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**ENVIRONMENTAL, SAFETY, AND HEALTH**

**WORK PRACTICES**

**511:** **PERSONAL PROTECTIVE EQUIPMENT**

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#### ABSTRACT

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| Overview of Practice 511 | The Environmental, Safety, and Health Work Practice 511: Personal Protective Equipment describes general requirements for personal protection equipment (PPE). It also describes when to use and how to maintain equipment for specific types of protection. ESH-511 does not discuss respiratory protection, which is addressed in ESH-517. |

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| Contents | This Practice defines “personal protective equipment” and describes general requirements for such equipment and its use and maintenance. In addition, the Practice gives specific information on requirements and maintenance on PPE for protection of the:* Head
* Eyes and face
* Hearing
* Hands
* Body
* Feet

The Practice concludes with requirements for training content, demonstration of understanding, retraining, and verification. |

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| Appendices | This Practice contains the following appendices:Appendix A: Hazard Assessment and Equipment GuidelinesAppendix B: PPE Hazard Assessment FormAppendix C: ESH-511 Personal Protective Equipment Performance Checklist |

#### SECTION 1 – PURPOSE

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| Purpose of Practice 511 | The Environmental, Health, and Safety Work Practice 511: **Personal Protective Equipment** helps you determine when and where you should use personal protective equipment at the terminal and how to maintain this equipment. This Practice does not contain information about respiratory protection. ESH-517 addresses respiratory protection. |

#### SECTION 2 – REFERENCES

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| References for Practice 511 | For additional or more detailed information about personal protective equipment, refer to the following documents: |

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| Document Number | Title |
| ESH-516 | Hazard Communication |
| ESH-517 | Respiratory Protection |
| ESH-518 | Hearing Conservation |
| ESH-534 | Tank Cleaning |
| SWP | Safe Work Practices – Assessing Hazards and Managing High Risk Work Procedures |
| SWP 566 | Safe Work Practice Standard Work at Height |
| SWP 12.3.2.45 or ESH 560 | Safe Work Practice Standard Electrical |

#### SECTION 3 – DEFINITIONS

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| Personal protective equipment (PPE) | Equipment and clothing worn to protect against hazards that cannot be eliminated by other means or where no other practical preventive solution can be found. |

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| Impervious | Incapable of being penetrated by chemicals, hydrocarbons, or other materials. |

#### SECTION 4 – GENERAL REQUIREMENTS

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| Introduction | Personal protective equipment must be provided and worn whenever it is required by regulation or when identified by a Hazard Assessment, or additionally by a Job Loss Analysis. |

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| Hazard assessment | A hazard assessment is conducted at a facility to determine what types of PPE must be used there and where and when they must be worn. * The hazard assessment must be conducted according to the requirements in this Practice and the procedures in Appendix A.
* The hazard assessment form in Appendix B identifies the workplace evaluated, PPE required, person performing the evaluation, and date(s) of hazard assessment. A completed Appendix B must be on file at the facility.
* To help in completing an assessment, a completed generic assessment form is included in Appendix B. This assessment must be tailored to each facility.
* OE/HES reassess the workplace hazard situation as necessary, by identifying and evaluating new equipment and processes, reviewing accident records, and reevaluating the suitability of previously selected PPE or every 3 years.

For guidance on conducting hazard assessments, refer to Global Downstream Managing Safe Work Practices Assessing Hazards and Managing High Risk Work Procedure.  |

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| Approved safety equipment | All PPE and other safety equipment used at the terminal must:* Be specific for the job hazard, as determined by the Hazard Assessment.
* Meet OSHA requirements or/and local regulations, meet the ANSI standard, and/or be NIOSH approved.

The TESH specialist can provide terminal management with current information regarding PPE. |

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| Damaged and defective equipment | Do not use damaged or defective equipment. Report it to your supervisor immediately and get proper equipment before performing the work.  |

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| Care and storage | All PPE must be kept clean and in usable condition. You are responsible for cleaning and storing each piece of equipment assigned to you. |

Terminal & Operations Requirements

 All employees and contractors working in operating areas will use:

* Hard Hat\*
* Safety Glasses with Side Shields
* Safety Toe Boots
* Long Pants

\*Bump caps for airport facilities.

Operating areas implies Tank Farm, Loading Rack, walking between buildings, Maintenance shops, and Warehouses.

Equipment specifications are outlined in Section 5 Head Protection, Section 6 Eye and Face Protection, Section 7 Hearing protection, Section 8 Hand Protection, and Section 10 Foot Protection.

These requirements do not apply for personnel working in an office setting or laboratory or personnel when walking directly from parking areas to office areas or change rooms (ie shift changes).

Visitors or Service Contractors are required to wear the same level of protection as employees/contractors when working in operating areas.

Visitors who are escorted by AP personnel and are not working within the designated operating areas may be exempted from the requirements of safety-toe shoes; however they must be wearing substantial leather footwear with oil resistant soles and needs to be pre-approved by the terminal manager.

