CITY AND COUNTY OF DENVER

Personal Protective Equipment Policy		
Occupational Safety and Health Management System No. 65.6.3 This policy was developed and shall be implemented under the authority of Executive Order No. 65 and the Risk Management Office.	January 1, 2008	Prepared / Revised By: Risk Management – Safety Unit

1.0 Introduction

This policy has been developed to provide adequate methodology for the proper application, selection, use and maintenance of personal protective equipment for the protection of the eyes, face, head, feet, hands and arms, torso, respiratory system and hearing for the City and County of Denver employees.

2.0 Scope

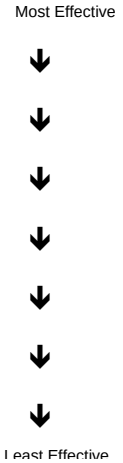
2.1 This policy applies to all City and County of Denver employees, contractors and visitors where manufacturing, construction, remediation, shipping, receiving, warehousing, field service or similar activities of employment could be reasonably anticipated to present an exposure to potential hazards that could effectively be controlled by the proper use of personal protective equipment.

2.2 Hazard controls are the countermeasures taken to reduce the:

- Potential effects or severity of a hazard,
- Likelihood of exposure to the hazard, and/or
- Frequency of exposure

Ideally, an agency/department must find solutions and use countermeasures that *eliminate* the hazards. When hazard elimination is not technically feasible or is extremely impractical, the agency/department needs to ensure that the hazards are managed so that incidents are prevented. Hazard controls can be classified into five major strategies. The order of preference to be applied is as follows:

HIERARCHY SAFEGUARDING CONTROLS



1) Elimination or Substitution	• Eliminate human interaction in the process • Eliminate pinch points (increase clearance) • Automated material handling
2) Engineering Controls (Safeguarding Technology	• Mechanical hard stops • Barriers • Interlocks • Presence sensing devices • Two hand controls
3) Awareness Means	• Lights, beacons and strobes • Computer warnings • Signs • Restricted space painted on floor • Beepers • Horns • Labels
4) Training & Procedures (Administrative Controls	• Safe job procedures • Safety equipment inspections • Training • Lockout
5) Personal Protective Equipment	• Safety glasses • Ear plugs • Face shields • Gloves

2.3 Personal protective equipment shall be applied after other safeguarding controls have been considered and evaluated. Wherever practical, the use of personal protective devices alone, as a single-layer of protection, shall be limited to those situations with lower risk for serious or disabling injuries or illnesses or where no other foreseeable interim solution exists.

2.4 Personal protective equipment, for the purposes of this policy will be considered those devices intended to be personal in nature and focused on protecting the eyes, face, head, feet, hands and arms, torso, respiratory system and hearing of the employees. These devices include items such as: safety glasses, goggles, face shields, hard hats, safety shoes, gloves, protective sleeves, specialized clothing, aprons, chaps, respirators, ear plugs and ear muffs.

2.5 This policy does not address the specifics of low and high voltage gloves, sleeves, leather protectors, mats, hot sticks and similar equipment. This equipment is addressed under 65.5.3 Electrical Safety Policy.

2.6 This standard does not address the specifics of confined space entry rescue equipment, passive alert safety systems and fall protection equipment such as full-body harnesses, lanyards and similar equipment all of which are covered by 65.5.1 Confined Space Policy.

2.7 This standard does not address the specifics of respiratory protection equipment. These are addressed under 65.6.4 Respiratory Protection Policy.

3.0 Definitions

Head Hazards

Work activities/situations that can create the potential for head injuries include: Working below work surfaces from which tools, debris and materials can fall; suspended loads over work areas and traffic routes; loosely secured or unstable objects stored overhead; low hanging piping and ductwork.

Eye Face Hazards
Work activities/situations that can create the potential for eye and face injuries include: Operations generating hot or high speed projectiles such as welding, grinding, torch cutting and chipping; operations generating finely divided airborne particulate such as sanding and demolition; handling of acids, caustics and other hazardous liquids.

Hand and Arm Hazards
Work activities/situations that can create the potential for hand and arm injuries include: Improper use of hand tools; cutting operations; unguarded moving part; material handling; banding operations; unfinished metal work; extreme temperatures.

