

2019



CAL MARITIME

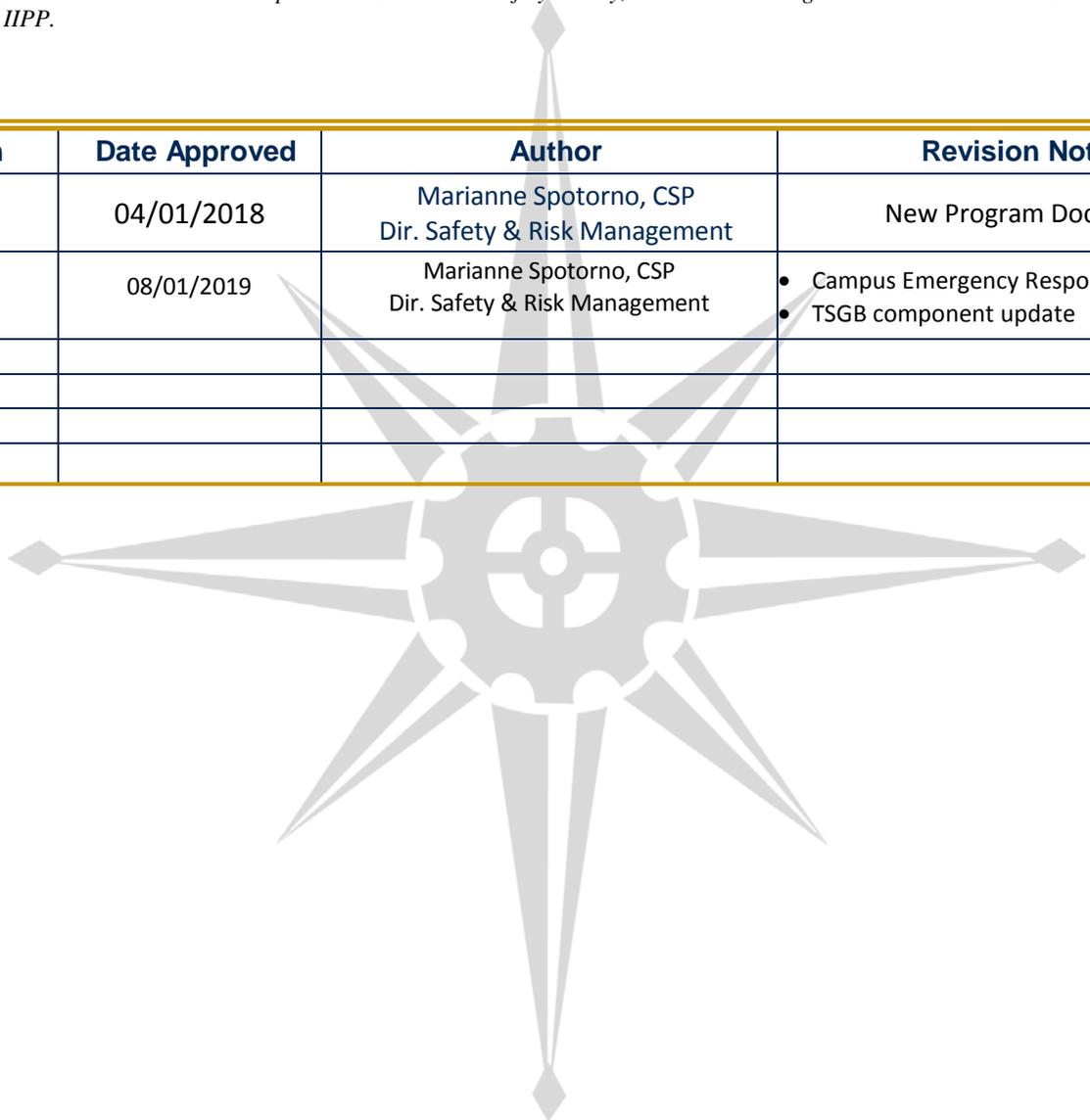


Hand & Power Tool Safety Plan

INJURY ILLNESS PREVENTION PROGRAM

This sheet should be completed each time the **Hand & Power Tool Safety Plan** is reviewed and/or modified. The Director of Safety and Risk Management is responsible for the review and update this document annually or more frequently as determined or needed per CSU Chancellor's Executive Order 1039 Occupational Health and Safety Policy, 1069 Risk Management as well as Cal Maritime A&F Policy 09-004 IIPP.

Version	Date Approved	Author	Revision Notes:
1.0	04/01/2018	Marianne Spotorno, CSP Dir. Safety & Risk Management	New Program Document
2.0	08/01/2019	Marianne Spotorno, CSP Dir. Safety & Risk Management	<ul style="list-style-type: none"> • Campus Emergency Response update. • TSGB component update



											
Risk Management	Transportation	Personal Protective Equipment	Hazardous Materials Management	Ergonomics	Material Handling	Safe Work Practices/Accident Prevention	Working at Heights/Elevated Work	Emergency Response	Controlling Hazardous Energy	Marine/Water Safety	Continuous Improvement / Change Management

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1.0 Purpose & Scope

The purpose of the Injury Illness Prevention Program (IIPP) is to outline Cal Maritime’s environmental health and safety requirements, expectations, and responsibilities in order to achieve effective campus safety performance through Integrated Safety Management (ISM). The **Hand & Power Tool Safety Plan** is a subject specific component that supports the overall University IIPP.

This Manual applies to all Cal Maritime operations, maintenance and construction activities under the supervision of Cal Maritime personnel. For activities associated with the Training Ship Golden Bear (TSGB) refer to the Vessel Operating Manual (VOM) and/or Shoreside Administrative Manual (SAM). The TSGB is a subject specific component that supports the overall University IIPP.

1.1 Regulatory Standards Reference

Cal Maritime and its subcontractors shall comply with the following requirements.

In case of conflict or overlap of the below references, the most stringent provision shall apply.

- Occupational Safety and Health Act (OSHA), 1904, 1910, 1915, 1917, 1918, 1926
- California Code of Regulations (CCR), Title 8, GISO, CSO, ESO
- Portable power tools such as drills, sanders, and saws must be either grounded or double insulated - [T8CCR 2395.45](#)
- Circular saws must be guarded - [T8CCR 4307](#)
- Saws must not pullout pass the front of table - [T8CCR 4309\(b\)](#)
- Saws must automatically return to back of table when cut is done - [T8CCR 4309\(d\)](#)
- Cords and hoses must not be used to lower tools - [T8CCR 1707](#)
- Electrical cords must be kept in good working order. Damaged cord insulation can be repaired only if the conductor is not damaged and the completed cord repair allows the insulation to retain its original properties [T8CCR 2500.25](#)
- Electrical cords must be protected - [T8CCR 2405.2\(f\)](#)
- Keep the tool sharp - [T8CCR 1699\(a\)](#)

1.2 CSU-System & Cal Maritime Specific Reference

For additional information on Cal Maritime environmental health and safety policies, refer to:

- CSU Executive Order 1039, 1056, 1069
- Cal Maritime Policy AF 09-003, AF 09-004

1.3 Other Resources

- N/A

2.0 Administrative Duties & Responsibilities

It is the policy of the Cal Maritime to maintain a safe and healthy work environment for each employee (including student and contract employees), and to comply with all applicable occupational health and safety regulations. This Injury and Illness Prevention Program (IIPP) is intended to establish a framework for identifying and correcting workplace hazards within the department, while addressing legal requirements for a formal, written IIPP.