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| Contractor requirements | Contractor employees must wear protective equipment when the Company Representative specifies it or when a job requires it. Contractors must provide their employees with safety and protective equipment that meets:* OSHA requirements or/and local regulations
* ANSI standards
* NIOSH approvals
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| Visitor requirements | The person responsible for visitor(s) will ensure that they wear proper clothing and appropriate footwear whenever they are in operating areas. The following types of footwear are not allowed outside the office area:* High heels
* Open-toe sandals
* Flip-flops
* Non-substantial, non-leather athletic shoes
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#### SECTION 5 – HEAD PROTECTION

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| Introduction | Safety helmets, also called “hard hats,” protect the head from: * Impact
* Falling or flying objects
* Overhead spills of hot or hazardous liquids
* Electric shock

Safety helmets also reduce the risk of hair becoming entangled in machinery. |

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| Safety helmet requirements | The following requirements apply to hard hats:* Hard hats must be worn in work areas where there is potential for head injury from falling objects or in areas with restricted head clearance.
* Hard hats must comply with ANSI Z.89.1- requirements or equivalent.
* Hard Hats Class E with an integrated face shield and balaclava hard hat liner worn for work on or near energized electrical components at >50 volts. See ESH 560 Electrical Safe Work Practice Annex E for guidance on specific PPE based on Hazard Risk Category.
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| General safety rules for helmets | Follow these general safety rules for helmets:* Do not modify the suspension.
* Make sure the suspension is properly fastened at all times.
* Replace the suspension if it is frayed, cracked, if adjustments slots are torn, or if suspension clips are worn.
* Do not drill holes in the shell.
* Do not paint your hard hat.
* Inspect your helmet regularly and replace it at the first sign of cracking, dents, or other damage.
* Discard any helmet that is taken out of service.
* Do not use a metal hard hat.
* Do not use a bump cap in place of a safety helmet.
* Replace hard hats and replacing suspension per manufacturer’s recommendation typically 3-5 years
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| Guidelines for cleaning and storing helmets | Observe the following guidelines for cleaning and storing your helmet:* Clean with mild soap and water.
* Do not use solvents on helmets.
* Do not dry the suspension with heat.
* Replace the suspension if it contains grease or tar that you cannot remove.
* Never store a hard hat where it is exposed for long periods to direct sunlight.
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| Sweatbands | Sweatbands are provided to employees on request for:* Keeping perspiration off the forehead and out of the eyes.
* Removing moisture that contributes to fogging of goggles and glasses.

You can wash and reuse a sweatband, but it should be replaced when it loses elasticity. |

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| Winter liners | Winter liners may be worn with a hard hat to protect the head and ears from cold. You should request a winter liner if you must work outside during cold weather. Winter liners can be washed and reused. |

#### SECTION 6 – EYE AND FACE PROTECTION

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| Introduction | You must wear appropriate protection when your eyes or face are exposed to hazards. Types of eye and face protection include safety glasses, chemical goggles, face shields, welders’ goggles, and welding hoods. |

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| General eye and face protection requirements | The following general requirements apply to eye and face PPE:* Must be used when you are exposed to hazards from flying particles, liquid chemicals, acids or caustic chemicals, chemical gases or vapors, or potentially injurious light radiation.
* Must be distinctly marked to easily identify the manufacturer’s name.
* Eye and face protection must comply with ANSI Z.87.1 requirements or equivalent.
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#### 6.1 – Safety Glasses

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| Introduction | Safety glasses protect the eyes from flying objects. They are supplied by the company, in most instances. Depending on an employee’s work environment and vision, safety glasses may be prescription or nonprescription, tinted or clear. Chevron Products Company will replace safety glasses if they are broken or lost, but will generally not supply you with more than two pairs of safety glasses per year. |

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| Requirements for all safety glasses | The following requirements apply to all safety glasses:* Must be worn when exposed to hazard from flying objects.
* Must have side protection. (Detachable side protectors, such as clip-on or slide-on side shields, are acceptable.)
* Safety glasses must meet ANSI Z87.1-requirements or equivalent.
* Safety Glasses with non-conductive materials are worn for work on or near energized electrical components at >50 volt
* Must not be used as a substitute for goggles, because safety glasses do not provide complete eye protection.
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| If you wear prescription lenses | Employees who wear prescription lenses and are required to wear safety glasses must follow these requirements and guidelines:* You must wear prescription safety glasses or wear eye protection over your normal prescription glasses.
* You may wear prescription contact lenses. However, if you are working in an excessively dusty atmosphere or where splashes may occur, you must also wear goggles.
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* Prescription safety glasses or other eye protection with non-conductive materials are worn for work on or near energized electrical components at >50 volt