Foot and Ankle Hazards
Work activities/situations that can create the potential for foot and ankle injuries include: Carrying or handling materials; unstable or uneven work surfaces; poor housekeeping; improper storage of tools/materials in walkways or work areas; unexpected steps/drop-off; rollover; puncture hazards such as nails or screws.

Hazard Classes: The hazard classes and examples common sources listed below shall be considered while assessing each of the above categories:

Burns - Extreme temperatures; radiant energy.

Chemical Exposure - Acids; caustics; solvents; toxins.

Compression - Unguarded machinery - shifting loads.

Electrical Shock - Poorly maintained power tools, unguarded power lines, crane rail, faulty wiring.

Impact - Overhead loads, falling tools/materials, blind spots in roadways/walkways.

Cuts and Abrasions - Sharp/unfinished materials, cutting tools, improper tool use.

Strain/Sprain - exertion and body position that creates a strain on a body part sufficient to cause injury.

Puncture - Object such as a nail or tool or sliver breaking the skin and or entering body.

Eye/Face Protection
Safety glasses with side shields, complying with ANSI Z87 - 1-1989 (or most current issue)

Welders shall not wear contact lenses at any time. Operations generating intense radiant energy, such as welding and cutting, require the use of shaded/filtered eye protection.

See Attachment Two - Eye Protective Shading for Weld Operations to determine the MINIMUM Protective Shade for the task.

ANSI approved face shields shall be worn when operations require additional face, neck and ear protection. Safety glasses must always be worn under the face shield as the first and primary eye protection. The following are examples of work activities requiring face shields:

- Grinding

- Chemical handling

Impact resistant goggles, meeting the requirements of ANSI Z87 - 1-1989 (or most current issue) may replace safety glasses as a primary form of eye protection. Goggles can be used in situations where more complete eye protection is required. The following are examples of work activities requiring goggles:

- Chemical handling operations.
- In operations that are over-the-head and deposit debris and objects in the face.
- In operations that are unusually dusty.

Foot Protection
Leather footwear with toe protection, meeting the requirements of ANSI Z41 1991, (or most current issue)

Hand Protection
All employees engaged in production/maintenance activities with the potential for hand injuries such as lacerations, cuts, abrasions and chemical exposure shall wear hand protection. Gloves must be selected and provided to fit the hazard and work activity for which they will be used.

Protective Clothing
Welding and Burning - 100% non-frayed cotton clothing.

Disposable Coveralls - Disposable Tyvek type coveralls shall be used in accordance with the manufacturer's requirements concerning flammability.

4.0 Roles and Responsibilities

4.1. Each agency/department location shall designate a competent person to act as the overall Personal Protective Equipment Program Coordinator for the location. This individual by means of training, experience, third party certification or professional certification must be competent in the hazard assessment process, as well as the proper selection, use and maintenance of personal protective equipment used on site.

4.2. The Personal Protective Equipment Program Coordinator(s) have the following responsibilities:

- Coordinate the completion, documentation and certification of the workplace Hazard Assessment (Attachment One).
- Establish procedures for the proper selection, purchase, use, inspection and maintenance of personal protective equipment consistent with applicable requirements and manufacturers' recommendations. Procedures shall address controls and approvals required for the testing and/or purchase of new personal protective equipment.
- Document established procedures in the form of a written health and safety rules, safe work instructions and a personal protective equipment program or procedure for the location.

- Assist with the identification and selection of personal protective equipment appropriate for the hazards likely to be encountered.
- Ensure processes are in place to meet the anticipated demand for protective equipment, make it readily available to employees and maintain it in a clean, sanitary and reliable condition.
- Ensure processes are in place to deliver and document personal protective equipment training requirements to all new hire and active employees.

4.3. Agency/Department Supervisors have the following responsibilities:

- Maintain an adequate supply of personal protective equipment to meet the needs of their area or work group.
- Participate in the Hazard Assessment process to the extent necessary to ensure hazards are adequately considered and workable countermeasures are clearly defined.
- Coordinate employee participation, testing, input and feedback on personal protective equipment selection and performance.