To assist Cal Maritime in providing a safe, compliant, environmentally sound, and more sustainable operation, each department or operational unit is expected to review, understand, and follow the guidance provided in the Injury Illness Prevention Program components and the and the function of the integrated campus safety management system (ICSMS) as related to operations under their control.

In a proactive behavior based environmental health and safety model that entire campus community participation reflects a process that embraces the ability to;

- Eliminate adverse conditions which may result in injury or illness,

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- Recommend the establishment of programs to raise safety consciousness in the community, and
- Achieve and maintain a beneficial relationship through continuing communication on issues relating to environmental health and occupational safety.

2.1 Employees (Including Student workers)

It is the responsibility of all faculty and staff to proactively participate and subsequently comply with all applicable health and safety regulations, Cal Maritime policies, and established safe work practices. This includes, but is not limited to:

- Observing health and safety-related signs, posters, warning signals and directions.
- Learning about the potential hazards of assigned tasks and work areas.
- Taking part in appropriate health and safety training.
- Following all safe operating procedures and precautions.
- Participating in workplace safety inspections
- Using proper personal protective equipment.
- Inform coworkers and supervisors of defective equipment and other workplace hazards without fear of reprisal.
- Reviewing the building emergency plan and assembly area.
- Reporting unsafe conditions immediately to a supervisor, and stopping work if an imminent hazard is presented.

2.2 Department of Safety and Risk Management (SRM)

The Director of Safety and Risk Management (SRM), as delegated by the University President, is responsible for the implementation and administrative management for Cal Maritime’s Injury Illness Prevention Program (IIPP) that meets the requirements of California Code of Regulations (CCR), Title 8, section 3203) as well as other applicable California and Federal Occupational Safety and Health (Cal-OSHA) requirements.

Further responsibilities are outlined below:

- Provide advice and guidance to all university personnel concerning IIPP compliance requirements;
- Provide centralized monitoring of campus activities related to implementation of campus IIPP;
- Ensure scheduled periodic safety inspections are performed in compliance with regulatory requirements and assist management staff in identifying unsafe or unhealthful conditions;
- Ensure safety and health training programs comply with regulatory requirements and university policy;
- Oversee the maintenance of safety and health records consistent with the requirements of this document and regulatory mandates;
- Ensure program audits, both scheduled and as required by a process, equipment or personnel change, or by a safety program mandate, are performed;
- Interpret existing or pending safety and health legislation and recommend appropriate compliance strategies to university personnel;
- Maintain centralized environmental and employee monitoring records, allowing employee access as directed by law.
- Conduct at least an annual review of this document and make the current revision available on the SRM web site.

2.3 Deans, Directors, Department or Operating Unit Management

Campus Department or Operating Unit Head leadership have an integral campus role and shall have a thorough understanding of Injury Illness Prevention Program components and the function of the integrated campus safety management system (ICSMS) as related to operations under their control.

- The Department Head has primary authority and responsibility to ensure the health and safety of the department's faculty, staff and students through the implementation of the Injury Illness Prevention Program components. This is accomplished by communicating the Cal Maritime’s campus emphasis on health and safety, analyzing work procedures for hazard identification and correction, ensuring regular workplace inspections, providing health and safety training, and encouraging prompt employee reporting of health and safety concerns without fear of reprisal.

- Specific areas include employee and student (both student employees and students in academic programs) education and training, identification and correction of unsafe conditions, and record keeping. It is recognized that a substantial amount of responsibility falls at this level.
- Colleges and Departments are encouraged to designate an individual as the College or department safety coordinator, to assist with specific operational environmental health and safety process management components.

2.4 Supervisors and Principal Investigators

Supervisors play a key role in the implementation of the Cal Maritime's Injury Illness Prevention Program components. Supervisors may be Management, Senior Research Associates, Department Chairs, Principal Investigators, or others who oversee a project and/or staff. They are responsible for but not limited to:

- Communicating to their staff and students about Cal Maritime campus's emphasis on health and safety.
- Ensuring periodic, documented inspection of workspaces under their authority.
- Promptly correcting identified hazards.
- Modeling and enforcing safe and healthful work practices.
- Providing appropriate safety training and personal protective equipment.
- Implementing measures to eliminate or control workplace hazards.
- Stopping any employee's work that poses an imminent hazard to either the employee or any other individual.
- Encouraging employees to report health and safety issues without fear of reprisal.

2.5 Academic Programming Faculty and Advisors

It is the responsibility of Faculty, Academic Programming Advisors other Cal Maritime related activities and student clubs to:

- Develop procedures to ensure effective compliance and support of the Injury and Illness Prevention Program components as it relates to operations under their control. Specific areas of responsibility include student education and training, identification and correction of unsafe conditions, and incident reporting.
- Develop and maintain written classroom, laboratory, and activity procedures which conform to regulatory, campus and departmental guidelines.
- Instruct students in the recognition, avoidance, and response to unsafe conditions, including hazards associated with non-routine tasks and emergency operations
- Permit only those persons qualified by education and training to operate potentially hazardous equipment or use hazardous materials, unless under close supervision.
- Supervise students in the performance of activities.

2.6 Students- Cadets

Students are expected to always adhere to safety practices presented by faculty, technical staff, student assistants, graduate assistants or other authorized individuals. They must also report potentially hazardous conditions that become known to them. These reports should be made to their supervisors, faculty advisers, Department of Safety and Risk Management, or other responsible parties.

2.7 Hand & Power Tool Users

- Is trained on and applies "Safe-Work Rules" for users as outlined in this program.
- Always selects and uses a hand and power tools in a safe manner.
- Visual inspect prior to use.
- Alerts Owner Department Management when hand and/or power tools need repair/replacement.
- Assesses work to determine if fall protection should be worn and seeks alternative access methods instead of hand and/or power tools if need be.
- Proactively use Stop Work Authority when they feel there is an unsafe condition present by means of communicating with Department Management and SRM to work collaboratively to resolve and improve identified or perceived condition.

3.0 Process Management

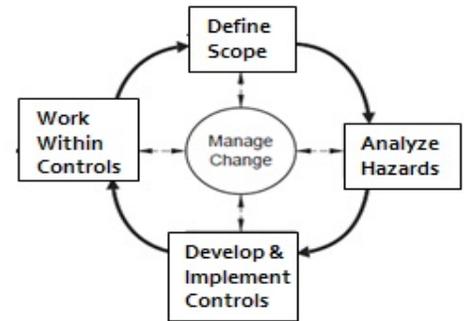
3.1 Hazard Identification, Risk Assessment & Control (HIRAC)

3.1.1 Integrated Safety Management (ISM)

Cal Maritime is committed to having all campus-related work performed safely and in a manner that strives for the highest degree of protection for the Campus Community. To achieve these goals, Cal Maritime implements, the principles of safety through an Integrated Campus Safety Management System (ICSMS).

Simply put, ICSMS applies a plan-do-check-act approach to campus safety management. Five core activities represent the plan-do-check-act approach, and comprise the underlying process for any construction work activity. The five core activities are:

- 1) Define the Scope of Work
- 2) Analyze the Hazards
- 3) Develop and Implement Hazard Controls
- 4) Perform Work Within Controls
- 5) Provide Feedback and Manage Change



The identification and analysis of workplace hazards is part of the pre-work planning process. The goal of this core activity is to ensure that the hazards associated with construction work activities are clearly understood and appropriately managed. All new campus work activities, changes to existing work or introduction of new equipment or processes (which introduce new hazards or increase the hazard level) need to be reviewed to analyze hazards, identify safety standards/requirements, and establish appropriate controls. Safety conditions and requirements need to be formally established and in place before construction work is initiated.