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| Tinted safety glasses | Employees who work outside when glare is excessive may wear safety glasses with tinted lenses. The following requirements apply to tinted safety glasses:* Must be either Green 1.7, Green 2.0, or Gray 2.0 tint.
* Must not be worn inside buildings or during darkness hours.
* Must not substitute regular, nonprescription dark glasses.
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| Guidelines for supplying prescription safety glasses  | Chevron Products Company supplies prescription safety glasses according to the following guidelines:* If an employee wears prescription lenses, the Company will pay 100 percent of the cost of the frames and prescription lenses for safety glasses. The employee must furnish a prescription that is less than a year old, and must pay for the eye examination and subsequent fitting.
* Employees exposed to excessive glare may be authorized to have two pair of prescription safety spectacles, one tinted and one clear.
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| Choosing and purchasing lenses and frames | When selecting the lens material and frame style for safety glasses, keep in mind the following:* Both plastic and glass lenses meet ANSI requirements. Plastic is lighter but will scratch easier.
* Frame selections should be affordably priced. Non-conductive frames are required for work on or near energized electrical components at >50 volt.
* Designer frames generally do not meet ANSI standards.
* Use your terminal’s ProCard when purchasing prescription safety glasses. Some retailers, such as Lens Crafters, give discounts to Chevron Products Company.
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#### 6.2 – Chemical Goggles and Face Shields

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| Introduction | Chemical goggles provide eye protection from the front, top, bottom, and all sides. They are designed to fit over prescription safety glasses. Face shields protect the face and neck. |

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| Requirements for using face shields and goggles | The following requirements apply for chemical goggles and face shields:* Wear chemical goggles during light chipping, dusty work, light grinding with hand or power tools, and when exposed to possible splashes or to any materials capable of irreversibly damaging your eyes.
* Wear face shields when you may be exposed to flying particles or to sprays of hazardous liquids or hot solutions.
* Do not use chemical goggles for welding. Wear welders’ goggles.
* Do not use face shields for eye protection. Wear goggles to protect eyes.
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| Maintaining and storing goggles and face shields | Follow these guidelines for maintaining and storing goggles and face shields:* Wash goggles and face shields in warm, soapy water, rinse thoroughly, hang to dry.
* Clean goggle lenses only with facial tissue; Kem-wipes; or soft, nonabrasive cloth.
* Store goggles in a closed container. Do not hang or store by the straps.
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| Replacing defective goggles and face shields | Follow these guidelines for replacing defective goggles and face shields:* Replace goggles when:
* Lenses become cracked, scratched, pitted, or brittle around the sealing edge.
* Sides get damaged.
* Head straps no longer hold goggles in place.
* Replace face shields when they become scratched, cracked, or brittle.
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#### 6.3 – Welders’ Goggles and Welding Hoods

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| Introduction | Shaded welders’ goggles protect against glare and radiation from welding, cutting, and burning, and from welding slag. A welding hood provides both eye and face protection and protects against skin burns. |

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| Requirements for welders’ goggles | The following requirements apply to welders’ goggles:* Always wear welders’ goggles when acetylene welding.
* For cutting (light), shade number 3.
* For welding (medium), shade number 5.
* Do not wear with goggle shades above 8; use a welding hood to protect against burns.
* Do not wear a face shield over welding goggles.
* Do not wear for splash protection; use chemical goggles.
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| Requirements for welding hoods | The following requirements apply to welding hoods:* A welding hood is required for arc welding.
* For appropriate lens-shade numbers, see 29 CFR 1910.133(a)(5) or equivalent.
* Always use a welding hood for goggle shades above 8 to protect against skin and eye burns.
* Welding hoods equipped with a lift front lens are recommended.
* The Company individually assigns welding hoods to employees, who are responsible for their proper maintenance and storage.
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#### SECTION 7 – HEARING PROTECTION

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| Introduction | Hearing loss can result from prolonged exposure to excessive noise and by short exposure to excessively loud noise. |

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| General requirements for hearing protection | The following general requirements apply to hearing protection:* Employees, contractors, and visitors must wear hearing protection in all areas that are posted when equipment is running.
* For more detailed information on hearing protection, refer to ESH-518.
* Hearing protection (ear canal inserts) are worn for work on or near energized electrical components at >50 volts. See ESH 560 Electrical Safe Work Practice Annex E for guidance.
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#### SECTION 8 – HAND PROTECTION

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| Introduction | Employees whose hands are exposed to hazards from severe cuts or lacerations or from skin absorption of harmful substances must wear gloves. |

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| Selecting the appropriate type of glove | Select the type of glove that best protects you against hazards, yet provides you enough dexterity to do the job. Use the following guidelines: |
| Glove Type | Characteristics and/or Uses |
| Leather  | Resist heat, protect against sharp or rough objects, and provide some cushioning against blows. Often used for heavy-duty work. |
| Leather-palm | Wear when handling pallets, plywood bracing, and/or drums. |
| Disposable Nitrile | Provide maximum dexterity but minimum protection. Designed for single use in very light service to keep oil and liquids off skin. Available in the lab. |
| Welders’ | Made from treated leather. Protect against heat, welding sparks, splatter, and hot slag. |
| Rubber | Wear when handling equipment in E85 fuel or ethanol service. |
| Coated Nitrile | Dipped in Nitrile and provide enhanced grip, liquidrepellency, tactile sensitivity or cut resistance |
| Rubber gloves with leather overs | Worn for work on or near energized electrical components at >50 volts. See ESH 560 Electrical Safe Work Practice Annex E for guidance |