4.4. All employees have the following responsibilities:

- Re-enforce the "right behavior" wearing all required personal protective equipment and enforcing the same with all employees, contractors and visitors.
- Clean, inspect, store and maintain personal protective equipment to ensure sanitary and reliable protection.
- Notify a supervisor or the Program Coordinator when issues are identified associated with the fit, reliability, comfort or effective performance of the protective equipment.
- Participate in the selection, training and Hazard Assessment steps of the process as requested.

4.5. As a minimum, contractors, temporary personnel and visitors will be required to wear the same personal protective equipment as employees working in the same department, area or job classifications. More stringent local standards may be applied for contractors based on specific risks and activities at the site. In addition less stringent requirements may be applied to accommodate touring visitors with regard to protective footwear when a controlled and designated tour route is used and an escort accompanies them.

5.0 Guidelines

5.1. **Hazard Assessment:** Locations involved in manufacturing, construction, remediation, shipping, receiving, warehousing, field service or similar activities that could be reasonably anticipated to present an exposure to potential hazards that could effectively be controlled by the proper use of personal protective equipment shall complete a comprehensive hazard assessment by task, job classification, area or department to identify where personal protective equipment shall be used in combination with or in lieu of other countermeasures.

5.1.1. Hazard assessments shall be conducted as follows:

- Initially
- When new materials, equipment or processes are introduced into an area, task or job classification.
- When incident records indicate a need to reevaluate the personal protective equipment needs of an area, department, task or job classification.
- Periodically, (at least every three years) to reevaluate the effectiveness and suitability of previously selected personal protective equipment.

5.1.2. The Hazard Assessment shall be systematically documented in a consistent format. As a minimum it shall include:

- Identification of the workplace evaluated
- Identification of the competent person certifying the evaluation
- Dates of the assessment

Note: Attachment One provides an example of a Hazard Assessment Process.

5.1.3. The Hazard Assessment shall include a ***Walk-Through Survey***. A walk-through survey can be completed by task, job classification, area or department. Surveys must be conducted by the personnel qualified in the proper application, selection and use of personal protective equipment with participation by personnel with knowledge of the potential task, job classification, area or department hazards and exposures. While conducting the survey, potential hazards and hazard sources shall be identified and documented.

Note: Respirators, fall arrest equipment, and rubber insulating equipment (gloves, sleeves, blankets, etc.) are also considered to be personal protective devices. However, the need for their use must be identified as part of the PPE Hazard Assessment to the extent possible and shall be updated accordingly based on a location specific industrial hygiene assessment, fall prevention survey and confined space entry assessment.

5.1.4. The Hazard Assessment shall include a ***review of applicable material safety data sheets, qualitative and quantitative industrial hygiene assessments where they exist.***

5.1.5. The Hazard Assessment shall include a review of the ***existing safe work instructions*** (e.g. job safety analysis, Safe Job Procedure, etc.).

5.1.6. The Hazard Assessment shall include a review of the ***incident history*** (e.g. by area, department or job being done) to ensure that the appropriate gaps in requirements are included in the assessment.

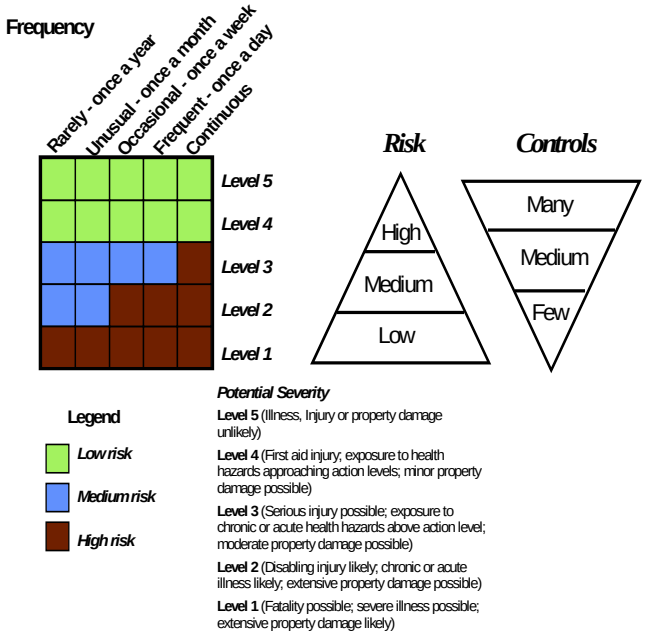
5.1.7. The Hazard Assessment shall include a review of the ***general noise survey*** if completed (e.g. by area, department or specific equipment) to ensure that the appropriate hearing protection requirements are included in the assessment.

