidebook with all your all your employees and subcontractors. As a contractor working on Sikorsky Aircraft property, you are responsible for your employee's safety and compliance with all Sikorsky Aircraft, Lockheed Martin, and regulatory requirements.