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| Inspecting gloves | Follow these guidelines when inspecting gloves:* Inspect gloves daily before each use.
* Replace cotton or leather gloves that are damaged or oil soaked.
* Replace impervious gloves and electricians’ gloves if they have cracks or holes, including pin-holes. (Check gloves for pin-hole leaks by blowing air into them.)
* See ESH 560 Electrical Safe Work Practice Section 4.5 and Annex I for further guidance for inspecting gloves for electrical exposure.
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| Cleaning and maintaining gloves | Follow these guidelines for cleaning and maintaining gloves:* Wash impervious gloves in soap and water when they become contaminated or dirty.
* Do not use solvents on impervious gloves unless you know the glove is resistant to these materials.
* Replace any gloves that become wet or contaminated on the inside.
* You may use talcum powder in gloves to reduce the effects of sweating.
* Store and maintain electrical gloves per ESH 560 Annex I.
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#### SECTION 9 – BODY PROTECTION

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| Introduction | * You must wear appropriate body protection against acidic, corrosive, oily, dirty, or dusty materials. Hazard assessment will determine the type of protection, based on the nature of the hazard. Arc rated clothing is worn for work on or near energized electrical components at >50 volts. See ESH 560 Electrical Safe Work Practice Annex E for guidance.
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| Impervious clothing | Impervious clothing provides splash protection. You must wear it for jobs where you may come in contact with corrosive materials or hydrocarbon liquids. Types of impervious clothing include:* Rain gear
* Acid suits
* Disposable coveralls
* Aprons

Not all disposable coveralls or aprons are impervious clothing. |

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| Requirements for impervious clothing | The following requirements apply to impervious clothing:* Wear when breaking lines, opening equipment, or working on jobs where liquid materials could splash or spray.
* Wear under wet conditions, during maintenance where you may be exposed to corrosive material, and when cleaning tanks containing liquids.
* Remove torn or damaged impervious clothing immediately and exchange for new PPE.
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| Disposable coveralls | Disposable coveralls are one piece and designed to protect against dust and dry materials. Wear disposable coveralls for:* Clean-up work
* Asbestos removal
* Dumping dry material

Disposable coveralls provide minimal protection against liquid or oily substances. |

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| Aprons | Wear an apron for dumping liquids and dry materials to keep dirt and material off work clothing. Impervious aprons also provide splash protection against oils, solvents, greases, and additives. |

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| Cleaning and storing body-protection equipment | Follow these guidelines when cleaning and storing body-protection equipment:* Clean impervious clothing and aprons with soap and water, rinse, and hang to dry.
* Store impervious clothing on hangers to prevent cracking.
* Discard disposable coveralls after use.
* See Appendix D for Laundering Guidance of Arc Rated Clothing
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| Personal flotation devices (PFDs) | U. S. Coast Guard-approved personal flotation devices (PFDs) are also personal protective equipment for the body.  |

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| Minimum requirements for using PFDs | PFDs must be available and easily accessible at all waterfront locations. Minimum requirements specify that PFDs must be used when:* Tying up and releasing tankers or barges.
* Riding in or working on a boat.
* Working under or over the side of a dock, wharf, pier, or over the side of a dolphin.
* Crossing between a vessel and dock, pier, or wharf on a gangway that does not have guardrails.
* Boarding a vessel, such as a barge, that does not have guardrails.
* Working within 3 feet of the edge of any dock, wharf, pier, or dolphin, unless protected by a guardrail.
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| The “3-feet” requirement for PFDs | In addition to the above requirements, a yellow warning line must be painted 3 feet from the edge of any dock, wharf, or pier and the area posted to indicate that PFDs must be worn within that boundary at all times. An acceptable alternative is that PFDs are required at all times on the dock and the requirement posted at the dock entrance.  |

#### SECTION 10 – FOOT PROTECTION

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| General requirements for foot protection | You are required to have foot protection in operating areas and whenever your work may expose you to foot injury from any of the following:* Hot, corrosive substances
* Falling or rolling objects
* Crushing or penetrating action
* Abnormally wet locations
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| Unacceptable footwear | The following types of footwear are not allowed:* High-heel shoes
* Open-toed shoes
* Sandals
* Non-substantial, non-leather athletic shoes
* Shoes with extra thick surfaces
* Shoes with uneven surfaces
* Western style boot with riding heel and tennis style shoes with canvas sides do not provide either firm footing or puncture resistance.
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| Requirements for safety-toe boots | Safety-toe boots must comply with ANSI Z.41 or ASTM F 2412 or 2413 or equivalentEH rated safety boots must be worn for work on or near energized electrical components at >50 volts. See ESH 560 Electrical Safe Work Practice Annex E for guidanceSafety toe boots will have slip & oil-resistant sole, sturdy leather upper, high top (6”), and heelIf safety toe boots are required in the work area, Chevron Products Company will reimburse employees for one pair of safety toe boots per year up to $150 US. If safety toe boots are damaged or lost, then replacement can be approved by Manager or Superintendent. |

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| Requirements for rubber boots | You should wear rubber boots on jobs where your feet will be exposed to excessive water and oil. |