Note: Hearing protection must be required when working or visiting an area the noise level is equal to or exceeds 90 dBA 8-hour TWA (time -weighted average). Anyone working in or visiting an area where sound levels exceed 100 dBA for a 15-minute STEL, will also be required to wear hearing protection.

5.2. **Risk Analysis:** After the Hazard Assessment is complete; a risk analysis shall be conducted to align the personal protective equipment requirements of the task, job classification, area or department. A determination will be made as to the level of risk, based on frequency of exposure and seriousness of potential for injury/illness associated with each of the potential hazards identified. The risk analysis can:

5.2.1. Be performed by a competent person and integrated into the Hazard Assessment with no further documentation required.

5.2.2. Be performed by a team with oversight and review by a competent person using one of several risk assessment tools such as a Frequency/Severity Risk Rating similar to that identified below.



5.3. **Proper Selection of Personal Protective Equipment:** After the Hazard Assessment and Risk Analysis has been completed and reviewed; a determination shall be made as to the type of personal protective equipment. A systematic approach to selection can be utilized and completed as follows:

5.3.1. Various personal protective devices shall be identified with respect to the hazards that have been identified and assessed.

5.3.2. A comparison of the following shall be made:

- The specifics of the hazards identified (i.e., impact velocities, projectile shapes, radiation intensities, noise levels, etc.)
- The capabilities of the PPE available (i.e., Noise Reduction Rating (NRR), splash protection, shade of lenses, etc.)

5.3.3. Selection of PPE shall be made according to the following general guidelines:

- The level of protection shall be equal to minimum required to adequately protect employees from the most reasonably likely hazards present. Choose the appropriate personal protective equipment after evaluating the performance characteristics of the protective equipment to make sure that it is suitable to the tasks(s) to be performed, conditions present, duration of use and the hazards and potential hazards identified. Where there is a wide assortment of choices in protective equipment such as is the case with protective clothing, gloves and respirators the manufacturer or Risk Management shall be contacted to verify protection against the hazard(s) anticipated.
- Comfort for the employees shall be a priority when making the selection. Continued and proper use of the PPE is more likely when the user is comfortable**.** However, comfort shall be subordinate to risk in situations that represent life threatening or seriously disabling injury or illness potentials.
- Fit of the device shall be ensured through testing, adjustments, etc. Protective devices are generally available in a variety of sizes. During the selection process, ensure that protective equipment is acquired not only in the proper quantity but also in the proper sizes.
- Increase acceptance, test performance and ensure reasonable comfort and fit, the employees need to have the opportunity to participate and be involved in the selection process.

5.4. **Preventive Inspection, Cleaning, Maintenance and Storage Practices** to maintain and verify the effectiveness of the personal protective equipment's integrity and reliability.

5.4.1. Improperly functioning or damaged personal protective equipment must be removed from service or repaired.

5.4.2. The more critical an article of personal protective equipment is to protection of the individual from life threatening or debilitating injury or illness, the more frequently its' condition and protective functions must be verified. Key to this is the concept of "mean time to detection" of a failure in a safeguard. Locations shall incorporate this risk-based decision making into their respective personal protective equipment programs when deciding which equipment will be inspected, by whom and with what level of documentation.

5.4.3. Equipment requiring a formalized inspection beyond the individual user's pre-use check shall be identified in the Personal Protective Equipment Program or affiliated procedures (e.g. Fall Protection Programs).

5.5. **Employee Training:** All employees who are required to wear personal protective equipment shall receive documented training prior to issuance and periodically thereafter. At a minimum, this training shall consist of the following information:

a) Overview of the PPE Hazard Evaluation

- Designated facility PPE Areas/Tasks
- When, where and why PPE is required

b) How the Personal Protective Equipment Works

- Capabilities of the PPE
- Limitations of the PPE

c) How to properly wear each specific type of Personal Protective Equipment

d) How to identify signs of wear and or damage

e) How to clean/properly store/dispose of PPE

f) How to get new or replacement PPE

5.6. **Basic Safe Work Practices** for the proper use of personal protective equipment.