The campus Job Hazards Analysis (JHA) process is the principle method for achieving this.

3.1.2 Hazard Identification, Risk Assessment & Determining Control Table (HIRAC)

The EHS Hazard Identification, Risk Assessment and Determining Control Table (HIRAC) process is used to identify, assess and risk-rank Cal Maritime campus-related activities in order to ensure that Cal Maritime Campus Safety programs, activities and work controls are appropriately addressing construction risks. The initial HIRAC assessment and risk-ranking of campus-related activities was conducted during the third quarter, AY 2016-2017. The HIRAC assessment will be reviewed annually, when new campus-related activities are introduced that create or modify assessed risks, and when worksite observations or accident/incident experience identify previously unrecognized or incorrectly categorized risks.

3.1.3 Application of Hierarchy of Controls

In developing hazard controls and preparing the Job Hazard Analysis submittal, the campus shall select means and methods to mitigate worker exposure to workplace hazards using the Hierarchy of Controls as specified in the American National Standards Institute (ANSI) Z10-2005 Occupational Health and Safety Management Systems.

The campus shall make a good faith effort to analyze each hazard and identify the appropriate control(s) using the following hierarchy:

- Elimination or substitution of the hazards where feasible and appropriate;
- Use of engineering controls where feasible and appropriate;
- Application of work practices and administrative controls that limit worker exposures; and
- Provision and use of personal protective equipment

3.1.4 Job Hazards Analysis (JHA)

For the purposes of this section Job Hazard Analysis (JHA) and Job Safety Analysis (JSA) can be used synonymously. A JHA/JSA can be incorporated into a Pre Task Plan, provided there is a section for employees to review, comment and sign. Core components of the scope of work and relative hazards can be electronically completed ahead of time, provided there is room for current site conditions are able to be readily added as applicable. When the scope or conditions change, the change in work plan should be noted in a different colored pen with employee’s initially that they have been briefed on the change. The Department of Safety and Risk Management will work with individual Departments to develop a master Campus JHA library.

- Each employee scheduled to work in the activities identified below shall receive safety training in those activities prior to working on them.
- Subcontractors shall submit a Job Hazards Analysis (JHA) for those construction activities meeting the requirements for performing JHA (see below). The JHA shall be reviewed and authorized to proceed by the Cal Maritime Department of Safety and Risk Management before work commences.
- Subcontractor shall be responsible for submitting a JHA and work procedures to Cal Maritime Department of Safety and Risk Management for review a minimum of seven days prior to the start of work for most work activities.

3.1.4.1 JHA Requirements

A JHA shall be written based on the following conditions:

- Jobs with the highest injury or illness rates
- Jobs with the potential to cause severe or disabling injuries or illness, even if there is no history of previous accidents
- Jobs in which one simple human error could lead to a severe accident or injury
- Jobs that are new to your operation or have undergone changes in processes and procedures
- Jobs complex enough to require written instructions.

If not otherwise specified in a particular project specification, the JHA shall be performed in accordance with the OSHA 3071.

JHA processes. In general the JHA will include:

- Description of work phase or activity
- Identification of potential hazards associated with the activity
- Address further hazards revealed by supplemental site information (e.g., site characterization data, as-built drawings) provided by the subcontractors construction manager.
- A list of the Subcontractor’s planned controls to mitigate the identified hazards
- Identification of specialized training required
- Identification of special permits required
- Name of the Subcontractor’s Competent Person(s) responsible for inspecting the activity and ensuring that all proposed safety measures are followed.

3.2 Hazard Assessment

⚠ Note: Each scope of work will have its own JHA, refer to the JHA Library for more details.

GENERAL HAZARD IDENTIFICATION & CONTROL MEASURES FOR EQUIPMENT USE			
TASK	HAZARD		HAZARD CONTROLS & PROTECTION MEASURES
OPERATION OF HAND AND/OR POWER TOOLS	Use of Hand And/or Power Tools- Cuts, abrasive, electric shock, injury from flying debris, tripping over power cords, electrocution		<ul style="list-style-type: none"> ☞ Wear goggles and dust mask if applicable. ☞ Keep cords away from work area. ☞ Keep tools in good condition. ☞ Inspect tools before use. Verify that guards are working properly. ⚠ DO NOT put hand near blades. ☞ Make sure you have a good center of gravity and maintain control at all times
	Electrical Hazard		<ul style="list-style-type: none"> ☞ Ensure all electrical equipment is properly grounded. (i.e. three prong electrical plugs) and in proper working order before using. ☞ Strictly follow all manufactures precautions and recommendations. ⚠ DO NOT overload circuits by stringing multiple power strips (also known as daisy chaining)
	Caught in between Pinch Points Cuts, pinches, smashes, punctures, severing of fingers.		<ul style="list-style-type: none"> ☞ Wear safety glasses. Work away from yourself. ☞ Use normal caution required for all hand tools.
	Caught in between Moving Parts		<ul style="list-style-type: none"> ☞ There are gears and exposed moving parts on machinery ☞ Use LOCK-OUT procedures when performing maintenance or conducting any work within 12" of an exposed pinch point. ⚠ NEVER put your hands or feet near an exposed pinch point or gears.
	Crush Hazard to foot		<ul style="list-style-type: none"> ☞ Approved protective footwear is needed when there is the risk of foot injury due to slipping, uneven terrain, abrasion, crushing potential, temperature extremes, corrosive substances, puncture hazards, electrical shock and any other recognizable hazard

TRAINING REQUIREMENTS

⚠ DO NOT use this equipment unless an instructor or shop supervisor has instructed you in the safe use and operation and has authorized you to operate this equipment. ⚠

IIPP
 Dept. Specific
 Operators/Owner's Manual
 Other:

PERSONAL PROTECTIVE EQUIPMENT

									
Eye Protection	Foot Protection	Hand Protection	Hearing Protection	Body Protection	Head Protection	Respiratory Protection	Fall Protection	Face Shield	OTHER
When exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation...	When working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, or will protect the affected	When hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns	When exposed to a time weighted average noise level of 85 dBA or higher over an 8 hour work shift.	When exposure to: Intense heat, hot metals, other hot liquids Impacts from materials that can cut, burn Hazardous chemicals Or potentially infectious materials	Where there is a potential for injury to the head from falling objects and/or when there is a risk of impact to head	May be required if removal of contaminants from the air does not fall below permissible exposure level.	When there is a risk of falling from a height greater than 4ft GSO 6ft CSO 6ft MSO When working in confined space	Face shield can be used over the glasses if there is a presence of a lot of flying debris.	

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3.3 General Requirements

All hand and portable power tools must be maintained in a useable condition. The following applies to all hand and portable power tool maintenance and use to minimize hazards associated with their use.

Maintain all tools in useable condition through following manufacturer recommendations for service; storing tools in the appropriate manner to minimize exposure to excessive temperature, humidity and corrosive materials; and reporting defects or deficiencies associated with tools to departmental supervisors upon discovery.

Use the appropriate tool for the job. Hand and portable power tools are designed and manufactured for specific uses. Employees must use tools and equipment in the manner intended by the manufacturer. To prevent misuse of existing equipment and to prevent injuries, the supervisor shall ensure the proper tools are available to complete a job; if a task is required to be completed by an employee where an appropriate tool is not present, the supervisor shall ensure the job is not completed until the appropriate tool is available.

Prior to use, tools and equipment should be inspected by the user to ensure they are in proper working order with no defects or deficiencies, which may result in unsafe use or injury to the user. Damaged tools and equipment must be removed from service and tagged to ensure unauthorized use does not take place.