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| Guidelines for selecting foot protection | Follow these guidelines when selecting foot protection:* Employees are responsible for selecting their own safety-toe boots and should choose them based on the nature of the work to be done.
* Boots, preferably leather, with rubber oil and slip resistant soles are required for Terminal Operators and Airport Refueler drivers/operators.
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| Cleaning and storing protective footwear | Employees are responsible for:* Maintaining protective footwear in a sanitary and useable condition.
* Returning rubber boots in a clean and sanitary condition.
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#### SECTION 11 – TRAINING

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| Introduction | Chevron Products Company shall provide training to each employee required to wear PPE. |

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| Training content | PPE training shall cover at least the following topics:* When PPE is necessary
* What PPE is necessary
* How to properly put on, remove, adjust, and wear PPE
* The limitations of the PPE
* Proper care, maintenance, useful life, and disposal of the PPE
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| Demonstration of understanding | Each employee required to wear PPE must demonstrate an understanding of the training and the ability to use PPE properly, before he or she is allowed to perform work that requires use of PPE. |

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| Retraining | An employee must be retrained in PPE use when:* The supervisor believes the employee completed training without acquiring the required understanding or skill.
* Workplace changes render previous training obsolete.
* The trained employee has not retained the required understanding or skill.
* An LPO root cause analysis of a questionable item indicates retraining is necessary.
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#### APPENDIX A - Hazard Assessment and Equipment Guidelines

For guidance on conducting hazard assessments, refer to Managing Safe Work Practices Assessing Hazards and Managing High Risk Work Procedure.

1. Conduct a walk-through survey of the work areas at the facility to identify sources of hazards to workers. Consider the basic hazard categories: impact, penetration, compression, chemical, heat, harmful dust, and light radiation (from welding or cutting).

2. During the walk-through survey, observe the following:

1. Sources of motion; i.e., machinery or processes where any movement of tools, machine elements or particles could exist, or movement of personnel that could result in collision with stationary objects.
2. Sources of high temperatures that could result in burns, eye injury, ignition of protective equipment, etc.
3. Types of chemical exposures.
4. Sources of harmful dust.
5. Sources of light radiation, e.g., welding, brazing, cutting, furnaces, heat treating, high intensity lights, etc.
6. Sources of falling objects or potential for dropping objects.
7. Sources of sharp objects that might pierce the feet or cut the hands.
8. Sources of rolling or pinching objects that could crush the feet.
9. Layout of workplace and location of co-workers.
10. Any electrical hazards.

 In addition, review injury/accident data to help identify problem areas.

3. Then analyze the data to determine the potential hazards of the activities.

1. Once the hazards have been identified, determine the appropriate PPE.

####  APPENDIX B - PPE Hazard Assessment Form

 **EXAMPLE**

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| **Work Area** | **Activity** | **Assessment of Hazard** | **Protection Required** |
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Person Conducting Assessment \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date of Assessment \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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APPENDIX B - PPE Hazard Assessment Form, *Continued*

| **Work Area** | **Activity** | **Assessment of Hazard** | **Protection Required** |
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| Product Testing Laboratory | Product testing | Product splash, broken glassware | Nitrile gloves, safety glasses1), safety toe footwear |
| Product Filters | Filter change outs | Product contact. | Hard hat, Nitrile gloves, safety glasses, safety toe footwear |
| Filter straining basket cleaning/change-out | Product contact, pinch point, flying debris | Hard Hat, Nitrile gloves, safety glasses, safety toe footwear |
| Terminal Yard | Loading transmix | Product contact | Hard hat, Nitrile gloves, safety glasses, safety toe footwear |
| Landscape maintenance (using power tools) | Flying debris | Hard hat, Goggles or face shield with safety glasses, long sleeve shirt, long pants, leather gloves, safety toe footwear |
| Additive truck receipt | Product contact | Hard hat, Nitrile gloves, safety glasses, safety toe footwear |
| Truck inspection process | Product contact | Hard hat, Nitrile gloves, safety glasses, safety toe footwear |
| Loading Rack | Meter calibration | Product contact | Hard, hat, Nitrile gloves, safety glasses, safety toe footwear with oil resistant soles |
| Additive injection calibration | Product contact | Hard hat, Nitrile gloves, safety glasses, safety toe footwear with oil resistant soles |
| Product loading | Product contact | Hard hat, Nitrile gloves, safety glasses, safety toe footwear with oil resistant soles |

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| **Work Area** | **Activity** | **Assessment of Hazard** | **Protection Required** |
| --- | --- | --- | --- |
| Loading Rack | Changing dry brake couplers and hoses at rack | Product contact, pinch points, flying debris | Hard hat, Nitrile gloves, safety glasses, safety toe footwear with oil resistant soles |
| Changing Scully cords | Flying debris | Hard hat, Safety glasses, safety toe footwear with oil resistant soles |
| Cleaning strip drains | Product contact, splashing | Hard hat, Nitrile gloves, safety glasses, safety toe footwear with oil resistant soles |
| Tank Field | Setting valves for product receipt | Hand contusions or abrasions, pinch points | Hard hat, Leather gloves, safety glasses, safety toe footwear with oil resistant soles |
| Setting valves for product transfer | Hand contusions or abrasions, pinch points | Hard hat, Leather gloves, safety glasses, safety toe footwear with oil resistant soles |
| Testing high level alarms | Pinch points, product contact | Hard hat, Nitrile gloves, safety glasses, safety toe footwear with oil resistant soles |
| Hand gauging | Pinch points, product contact | Hard hat, Nitrile gloves, safety glasses, safety glasses, safety toe footwear with oil resistant soles |
| Water draw | Product contact | Hard hat, Nitrile gloves, safety glasses, safety glasses, safety toe footwear with oil resistant soles |
| Vapor Recovery Unit | Changing gas cylinders | Pinch points, flying debris | Hard hat, Leather gloves, safety glasses, safety toe footwear with oil resistant soles |
| Changing glycol filters | Pinch points, flying debris, product contact | Hard hat, Nitrile gloves, safety glasses, safety toe footwear with oil resistant soles |
| Marine Dock | Product receipt | Product contact, water hazards | Hard hat, Nitrile gloves, safety glasses, personal flotation devices in designated areas, safety toe footwear with oil resistant soles. |