5.6.1. Areas where personal protective equipment is required shall be posted or otherwise clearly communicated.

5.6.2. In general, where a recognized hazard exists, the Agency/Department will provide the personal protective equipment that is considered necessary to protect the employee from the exposure.

5.6.3. Safe work instructions such as job hazard analysis shall clearly identify job or task specific personal protective equipment that is required for specific jobs or tasks.

5.6.4. Personal protective equipment that is worn or damaged so as to render its protective properties ineffective or unreliable must be removed from service and repaired or replaced.

5.6.5. Personal protective equipment shall be worn in the manner intended and kept in clean, sanitary and reliable condition.

6.0 References

- ANSI Z 87.1-1989 American National Standard Practice for Occupational and Educational Eye and Face Protection.
- ANSI Z 89.1-1986 “American National Standard for Personnel Protection - Protective Headwear for Industrial Workers

- ANSI Z 241.1-1991, “American National Standard for Personal Protection- Protective Footwear”.
- American Society for Testing and Materials (ASTM) D 120-87, Specification for Rubber Insulating Gloves.
- ASTM D 178-93 (or D 178-88), Specification for Rubber Insulating Matting.
- ASTM D 1048-93 (or D 1048-88a), Specification for Rubber Insulating Blankets.
- ASTM D 1049-93 (or D 1049-88), Specification for Rubber Insulating Covers.
- ASTM D 1050-90, Specification for Rubber Insulating Line Hose.
- ASTM D 1051-87, Specification for Rubber Insulating Sleeves.
- *42 CFR Part 84 Respiratory Protective Devices*
- NIOSH GUIDE TO INDUSTRIAL RESPIRATORY PROTECTION
  September, 1987, DHHS (NIOSH) Publication No. 87-116
- A Guide for Evaluating the Performance of Chemical Protective Clothing June, 1990
  DHHS (NIOSH) Publication No. 90-109

Attachment One

PPE HAZARD ASSESSMENT PROCESS:

The Hazard Assessment Worksheet can be utilized to conduct the assessment according to the following process:

Conducting the Facility Walk-Through Survey

The walk-through survey shall be conducted in all areas of a facility including but not limited to: production, maintenance, warehouse, office, and grounds. Surveys shall be conducted by the Department Supervisor and shall involve affected employees in each area.
The purpose of the walk-through survey is to identify the following types of hazards:

- Impact
- Penetration
- Compression (roll-over)
- Chemical (including sensitizers, acute and chronic health hazards)
- Heat or open flames
- Harmful dust, vapor or gas
- Ultraviolet (welding arc) and other non-ionizing radiation (lasers, etc.)
- Ionizing radiation (sealed sources, x-rays)
- Electrical
- Laceration
- Potential for clothing ignition
- Noise or ultrasonic frequencies (e.g. ultrasonic welding)
- Molten substances (lead, glue, etc.)
- Biohazards (e.g. bloodborne pathogens, sanitary wastes, medical wastes)

In order to better protect against these hazards, the entire process must be evaluated to determine where hazard sources exist. The following list identifies the Hazard Sources that shall be considered during the walk-through survey.

- Sources of motion; i.e. machinery or process where any movement of tools, machine, elements or particles could exist, or movement of personnel that could result in collision with stationary objects.
- Sources of temperature that could result in burns, eye injury or ignition of protective equipment.
- Types of chemical exposures.
- Sources of harmful dusts, vapors and gases.
- Sources of light radiation such as welding, brazing, cutting, furnaces, heat treating, high intensity lights, etc.
- Sources of falling objects or potential for dropping objects from overhead.
- Sources of sharp objects, which might penetrate or pierce the feet or cut the hands.
- Sources of rolling or pinching objects that could crush the feet.
- Layout of the workplace and location of employees.
- Electrical hazards.