Always operate tools and portable power equipment according to the manufacturer's specifications. Failure to do so may result in injury to the user.

3.3.1 Machine Guards & Safety Switches

Many tools and equipment protect exposed moving parts through various machine guarding techniques. Belts, gears, shafts, pulleys, sprockets, spindles, drums, flywheels, chains, or other reciprocating, rotating, or moving parts are typically guarded with safety shields or switches.

Machine guards must be provided to protect the user from the following:

- Point of operation hazards
- In-running nip points
- Rotating parts
- Flying particles and sparks.

Machine guards directly cover a hazardous area of a tool or piece of equipment to prevent contact by the user. An example of a machine guard is the retractable cover on a circular saw, which exposes only the area of the blade performing the cutting action.

Safety switches are incorporated into many portable power tools to prevent unintended activation of the equipment. An example of a safety switch is a constant pressure switch, which requires the user to place pressure on the activation switch and releasing of the switch results in the tool shutting off or stopping.

Machine guards, safety switches, and any other safety elements of a tool or power tool, must not be removed, manipulated or tampered with in any way.

3.3.2 Hand Tool Safety

Use hand tools only for their intended purposes. For example, using a screwdriver as a chisel may result in the tip of the screw driver breaking and becoming a flying particle hazard.

- Inspect hand tools for damage prior to use
- Maintain hand tools in good working condition and free from damage. Handles of tools should be maintained free from grease and oil to prevent slipping and deterioration of the materials of construction. Damaged hand tools must be removed from service and repaired or replaced.

- When using tools, such as knives, saws, or other cutting devices, always direct the tool away from the worker and any other personnel in the area.
- Maintain cutting tools so that the cutting edges are sharp. Dull cutting edges may present additional hazards.
- Cracked cutting blades must be removed from service and replaced.
- Wrenches must be used to prevent slippage, to prevent injury to the user.
- Impact tools, such as chisels, drift pins, and wedges must be kept free from mushroomed heads.
- Iron or steel hand tools may produce sparks when struck. Ensure the use of iron and steel tools does not occur near flammable or combustible materials. If flammable or combustible materials are present, ensure the use of non-sparking hand tools.
- Maintain both the work area and tools in a clean and organized manner. This will help prevent potential injuries.
- Store hand tools in a clean and dry location.
- Wear the appropriate PPE

3.3.3 Portable Power Tool Safety

- Portable power tools must be equipped with safety mechanisms as per manufacture requirements. Portable power tools, when used improperly, can result in serious injury or death.
- Types of portable power tools are determined by their power source, each of which will be addressed in this program, and include electric, pneumatic, liquid fuel, hydraulic, and powder actuated portable power tools.
- To reduce hazards associated with the use of portable power tools, employees should observe the following general safety practices.
- Read and understand the owner's/user manual for each portable power tool expected to be used by the employee. The manual should address the tool's proper use, limitations, proper operation, hazards, and PPE, storage and maintenance practices applicable to the equipment.
- Tools should not be carried or lowered from an elevated position by the power cord.
- Never pull a power cord or hose as a means to disconnect it from a power source.
- Ensure cords and hoses are kept clear from heat, oil and sharp edges during use.
- Ensure tools are properly grounded during use. Use a ground fault circuit interrupter (GFCI) for corded tools.
- When not in use, before service, cleaning and during blade/bit replacement procedures; power tools should be disconnected from their power source.
- When portable power tools are in use, unauthorized personnel must be kept clear of the work area. Utilize appropriate signage to indicate when portable power tools are in use and clearly define restricted areas.
- It may be necessary to secure the work area with a vice or clamps to allow for proper use of equipment when two hands are required to be on the power tool during use.
- To avoid accidental start-up of power tools, do not hold fingers on the triggers during transportation of equipment.
- Maintain tools in a clean manner free from oil and grease.
- Maintain cutting surfaces in a sharp manner. Dull cutting edges present additional hazards.
- When operating power tools, ensure adequate footing and maintain good balance while in use.
- Wear appropriate PPE during the use of power tools including hand, head, eye, foot, hearing, respiratory and body protection. Loose clothing, long hair, ties, or jewelry can become caught in moving parts; therefore ensure employees are appropriately dressed to perform the necessary work with portable power tools.
- Inspect portable power tools prior to use. Any defects or deterioration of the equipment should result in the tool being removed from service. Portable power tools removed from service due to defects must be tagged with "DO NOT USE" or the equivalent to prevent unauthorized use.

3.3.4 Personal Protective Equipment (PPE)

Employees who use hand and portable power tools and are exposed hazards, such as noise, vibration, particulate, sparks/chips, abrasive, splashing objects, harmful dusts, fumes, mists, vapors and/or gases must be provided with the

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appropriate personal protective equipment (PPE).

The following considerations should be evaluated, at a minimum, in the selection and use of PPE when utilizing hand and portable power tools.

- **Eye protection** - Safety glasses or goggles must be worn at all times when using hand and portable power tools.
 - A face shield may be used in addition to safety glasses or goggles to protect the face and neck.
- **Foot protection** – Appropriate foot protection, which may include closed toed shoes or steel-toed boots, must be worn when working with hand and portable power tools.
- **Hearing protection** – If the tool or equipment being utilized generates excessive noise, the use of hearing protection may be necessary. Follow the manufacturer’s recommendations for hearing protection and contact Environmental Health & Safety to conduct personal noise dosimetry to determine if employees should be enrolled in the hearing conservation program.
- **Hearing protection** is recommended during the use of certain hand tools and all portable power tools.
- **Respiratory protection** – Tools and equipment, which generate excessive dust, may require the use of a particulate filtering respirator. Contact EHS to determine if the use of a respirator is required or voluntary. Refer to the Cal Maritime Respiratory Protection Program for additional information on respiratory protection.
- **Hand protection** – Whenever there are sharp objects or elevated temperatures associated with the work being conducted, adequate hand protection must be provided to the employee performing the work.
- **Body protection** – Depending on the hazard present, appropriate clothing must be worn during the use of hand/portable power tools.
- **Hair Protection** – Long hair must be tied back and secured during the use of power tools to prevent hair being caught in moving parts.

3.4 Electric Power Tools

- Employees utilizing electric powered portable tools must be aware of many hazards associated with their use. One common hazard with all electric power tools is the possibility of burns, shock or electrocution. Even a slight shock or small burn can cause a worker to fall from a ladder or result in serious injury depending on the work conditions.
- To protect users from shock hazards, electrical power tools must have a three wire cord with a ground prong and be properly grounded during use.
- Three-wire cords contain two current carrying conductors and a grounding conductor. One end of the grounding conductor connects to the tool’s metal housing; the other end is grounded through a prong on the plug.
- The use of an adapter to fit a two-hole receptacle is not recommended, but if necessary, the equipment must be properly grounded to a known ground.
- The third prong on the electrical cord of power tools must never be tampered with or removed for any reason.
- Some tools are equipped with double-insulated electrical cords, which contain an internal layer of insulation to isolate the external housing of the tool, and do not have a ground prong. Only double-insulated cords are permitted to be used without a ground wire.

The following general practices should be followed when utilizing electric power tools.

- Electric power tools must be operated as intended and specified by the manufacturer.
- Utilize the appropriate PPE when utilizing electrical power tools.
- Store power tools properly when not in use to prevent unnecessary damage.
- Never use electric power tools in wet or damp locations, unless they are approved for use in these locations.
- Work areas should be well lighted.
- Ensure cords associated with the use of power tools do not present excessive trip hazards.
- Electrical power tools should be inspected prior to use. Any defects in the tool or wiring must result in the tool being taken out of service and marked “DO NOT USE” or similar to prevent unauthorized use.