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| **Work Area** | **Activity** | **Assessment of Hazard** | **Protection Required** |
| Maintenance Shop | Tire changes | High noise, flying debris | Hart hat, Hearing protection, safety glasses, safety toe footwear with oil resistant soles, leather gloves |
| Power tool use | High noise, flying debris | Hard hat, Hearing protection (as necessary), goggles or face shield with safety glasses, safety toe footwear with oil resistant soles |
| Product Pump Area | PM Maintenance – Oil & Grease | Hydrocarbon contact. High noise | Hard hat, Nitrile gloves (or equivalent). Hearing protection as warranted by monitoring data, safety glasses, safety toe footwear with oil resistant soles |
| Aircraft fueling at Tarmac- Aviation | Product delivery | Product contact | Hard hat or bump cap, Nitrile gloves, safety glasses, safety toe footwear with oil resistant soles, hearing protection |
| Product sampling /water free testing | Product splash, broken glassware | Hard hat or bump cap, Nitrile gloves, safety glasses1), safety toe footwear, hearing protection |
| Pulling hoses to connect to aircraft | Pinch points, Hand contusion, product contact | Hard hat or bump cap, Nitrile gloves, safety glasses, safety toe footwear with oil resistant soles, hearing protection |
| Setting valves for product delivery | Hand contusions or abrasions, pinch points | Hard hat or bump cap, Leather gloves, safety glasses, safety toe footwear with oil resistant soles, hearing protection |
| Setting valves for product transfer | Hand contusions or abrasions, pinch points | Hard hat or bump cap, Leather gloves, safety glasses, safety toe footwear with oil resistant soles, hearing protection |
| Truck inspection process | Product contact | Hard hat or bump cap, Nitrile gloves, safety glasses, safety toe footwear, hearing protection |

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|  |  |  |  |
| --- | --- | --- | --- |
| Service station | Product unloading | Product contact | Nitrile gloves, safety glasses |
| General Terminal | Construction activities2) | Flying debris, falling debris | Hard hat, safety toe footwear, safety glasses, long sleeved shirt, long pants |
| Pressure washer | Flying debris | Hart hat, Reinforced rubber or nitrile gloves, safety glasses, safety toe footwear with oil resistant soles |
| Pump maintenance | Flying debris, pinch points, product contact | Hard hat, Leather (or reinforced nitrile) gloves, safety glasses, safety toe footwear with oil resistant soles |
| Work on or near energized electrical components at > 50 volts3)  | Shock, arc flash | Hazard Risk Category 0 Class E Hard hat, Leather gloves, Cotton or other natural fiber clothing with long sleeves/pants, EH rated safety shoe with oil resistant soles, Safety glasses, Hearing protection (interaural)Hazard Risk Category 2: Class E Hard hat with an integrated face shield and balaclava hard hat liner, arc rated clothing with long sleeves/pants and natural fibers under clothing, EH rated safety shoe with oil resistant soles, Hearing protection (interaural). NOTE; HRC 1 is same as HRC 2 minus balaclava and with lower arc rated clothing. Terminals have arc rated clothing meeting HRC 2 so only HRC 2 included here.  |

1) Safety glasses must be worn with side shields.

2) This requirement applies only to those who are involved in construction activities, or those (e.g., Operators) who must at least occasionally enter active construction zones. An active construction zone is defined as that immediate area where construction is occurring. The perimeter of the construction zone should be broad enough to preclude obvious risk from falling, or flying, objects and/or debris, to anyone standing immediately outside the defined perimeter.

Terminal and Operations requires all employees and contractors working in operating areas (ie Tank Farm, Loading Rack, Walking between buildings, Maintenance shops, and Warehouses and need to be consistent among terminals) will use Hard Hat, Safety Glasses with Side Shields, Steel Toe Boots, and Long Pants. Bump cap exception noted for airport facilities. Note there is an exception for hard hats in laboratory/office setting. See Section 4 General Requirements.

**3)** For work on or near energized electrical components at >50 volts. See ESH 560 Electrical Safe Work Practice Annex E for guidance. Hazard Risk Category (HRC) is determined based on Incident Energy Analysis or NFPA 70E Table 130.7(C)(15). Choose Highest Hazard/Risk Category if incident Energy Analysis not available.