- Sources with potential for different level falls
- Sources of engulfment, asphyxiation or drowning

GUIDELINES FOR COMPLETING THE FACILITY WALK-THROUGH SURVEY

Use the following as a guide to conduct the facility survey. The attached worksheet may be used to record final assessment results and requirements for each department.

Note: A checklist and worksheet shall be completed for each of the major departments/areas of the location.

General	Yes	No	N/A	Additional Action Required
Is PPE in the area clean, functional, in good repair, and ready for use?	☐	☐	☐	
Is PPE easily accessible within the area where the hazard is present?	☐	☐	☐	
Are all Employees aware of how to request and receive new and replacement PPE?	☐	☐	☐	
Is there a PPE procurement system in place for this department/area?	☐	☐	☐	
Do the Employees interviewed in the area feel that the PPE presently used is adequate and available?	☐	☐	☐	
Does all of the PPE being used in the area meet the appropriate ANSI specifications and is it marked accordingly?	☐	☐	☐	
Additional Comments:				

Moving Parts Hazards	Yes	No	N/A	Additional Action Required
Are there 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?	☐	☐	☐	
Are employees prohibited from wearing loose clothing and jewelry in this area?	☐	☐	☐	
Is long hair required to be pulled back or otherwise contained in this area?	☐	☐	☐	
If gloves are used within the area, is their use prohibited when working around the above mentioned motion hazards?	☐	☐	☐	
Have there been any ADM4s submitted in the past year due to motion related incidents in this area?	☐	☐	☐	
Additional Comments:				

Temperature Exposure Hazards	Yes	No	N/A	Additional Action Required
Are there sources of temperature within the area that could result in burns, eye injury or ignition of protective equipment?	☐	☐	☐	
Are employees adequately protected from existing hazards?	☐	☐	☐	
If PPE is presently in use, has it been evaluated for its effectiveness?	☐	☐	☐	
Have there been any ADM4s submitted in the past year related to temperature extreme incidents in this area?	☐	☐	☐	
Additional Comments:				

Chemical Exposure Hazards	Yes	No	N/A	Additional Action Required
Are there chemical handling hazards present in this area?	☐	☐	☐	
Are JHA available for the handling of hazardous chemicals in this area?	☐	☐	☐	
Are MSDS's readily available for the chemicals used in this area?	☐	☐	☐	
Are adequate engineering and personal protective measures in place to protect employees from the hazards of the chemicals handled in this area (i.e, during production, spills, leaks, clean-up, etc.)?	☐	☐	☐	
Are employees aware of the capabilities and the limitations of the PPE used?	☐	☐	☐	
Have there been any ADM4s submitted in the past year related to exposure to chemical hazards in this area?	☐	☐	☐	
If yes, has corrective action been taken and is it working effectively?	☐	☐	☐	
Additional Comments:				

Harmful Dusts/Respiratory Hazards	Yes	No	N/A	Additional Action Required
Are there operations within this area, which may produce hazardous dusts or respiratory hazard exposures (i.e., cutting, grinding, welding, etc.)?	☐	☐	☐	
Has the exposure been evaluated through qualitative and quantitative sampling?	☐	☐	☐	
Are adequate engineering and personal protective measures in place? (i.e., ventilation, respirators, etc.)	☐	☐	☐	
Have any ADM4s submitted in the past year related to exposure to chemical hazards in this area?	☐	☐	☐	
If yes, has corrective action been taken and is it working effectively?	☐	☐	☐	
Additional Comments:				

Light Radiation	Yes	No	N/A	Additional Action Required
Are there operations such as welding, brazing, cutting, heat treating, etc. which might present an exposure to high intensity light or radiation hazards?	☐	☐	☐	
Have appropriate measures been taken to limit associate exposure (i.e., weld curtains, appropriately shaded filtered eye-wear, etc.)?	☐	☐	☐	
Additional Comments:				