Electric Saws – portable or semi-portable electric power saws can include circular, table, saber, radial arm, miter, and band saws. The following outlines the safety precautions to take when working with these types of saws.

Circular Saw – A portable saw using a toothed metal cutting disc/blade used for cutting wood, metal and concrete depending on the blade being used.

Portable circular saws with blades greater than 2 inches in diameter must be equipped at all times with guards. An upper guard must cover the entire blade of the saw. A retractable lower guard must cover the teeth of the saw, except where it makes contact with the work material.

- The lower guard must automatically return to the covering position when the tool is withdrawn from the material being cut.

Table Saw – portable/semi-portable cutting tables with a fixed, toothed blade used for cutting longer lengths of wood and ensuring flush cuts.

- The blade on a table saw must be adjustable in height to allow the user to adjust the blade no more than 1/8 inch above the material to be cut.
- Ensure the material set to be cut does not contact the blade when starting or stopping the saw.
- Keep the body away from the saw.
- Use a push stick to keep hands and fingers away from the cutting blade.
- Guards covering the blade at all times should operate freely when the material to be cut is introduced to the saw blade.
- When not in use, lower the blade fully below the tabletop to prevent inadvertent contact.

Saber Saw – a portable reciprocating saw used to make custom cuts in wood or metal.

- Always select the blade appropriate for the material being cut.
- Ensure the blade is sharp. Dull blades can present additional hazards.
- Do not turn on the saw when the blade is in contact with the material to be cut. This may cause the tool to “jump” or chip the material to be cut.
- Ensure the material to be cut is secure to prevent movement during cutting.
- Keep hands and other objects free from the cutting area at all times.

Radial Arm Saw – a semi portable saw equipped with a cutting table where the saw blade is above the table and moved along a rod to allow for flush cutting.

- The material to be cut should be placed firmly against the saw’s back guide.
- The blade should rotate downward.
- Pull the saw with one hand and hold the wood with the other, ensuring it is clear from the cutting area.
- Never reach across the line of a cut.
- Return the saw to the rear position after completing a cut.
- Radial arm saws should be equipped with blade guards, which operate freely when contacting materials being cut.

Miter Saw – portable/semi-portable saw used to cut flush angles on materials with a pull down blade.

- Miter saws use a downward cutting motion; therefore, keep hands and fingers well outside the cutting area.
- Miter saws must be equipped with a blade guard, which must operate freely when the blade contacts the material to be cut.
- Only use the manufacturer specified blade sizes and rpm ratings.
- When changing saw blades ensure all bolts are adequately tightened and secured to the saw.

Band Saw – a portable/semi-portable saw used for precision cuts on wood and metal with a rotating belt blade.

- Set the blade evenly and with the correct tension before cutting.
- Push the cutting item through the blade with both hands on either side of the blade ensuring hands and fingers are clear of the cutting area.
- Ensure guards are in place.

Drills – electric power drills are typically used to put holes in various materials including wood, metal, concrete and brick; and can be equipped with a hammer function.

- When operating a drill, use the proper size and type of bit for the job. Ensure the bit is sharp and not damaged.
- Ensure the chuck is secured to the spindle. Tighten the bit securely as outlined in the owner’s manual. Remove the chuck key prior to starting the drill.
- Ensure the handles are securely attached.
- When drilling, brace the drill to prevent torque on the hands/wrists.
- Never force a drill. Forcing a drill can cause the motor to overheat and damage the bit. Apply the appropriate pressure for the job. If the drill slows, relieve the pressure.

Portable Abrasive Wheel Tools – portable tools used to grind, cut, polish, buff, etc. through a rotating wheel attached to the tool body, which typically generate large amounts of dust and particulates during cutting operations.

- Abrasive wheel tools must be equipped with guards that cover the spindle end, nut and flange projections; maintain proper alignment with the wheel; and do not exceed the strength of the fastenings.
- Inspect wheels before use. Any damage or defects must be addressed prior to use. To ensure cutting wheels are not cracked, tap with a non-metallic instrument. If the wheel sounds cracked or “dead” it could disintegrate during use and must not be used. A stable and undamaged wheel, when tapped, will give a clear metallic tone or “ring”.
- Abrasive wheels must fit freely on the spindle. If a wheel is installed too tightly it may crack during use. Always follow the manufacturer’s instructions on wheel replacement.
- Allow the wheel to reach optimal operating speed before conducting cutting, grinding, buffing, etc. operations.
- Stand clear of flying particles coming from the tool during use if possible.
- Always utilize the appropriate PPE when using powered abrasive cutting tools including, but not limited to, eye/face, hand and body protection.
- Turn off and unplug abrasive grinding tools when not in use.
- Never clamp a grinding tool in a vise or to a surface to perform a function.

3.5 Pneumatic Power Tools

Pneumatic tools are powered by compressed air and include chippers, drills, hammers, sanders, nailers, etc. Hazards associated with pneumatic power tools include noise, vibration, fatigue, and struck by.

- ANSI approved eye protection is required anytime employees are working with pneumatic tools. A significant hazard of using pneumatic power tools is being struck by one of the tool’s attachments or by a fastener used with the tool.
- Ensure the air hose is securely attached to the tool being used prior to activating the tool to minimize the potential for the hose disconnecting during use.
- Air hoses greater than 1/2 inch in diameter must be equipped with a safety excess flow valve to shut off the air automatically in case the hose breaks.
- All pneumatic tools should be equipped with safety clips or other safety elements to prevent the release of tool parts during use. Safety features of pneumatic tools must not be tampered with or altered in any way.
- Pneumatic tools, which shoot nails, rivets, staples, or similar fasteners and operate at pressures above 100 psi, must be equipped with a muzzle safety feature to prevent fasteners from firing unless the muzzle is pressed against the materials to be fastened.

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- Never pull the muzzle safety switch back manually to fire fasteners for any reason.
- Pneumatic paint spray equipment must be equipped with safety switches to prevent accidental discharge of paint.
- When using pneumatic power tools, ensure the work area is isolated to prevent unauthorized access.
- Compressed air should not be used for cleaning purposes at pressures greater than 30 psi.

3.6 Liquid Fuel Powered Tools

Fuel powered tools are typically powered by gasoline or gasoline/oil mixtures. Common hazards associated with gas powered equipment are handling flammable liquids/vapors and exposure to exhaust fumes.

- Fuel (fuel/oil mixtures) must be handled, stored and transported only in approved containers for flammable liquids.
- When a fuel powered tool is used in an enclosed area, effective ventilation and/or appropriate respiratory protection must be provided to avoid exposure to carbon monoxide.

Additional safety precautions for using liquid fuel powered tools include:

- Utilize only the manufacturer specified fuel when powering the equipment.
- When refueling a tool or piece of equipment, ensure the motor is shut down and the engine is cool before refueling.
- Fire extinguishers should be available wherever fuel powered tools are in use.
- Cutting tools, such as chain saws or concrete saws, must be equipped with guards and/or safety switches to ensure safe use. Do not tamper with, or modify, safety features of fuel powered tools.