#### APPENDIX C – ESH-511 Personal Protective Equipment Performance Checklist

| **Section** | **Tasks** | **Assessment** | **Actions to Close Gap** |
| --- | --- | --- | --- |
| **General** | Has a Hazard Assessment been conducted to determine where and what type of PPE is required? | Yes 🗆 No 🗆 |  |
|  | Is PPE required at the facility? If yes, continue. If no, STOP. | Yes 🗆 No 🗆 |  |
|  | Do all employees know what type of PPE is required? | Yes 🗆 No 🗆 |  |
|  | Do all employees know how to obtain the required PPE? | Yes 🗆 No 🗆 |  |
|  | Are contractors notified of what type of PPE is required? | Yes 🗆 No 🗆 |  |
|  | Are visitors notified of what type of PPE is required? | Yes 🗆 No 🗆 |  |
|  |  |  |  |
| **Training** | Have all employees been trained in use and care of required PPE? | Yes 🗆 No 🗆 |  |
|  | Has each trained employee demonstrated an understanding of the training requirements? | Yes 🗆 No 🗆 |  |
|  | Are employees retrained when they do not have an understanding? | Yes 🗆 No 🗆 |  |
|  | Does each trained employee receive written certification? | Yes 🗆 No 🗆 |  |
|  |  |  |  |
| **Head Protection** | Hard hats are required when working in areas where there is a potential for injury to the head from falling objects. |  |  |
|  | Are hard hats required at this facility? If yes, continue. If no, skip to next section | Yes 🗆 No 🗆 |  |
|  | Do all hard hats purchased comply with ANSI Z.89.1 requirements? | Yes 🗆 No 🗆 |  |
|  | Does each employee have his or her own hard hat? | Yes 🗆 No 🗆 |  |
|  |  |  |  |
| **Eye and Face Protection** | Eye or face protection is required when an employee will be exposed to hazards from flying particles, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or to potentially injurious light radiation (from welding/cutting). |  |  |
|  | Is eye or face protection required at this facility? If yes, continue. If no, skip to next section. | Yes 🗆 No 🗆 |  |
|  | Does all eye and face protection purchased comply with ANSI Z.87-1 requirements? | Yes 🗆 No 🗆 |  |
|  | Do all safety glasses have side shields? | Yes 🗆 No 🗆N/A 🗆 |  |
|  | Are chemical goggles worn when there is exposure to materials (splash, flying chips or dust) that are capable of causing irreversible eye damage? | Yes 🗆 No 🗆N/A 🗆 |  |
|  | Are face shields worn where there is a hazard to the neck or face from flying particles, sprays of hazardous liquids, or hot solutions? | Yes 🗆 No 🗆N/A 🗆 |  |
|  | Are welders goggles worn when welding, cutting, or burning? | Yes 🗆 No 🗆N/A 🗆 |  |
|  |  |  |  |
| **Hearing Protection** | Is hearing protection required? If yes, refer to ESH-518. | Yes 🗆 No 🗆 |  |
|  |  |  |  |
| **Hand Protection** | Gloves are required when hands are exposed to hazards such as severe cuts, lacerations, or skin absorption of harmful substances. |  |  |
|  | Are gloves required at this facility? If yes, continue. If no, skip to next section. | Yes 🗆 No 🗆 |  |
|  | Is each employee issued his or her own pair of gloves? | Yes 🗆 No 🗆 |  |
|  |  |  |  |
| **Body Protection** | Body protection must be worn to keep acidic, corrosive, oily, dirty, or dusty materials off the body. |  |  |
|  | Is body protection required at this facility? If yes, continue. If no, skip to next section. | Yes 🗆 No 🗆 |  |
|  | Is impervious clothing available for employees performing jobs where it is possible to come into contact with corrosive materials or hydrocarbons? | Yes 🗆 No 🗆N/A 🗆 |  |
|  | Are PFDs worn when working on the dock at the water's edge or riding in work boats? | Yes 🗆 No 🗆N/A 🗆 |  |
|  |  |  |  |
| **Foot Protection** | Foot protection is required for employees exposed to possible foot injury from hot, corrosive substances, falling or rolling objects, or crushing or penetrating action that could cause injury, or when working abnormally wet locations. |  |  |
|  | Is foot protection required at this facility? If yes, continue. If no, STOP. | Yes 🗆 No 🗆 |  |
|  | Does all foot protection purchased comply with ANSI Z.41 requirements? | Yes 🗆 No 🗆 |  |

#### APPENDIX D

#### Laundering For Arc Rated Clothing

The best practice is to follow the manufacturer’s care instructions located on the label of each garment; however, following are general guidelines regarding care:

* Wash in warm water and tumble dry on medium temperature. Do not over dry. It is even a good idea to take the garments out of the dryer when they are still slightly damp and hang them to dry.
* Do not use chlorine bleach as this can affect the color and weaken the fabric.
* Do not use fabric softener.
* Excessive oil and grease can be removed by industrial laundering.
* Wash your clothing separate from regular use clothing to help keep away lint and any other contaminants.