Impact, penetration, laceration and compression Hazards	Yes	No	N/A	Additional Action Required
Is there a potential for crushing foot injuries from the movement of mobile equipment, carts, or objects being rolled during material handling?	☐	☐	☐	
Does overhead work or storage take place in this area creating the potential for objects falling from above or dropping onto the floor? (i.e., manlifts, warehousing, dollies, etc.)	☐	☐	☐	
Do employees use tools, which present the potential for laceration or puncture of the hands?	☐	☐	☐	
Are employees working with heavy materials or equipment, which create a potential compression (crushing) hazard if dropped?	☐	☐	☐	
Do employees work in areas or around equipment where they may potentially strike their head?	☐	☐	☐	
Are there existing or potential sharp objects or edges which may pierce the feet or hands?	☐	☐	☐	
Where the above hazards exist, are employees adequately protected?	☐	☐	☐	
Additional Comments:				
Noise Hazards	**Yes**	**No**	**N/A**	**Additional Action Required**
Are there sources of excessive noise present in this area?	☐	☐	☐	
Has noise monitoring been performed?	☐	☐	☐	
Are employees provided with adequate hearing protection where necessary?	☐	☐	☐	
Do employees appear to be wearing hearing protection properly?	☐	☐	☐	
Electrical Hazards	**Yes**	**No**	**N/A**	**Additional Action Required**
Are employees in this area required to perform electrical work?	☐	☐	☐	
If so, has PPE conforming to recommended guidelines been provided?	☐	☐	☐	
Additional Comments:				

Complete an assessment form for each department.

PERSONAL PROTECTIVE EQUIPMENT - HAZARD ASSESSMENT WORKSHEET		
Department:	**Area**	**Date:**

Facility Walk-Through Survey Results - Note General Requirements

Hazards Identified	Hazard Source	PPE Requirements

Task or Area Specific - Review of JHA's and/or Task Observations (Check whichever applies)*

Hazards Identified	Hazard Source	JHA	Task Obv.	PPE Requirements
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Walk-Through Observations And Employee Interviews - Points for consideration.

• Problems with any of the presently used PPE?	
• Any infrequent or new tasks that may need to be evaluated for PPE use?	
• What is the PPE procurement process in the area?	
• Where is PPE stored?	
• How is it maintained?	

Recommendations - Action Plan

Action To Be Taken	Person(s) Assigned	Completion Date

Assessment Completed By:

Employees Involved:

*** Identify only those jobs/tasks, which would require PPE outside of the "General Requirements" for the Department or Area.**

Personal Protective Equipment Assessment - MSDS/IH Review			
Material Description	**Material Use**	**PPE Requirements**	**Specific Comments**

ADM4 Review - Review all departmental incident trends (at least 12 months prior).	
Department incident trends indicate the need for an addition to or a change in the PPE utilized? ☐ **Yes** ☐ **No**	
Hazards Identified	**PPE Requirements**
List all specific hazards identified during the review and include the PPE recommendation for each.	

Attachment Two

EYE PROTECTIVE SHADING FOR WELD OPERATIONS

Operation	Electrode Size	Arc Current	*Minimum* Protective Shade
Shielded metal arc welding	Less than 3/32……. 3-5/32……. 5-8/32……. More than 8/32……..	Less than 60……. 60-160 ……. 160-250 …… 250-550 ……	7 8 10 11
Gas metal arc welding and flux cored arc welding		Less than 60……. 60-160 ……. 160-250 …… 250-500 ……	7 10 10 10
Gas Tungsten arc welding		Less than 50 ……. 50-150 150-500	8 8 10
Air Carbon Arc cutting	(Light) …… (Heavy) …….	Less than 500 500-1000	10 11
Plasma arc welding		Less than 20…….. 20-100 ……. 100-400 …… 400-800 ……	6 8 10 11
Plasma arc cutting	(Light) …… (Medium) …….. (Heavy) …….	Less than 300 …… 300-400 ……. 400-800 …….	8 9 10
Torch brazing Torch soldering Carbon arc welding			3-4 2 14
Operations	**Plate Thickness - Inches**	**Plate Thickness - mm**	**Minimum Protective Shade**
Gas welding: Light Medium Heavy	 Under 1/8 ……. 1/8 to 1/2 …… Over 1/2 …….	 Under 3.2 …..…… 3.2 to 12.7…….. Over 12.7……	 4-5 5-6 6-8
Oxygen cutting: Light Medium Heavy	 Under 1…….. 1 to 6 ……. Over 6 ……	 Under 25 …….. 25 to 150 ……. Over 150 ……..	 3-4 4-5 5-6