3.7 Hydraulic Power Tools

- Hydraulic power tools utilize pressurized lines filled with hydraulic fluid to provide the pressure. The fluid within hydraulic power tools must be an approved fire-resistant fluid and must retain its operating characteristics at the most extreme temperatures to which it will be exposed.
- Follow the manufacturer's recommendations for safe operating pressures for hoses, valves, pipes, filters, and other fittings at all times.
- Hand-held power tools, powered by hydraulic lines must be equipped with a constant- pressure switch, or a control that shuts off the power when pressure is released.
- This includes drills, tappers, fastener drivers, angle grinders (with wheels greater than 2 inches in diameter), disc sanders (with discs greater than 2 inches in diameter), belt sanders, reciprocating saws, saber saws, scroll saws, jig saws and other similar tools.
- Hydraulic jacks, including lever, ratchet, and screw jacks, must have a stop indicator, and the stop limit must not be exceeded.
 - Load limits must be determined by the manufacturer and be marked on the jack. Load limits must not be exceeded.
 - A jack should be used to raise a load, but not fully support a lifted load. Once raised, blocking should be placed firmly under the base of the load.
 - To set up a jack:
 - Place the base of the jack on a firm, level surface.
 - Center the jack correctly on the load.
 - Place the jack head against a level surface.
 - Apply the lifting force evenly.
 - Jacks should be lubricated regularly.

Jack Inspection – All jacks must be inspected regularly according to the following:

- Jacks used regularly: inspect at least once every 6 months
- Jacks sent out for special work: inspect when sent out and returned
- Jacks subjected to abnormal loads/shock: Inspect before and after use.

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3.8 Powder-Actuated Power Tools

Powder actuated tools require specific user training and are not to be used at Cal Maritime without prior approval from Environmental Health & Safety.

- If approval is granted for the use of powder actuated tools, all rules and guidelines are to be strictly followed.
- Hand tools are tools that are powered manually and do not require additional power sources such as electric, hydraulic, compressed air, etc. Examples of hand tools include anvils, axes, hammers, planers, pliers, punches, saws, screw drivers, tin snips, and wrenches.
- Hazards associated with hand tools are typically associated with misuse of the equipment and/or improper maintenance of the tools. To prevent injury when utilizing hand tools, the following precautions should be taken.

4.0 Training Requirements

Effective dissemination of safety information lies at the very heart of a successful Injury and Illness Prevention Program. It is essential to provide training for employees concerning general safe work practices as well as specific instruction with respect to hazards unique to each employee's job assignment.

Training content is determined by the Department of Safety and Risk Management, as well as Department Management which is based upon observed hazards, type of equipment, Department need, and work requirements.

- Providing training from within the department as a part of academic programming, or
- Training provided by CSU-System, or
- Training provided by Cal Maritime SRM, or
- A training provider outside the University.

Note: All outside trainer vendors are to be reviewed and content approved by SRM. The Department of Safety and Risk Management, in conjunction with various departments have developed training programs designed to meet general safe work practice requirements. These programs are elements of larger programs which service broad campus needs.

Employees expected to utilize hand and portable power tools as part of their job duties must be adequately trained prior to using such tools.

- Employees should be trained in the following areas:
 - Be able to recognize hazards associated with different types of tools and equipment; and the safety precautions necessary for use.
 - The PPE required to be worn during the use of tools.
 - The proper use of hand and power tools and other hand-held equipment
 - Be able to recognize defects in tools, which may render them out of service.
 - When applicable, provide access to the manufacturer specifications and manual's for specific equipment to be used.
 - Department-developed standard operating procedures (SOPs) outlining specific safety precautions for certain tools or activities.

Retraining may be necessary to maintain employee knowledge of working with tools or if a near-miss or injury has occurred.

Training is to be documented and kept in a readily accessible location by the Department designee for access reference as needed by Department Management, Department of Safety & Risk Management, or regulatory agency (e.g. CalOSHA). Submit the completed training roster of attendees to the Department of Safety & Risk Management.

Program Administrators are trained on their roles and responsibilities in the management/maintenance of the requirements and inspections outlined in this program.

Refer to Cal/OSHA Safety & Health Training and Instruction Requirements as outlined in Appendix C of the Injury Illness Prevention Program

5.0 Document Control & Recordkeeping

Essential records, including those legally required for Workers' Compensation, insurance audits and government inspections will be maintained for as long as required. Individual Departments and/or Colleges will also keep records of steps taken to establish and maintain the Injury and Illness Prevention Program.

They must include:

- Records of scheduled and periodic inspections to identify unsafe conditions and work practices. The documentation includes the name of the person(s) conducting the inspection, the unsafe conditions and work practices identified, and the corrective action(s) taken. These records will be maintained for at least three years.
- Documentation of health and safety training for each employee. Specifically, employee name or other identifier, training dates, type(s) of training and the name of the training provider will be included. Records will be retained for at least three years. Standard forms for maintaining this information can be obtained from the Department of Safety and Risk Management.

Training records will be kept in each department and copies will be forwarded to the Department of Safety and Risk Management.

Departments must maintain the following records as part of the hand and portable power tool safety program.

- Employee training records
- Specialized SOPs
- Manufacturer specifications/manuals
- Maintenance/service records

Record	Timeframe/Frequency	Location of Record	Retention Period*
Hand & Power Tool Safety Training-General	Initial, Annual Refresher for affected employees.	Document on Employee's Safety Training Checklist	3-Years
Hand & Power Tool Safety Training-General	Post incident and/or process management change for affected employees.	Document on Employee's Safety Training Checklist	3-Years
Hand & Power Tool Safety Training-Equipment Specific	Initial, Annual Refresher for affected employees.	Document on Employee's Safety Training Checklist	3-Years
Hand & Power Tool Safety Training-Equipment Specific	Post incident and/or process management change for affected employees.	Document on Employee's Safety Training Checklist	3-Years

*Refer to the Injury Illness Prevention Program Document Retention Table and/or California State University Systemwide for more information.

Appendix A: Definitions

General Definitions

ANSI:	American National Standards Institute
Authorized person:	Means a person approved or assigned by the employer to perform a specific type of duty or duties or to be at a specific location or locations at the jobsite.
Competent person:	<p>A competent person is a person who is capable of identifying existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous, or dangerous to employees.</p> <p>The competent person has the authority to impose prompt corrective measures to eliminate these hazards.</p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> • Excavation - Inspectors 1541 • Fall Protection Plan implementers & supervisors 1671.1 • Lift Slab Construction 1522.1
Confined Space:	Is a space that (1) is large enough and so configured that an employee can enter bodily, (2) has limited or restricted means for entry or exit (e.g., tanks, vessels, vaults, shafts, pits), and (3) is not designed for continuous occupancy.
Construction Manager:	Is the Cal Maritime employee responsible for the supervision and field management of day-to-day needs of a construction project. It may be a project superintendent, a craft supervisor, or a lead person.
Construction work:	For purposes of this section, "Construction work" means work for construction, alteration, and/or repair, including painting and decorating. Construction: is any combination of engineering, procurement, erection, installation, assembly, demolition, or fabrication used to create a new facility, or to alter, add to, rehabilitate, dismantle, or remove an existing facility. It also includes the alteration and repair (including dredging, excavating, and painting) of buildings, structures, or other real property, as well as any construction and excavation activities conducted as part of environmental remediation efforts.
Controlled Access Zone (CAZ)	Means an area in which certain work (e.g., overhand bricklaying) may take place without the use of guardrail systems, personal fall arrest systems, or safety net systems and access to the zone is controlled
Imminent Danger:	Is any condition or practice that could reasonably be expected to cause death or serious physical harm (permanent or prolonged impairment of the body or temporary disablement requiring hospitalization) to employees or the public unless immediate actions are taken.
Project Manager:	Is the Cal Maritime employee representative with overall responsibility for a project. This person ensures subcontractor compliance with subcontract documents, including performance, schedule, budget, and safety.
Shall:	Means mandatory
Should:	Means recommended
Subcontractor:	Is a firm that has sole contractual responsibility for execution of the construction work related to a project, and for compliance with all safety, health, and environmental codes, standards, and regulations.
Qualified Person:	<p>A qualified person is a person designated by the employer; and by reason of training, experience, or instruction has demonstrated the ability to perform safely all assigned duties; &, when required is properly licensed in accordance with federal, state, or local laws and regulations.</p> <p><i>Examples:</i></p> <ul style="list-style-type: none"> • Mobile Crane & Tower Crane Operators 5006.1(a) • Scaffold Erection & Dismantling Supervisors 1637(k)(1) • Demolition 1736 • Personal Fall Arrest System supervisors 1670(b)

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Definitions (cont.)