When caring for your uniform clothing during working conditions on the job, be aware of the following factors:

* Be careful of stress points on the fabric in areas where abrasions occur such as knees, elbows and thighs. Also be careful around the midsection as certain tools along with work habits can lead to constantly rubbing of this area that can deteriorate the material in this area.
* Never store or put away clothing rolled up with tools or sharp objects as they can be cut open and damaged easily.
* Do not store in areas where they can become contaminated from substances.
* Do not use insect repellents that contain DEET as they contain flammables

May 2013 Revisions

| **Section** | **Edits** |
| --- | --- |
| Various | * Removed Global Downstream
* Replace steel toe with safety toe
* Replace shoes with boots
 |
| 2. References for Practice 511 | * Removed EHS 502 General Safety Rules and Added 560
 |
| 4. General Requirements | * Replace Steel with Safety
 |
| 5. Head Protection | * Removed Hats designed to reduce electrical shock must be worn when near exposed electrical conductors that could contact the head.
* Added Hard Hats Class E with an integrated face shield and balaclava hard hat liner worn for work on or near energized electrical components at >50 volts. See ESH 560 Electrical Safe Work Practice Annex E for guidance on specific PPE based on Hazard Risk Category
* Added Replace hard hats and replacing suspension per manufacturer’s recommendation typically 3-5 years
 |
| 6.1 Safety Glasses | * Added Safety Glasses with non-conductive materials are worn for work on or near energized electrical components at >50 volt
* Added Prescription safety glasses or other eye protection with non-conductive materials are worn for work on or near energized electrical components at >50 volt
* Removed Must not be photochromatic lenses. Photochromatic lenses do not meet ANSI standard light-change requirements.
* Added Non-conductive frames are required for work on or near energized electrical components at >50 volt.
 |
| 7. Hearing Protection | * Added Hearing protection (ear canal inserts) are worn for work on or near energized electrical components at >50 volts. See ESH 560 Electrical Safe Work Practice Annex E for guidance
 |
| 8. Hand Protection | * Update M85 and methanol to E85 and ethanol
* Added Rubber gloves with leather overs worn for work on or near energized electrical components at >50 volts. See ESH 560 Electrical Safe Work Practice Annex E for guidance
* Added See ESH 560 Electrical Safe Work Practice Section 4.5 and Annex I for further guidance for inspecting gloves for electrical exposure.
* Added Store and maintain electrical gloves per ESH 560 Annex I.
 |
| 9. Body Protection | * Added Arc rated clothing is worn for work on or near energized electrical components at >50 volts. See ESH 560 Electrical Safe Work Practice Annex E for guidance.
* Added See Appendix D for Laundering Guidance of Arc Rated Clothing
 |
| 10. Foot Protection | * Specify in operating area
* Added EH rated safety boots must be worn for work on or near energized electrical components at >50 volts. See ESH 560 Electrical Safe Work Practice Annex E for guidance
 |
| Appendix B PPE Hazard Assessment Form | * Added to General Terminal Work on or near energized electrical components at > 50 volts with risk of shock, arc flash
* Added Hazard Risk Category 0 Class E Hard hat, Leather gloves, Cotton or other natural fiber clothing with long sleeves/pants, EH rated safety shoe with oil resistant soles, Safety glasses, Hearing protection (interaural)
* Added Hazard Risk Category 2: Class E Hard hat with an integrated face shield and balaclava hard hat liner, arc rated clothing with long sleeves/pants and natural fibers under clothing, EH rated safety shoe with oil resistant soles, Hearing protection (interaural). NOTE; HRC 1 is same as HRC 2 minus balaclava and with lower arc rated clothing. Terminals have arc rated clothing meeting HRC 2 so only HRC 2 included here
* Added Footnote 3 For work on or near energized electrical components at >50 volts. See ESH 560 Electrical Safe Work Practice Annex E for guidance. Hazard Risk Category (HRC) is determined based on Incident Energy Analysis or NFPA 70E Table 130.7(C)(15). Choose Highest Hazard/Risk Category if incident Energy Analysis not available.
 |
| Appendix D Laundering For Arc Rated Clothing | * Added new instructions for laundering of arc rated clothing
* The best practice is to follow the manufacturer’s care instructions located on the label of each garment; however, following are general guidelines regarding care:
	+ Wash in warm water and tumble dry on medium temperature. Do not over dry. It is even a good idea to take the garments out of the dryer when they are still slightly damp and hang them to dry.
	+ Do not use chlorine bleach as this can affect the color and weaken the fabric.
	+ Do not use fabric softener.
	+ Excessive oil and grease can be removed by industrial laundering.
	+ Wash your clothing separate from regular use clothing to help keep away lint and any other contaminants.
* When caring for your uniform clothing during working conditions on the job, be aware of the following factors:
	+ Be careful of stress points on the fabric in areas where abrasions occur such as knees, elbows and thighs. Also be careful around the midsection as certain tools along with work habits can lead to constantly rubbing of this area that can deteriorate the material in this area.
	+ Never store or put away clothing rolled up with tools or sharp objects as they can be cut open and damaged easily.
	+ Do not store in areas where they can become contaminated from substances.
	+ Do not use insect repellents that contain DEET as they contain flammables
 |