Hand & Power Tool Definitions

Hand tools	<p>Hand tools are tools that are powered manually. Hand tools include anything from axes to wrenches. The greatest hazards posed by hand tools result from misuse and improper maintenance. Some examples include the following:</p> <p>If a chisel is used as a screwdriver, the tip of the chisel may break and fly off, hitting the user or other employees.</p> <p>If a wooden handle on a tool, such as a hammer or an axe, is loose, splintered, or cracked, the head of the tool may fly off and strike the user or other employees.</p> <p>If the jaws of a wrench are sprung, the wrench might slip.</p> <p>If impact tools such as chisels, wedges, or drift pins have mushroomed heads, the heads might shatter on impact, sending sharp fragments flying toward the user or other employee.</p>
Portable Abrasive Wheel Tools	<p>Portable abrasive grinding, cutting, polishing, and wire buffing wheels create special safety problems because they may throw off flying fragments. Abrasive wheel tools must be equipped with guards that: (1) cover the spindle end, nut, and flange projections; (2) maintain proper alignment with the wheel; and (3) do not exceed the strength of the fastenings</p>
Operating Controls and Switches	<p>The following hand-held power tools must be equipped with a constant-pressure switch or control that shuts off the power when pressure is released: drills; tappers; fastener drivers; horizontal, vertical, and angle grinders with wheels more than 2 inches (5.08 centimeters) in diameter; disc sanders with discs greater than 2 inches (5.08 centimeters); belt sanders; reciprocating saws; saber saws, scroll saws, and jigsaws with blade shanks greater than 1/4-inch (0.63 centimeters) wide; and other similar tools. These tools also may be equipped with a "lock-on" control, if it allows the worker to also shut off the control in a single motion using the same finger or fingers. The following hand-held power tools must be equipped with either a positive "on-off" control switch, a constant pressure switch, or a "lock-on" control: disc sanders with discs 2 inches (5.08 centimeters) or less in diameter; grinders with wheels 2 inches (5.08 centimeters) or less in diameter; platen sanders, routers, planers, laminate trimmers, nibblers, shears, and scroll saws; and jigsaws, saber and scroll saws with blade shanks a nominal 1/4-inch (6.35 millimeters) or less in diameter. It is recommended that the constant-pressure control switch be regarded as the preferred device.</p>
Guards	<p>The exposed moving parts of power tools need to be safeguarded. Belts, gears, shafts, pulleys, sprockets, spindles, drums, flywheels, chains, or other reciprocating, rotating, or moving parts of equipment must be guarded.</p> <p>Machine guards, as appropriate, must be provided to protect the operator and others from the following:</p> <ul style="list-style-type: none"> ▪ Point of operation. ▪ In-running nip points. ▪ Rotating parts. ▪ Flying chips and sparks
Pneumatic Tools	<p>Pneumatic tools are powered by compressed air and include chippers, drills, hammers, and sanders</p>
Liquid Fuel Tools	<p>Fuel-powered tools are usually operated with gasoline. The most serious hazard associated with the use of fuel-powered tools comes from fuel vapors that can burn or explode and also give off dangerous exhaust fumes. The worker must be careful to handle, transport, and store gas or fuel only in approved flammable liquid containers, according to proper procedures for flammable liquids</p>
Powder-Actuated Tools	<p>Powder-actuated tools operate like a loaded gun and must be treated with extreme caution. In fact, they are so dangerous that they must be operated only by specially trained employees.</p>
Hydraulic Power Tools	<p>The fluid used in hydraulic power tools must be an approved fire-resistant fluid and must retain its operating characteristics at the most extreme temperatures to which it will be exposed. The exception to fire-resistant fluid involves all hydraulic fluids used for the insulated sections of derrick trucks, aerial lifts, and hydraulic tools that are used on or around energized lines. This hydraulic fluid shall be of the insulating type</p>

Appendix B: Job Hazard Analysis Template Sample

SAFETY GUIDELINES

IMAGE	SCOPE OF WORK/EQUIPMENT USE	DEPARTMENT:			
		HAZARD POTENTIAL EVALUATION			
		<input type="checkbox"/> Struck By <input type="checkbox"/> Struck Against <input type="checkbox"/> Slip/Trip/Fall <input type="checkbox"/> Caught In/Between <input type="checkbox"/> Material Handling <input type="checkbox"/> Equipment Operating	<input type="checkbox"/> Weather Conditions <input type="checkbox"/> Hazardous Substance <input type="checkbox"/> Electrical Hazards <input type="checkbox"/> Obstruction		
		SRM-HIRAC	1	2	3

TRAINING REQUIREMENTS

	DO NOT use this equipment unless an instructor or shop supervisor has instructed you in the safe use and operation and has authorized you to operate this equipment.	
<input type="checkbox"/> IIPP	<input type="checkbox"/> Dept. Specific	<input type="checkbox"/> Operators/Owner's Manual
<input type="checkbox"/> Other:		

PERSONAL PROTECTIVE EQUIPMENT

									
Eye Protection	Foot Protection	Hand Protection	Hearing Protection	Body Protection	Head Protection	Respiratory Protection	Fall Protection	Face Shield	OTHER
When exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation...	When working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, or will protect the affected	When hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns	When exposed to a time weighted average noise level of 85 dBA or higher over an 8 hour work shift.	When exposure to: Intense heat, hot metals, other hot liquids Impacts from materials that can cut, burn Hazardous chemicals Or potentially infectious materials	Where there is a potential for injury to the head from falling objects and/or when there is a risk of impact to head	May be required if removal of contaminants from the air does not fall below permissible exposure level.	When there is a risk of falling from a height greater than 4ft GSO 6ft CSO 6ft MSO When working in confined space	Face shield can be used over the glasses if there is a presence of a lot of flying debris.	

HAZARDS

HAZARD CONTROLS & PROTECTION MEASURES

IF CONDITIONS CHANGE: STOP WORK IMMEDIATELY-REVIEW WITH SUPERVISOR-DOCUMENT HAZARD-REVIEW WITH SRM

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SAFE OPERATING PROCEDURES				
STEPS/TASKS		HAZARD POTENTIAL		HAZARD CONTROLS & PROTECTION MEASURES
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
NOTES				
IF CONDITIONS CHANGE: STOP WORK IMMEDIATELY-REVIEW WITH SUPERVISOR-DOCUMENT HAZARD-REVIEW WITH SRM				
EMERGENCY RESPONSE			EVACUATION ASSEMBLY POINT	
1	First Aid Kit			
2	AED			
3	Emergency phone	Campus Police- 707-654-1111 or 911		
REMINDER: IMMEDIATELY REPORT ALL INCIDENTS, REGARDLESS OF SEVERITY, TO YOUR SUPERVISOR AND THE DEPARTMENT OF SAFETY & RISK MANAGEMENT.				
HOUSEKEEPING & SECURITY		SHOP SUPERVISOR MUST BE PRESENT WHEN SHOP IS OCCUPIED		
1	Is the work area/site Clean?	Ensure work area is clean daily and that any hazardous materials are properly disposed of daily		
2	Is the work area/site Secure?	Ensure lights are turned off and building is locked upon exiting work for the day.		
3				

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Appendix C: Inspecting of Equipment

SAMPLES TAGS & LABELS

SAFETY EQUIPMENT INSPECTION

Equipment I.D. _____			
Location _____			
DATE	OK	NG	BY

IF "NG" INSPECTOR MUST FILL OUT A REPAIR TAG

EQUIPMENT INSPECTION RECORD

Equipment I.D. _____			
Location _____			
DATE	OK	NG	BY

IF "NG" INSPECTOR MUST FILL OUT A REPAIR TAG. IF DANGEROUS TO OPERATE, LOCK OUT & TAG AT ONCE.

Labels and Color Coding

SAFETY ASSURED INSPECTION CODING		
MONTH	MONTH TESTED	COLOR OF TAPE(S) TO APPLY TO CORD
1	January	White
2	February	White + Yellow
3	March	White + Blue
4	April	Green
5	May	Green + Yellow
6	June	Green + Blue
7	July	Red
8	August	Red + Yellow
9	September	Red + Blue
10	October	Orange
11	November	Orange + Yellow
12	December	Orange + Blue
Repair/Damaged		Brown

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Appendix D: Equipment Inventory

Equipment Inventory					
Department Instructions: An initial inventory of Equipment owned/operated by each department must be conducted to identify all equipment impacted by this program. This must be done by physical inspection. At Cal Maritime this survey may be conducted by a responsible person in a department, the department's Designated Safety Coordinator (DSC) or their designee and documented on this form. Update this inventory list as equipment is purchased or retired from service, and at least annually					
#	Type	Location	JHA Doc #	Required/Recommended Training	PPE
EX.	6-inch Joiner	Carpentry Shop	09-03000	Operation of joiner, including use of push bar	Safety glasses Face shield
1					
2					
3					
4					
5					
6					
7					
8					
9					
7					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Retain Original at Department Level & Submit Copy to Risk Management

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Appendix E: Hand & Power Tool Job Hazard Analysis Library

Document #	Document Title	Date	Comments
09-03001-001	Job Hazard Analysis Manual- Hand & Power Tools	TBD	New Document
09-03001-002			
09-03001-003			
09-03001-004			
09-03001-005			
09-03001-006			
09-03001-007			
09-03001-008			
09-03001-009			
09-03001-010			
09-03001-011			
09-03001-012			
09-03001-013			
09-03001-014			
09-03001-015			
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09-03001-040			
09-03001-041			
09-03001-042			
09-03001-043			
09-03001-044			
09-03001-045			
09-03001-046			
09-03001-047			
09-03001-048			
09-03001-049			
09-03001-050			

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Appendix F: Emergency Response

To download and/or print poster refer to SRM website: [Campus Emergency Poster](#) , [Campus Emergency Response Guide](#)


911
EMERGENCY PROCEDURES

Evacuation	Fire	Hazardous Spill	Medical
 <ul style="list-style-type: none"> Do not use elevators, use nearest stairs and exit. Follow directions given by the building monitors or Campus Officials Go to designated evacuation point and do not return to building until instructed to do so. Assist persons with mobility needs. 	 <ul style="list-style-type: none"> Evacuate the building and notify occupants as you leave. Do not return until authorized by emergency personnel Do not use elevators Fire Extinguisher Instructions if trained: <ul style="list-style-type: none"> P- Pull pin A- Aim at the base of fire S-Squeeze handle S-Sweep from side to side 	 <ul style="list-style-type: none"> For spills not involving immediate danger, that are confined; contain and notify the Department of Safety & Risk Management (SRM) at 707-654-1076. For uncontained spill, contact Cal Maritime Police Department & SRM If immediate hazard or emergency exists, dial 911. Move away or evacuate the area. 	 <ul style="list-style-type: none"> For all medical emergencies dial 911 Be ready to describe natures and severity of the medical emergency. Provide the Campus location. Keep the victim calm and comfortable. Provide basic first aid/CPR/AED if trained. Report all work related injuries immediately to: Department of Safety & Risk Management and to Human Resources
Earthquake	Bomb Threat	Shelter in Place	Active Shooter
 <ul style="list-style-type: none"> Drop, Cover, Hold under a table or desk or against an interior wall until the shaking has stopped. After shaking has stopped check yourself and others for injuries. Evacuate the building. Move towards the safest location away from building, tree's, power lines. Follow the instruction of the building monitors or Campus officials and be prepared for aftershocks 	 <ul style="list-style-type: none"> Report all threatening calls to Cal Maritime Police Department Ask Caller: When the bomb is going to explode. Where the bomb is located? What does the bomb look like? Why did you place the bomb? If suspicious object is found: Do not handle and dial 911 immediately 	 <ul style="list-style-type: none"> Stay in building; close and lock doors and windows. Move away from windows Do not use elevators Remain in shelter area until emergency personnel announce that it is safe 	 <ul style="list-style-type: none"> RUN: leave your belongings behind. If there is an escape path attempt to evacuate. Help others if possible HIDE: If you cannot get out safely. Hide. Lock or barricade doors. Silence your cell phone and stay quiet. FIGHT: as a last resort, and if you life is in danger, you may attempt to incapacitate the shooter. Work in unison with others.

Non-Emergency M-F Business Hours	Campus Police Department 707-654-1176	Safety & Risk Management 707-654-1076	Facilities & Maintenance 707-654-1120	Human Resources 707-654-1139
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For more information and training, contact the Cal Maritime Police Department or the Department of Safety & Risk Management Rev.2019

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Appendix G: Accident Incident Management

To download and/or print poster refer to SRM website: Accident Incident Management Poster



ACCIDENT INCIDENT MANAGEMENT
IN CASE OF INJURY OR ILLNESS AT WORK

Prompt reporting and treatment provides the initial attention to the person suffering the injury or illness as well as address the work condition that contributed to the incident. Its not about blame, its about finding a gap in the system and improving it.

If Serious*
IMMEDIATELY
Call

911

PROMPTLY NOTIFY
Your Supervisor & Complete an Incident Report

TREAT
Injury or Illness Promptly & Appropriately


First Aid

Contact Human Resources to coordinate care at designated treating facility



RETURN TO WORK

Supervisor promptly notifies Safety & Risk Management

Supervisor promptly notifies VP of all Serious Injuries

Complete an Incident Report Online

<https://www.csum.edu/web/safety/home>

Non-Emergency M-F Business Hours	Campus Police Department	Safety & Risk Management	Human Resources-Workers Comp
	707-654-1176	707-654-1076	707-654-1021

For more information and training, contact the Department of Safety & Risk Management Rev.2.2019

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Appendix H: Training Log



TRAINING SIGN IN SHEET

Subject		Date	
Instructor Name			
Department			
Course Level	<input type="checkbox"/> Awareness	<input type="checkbox"/> Competent Person	<input type="checkbox"/> Certified Person <input type="checkbox"/> Other
Frequency	<input type="checkbox"/> Initial	<input type="checkbox"/> Annual-Refresher	<input type="checkbox"/> Process Change <input type="checkbox"/> Post Incident

The attendees listed have satisfactorily participated and been tested per Regulation/University training requirements.

	PRINT NAME	STATUS (Staff, Faculty, Student)	SIGNATURE
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

Retain Original at Department Level & Submit Copy to Risk Management

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