

## Hot Work (Welding and Cutting) Program

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# EHS Mosaic – Phosphate Hot Work (Welding and Cutting) Program

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## 1 PURPOSE

This program contains requirements to ensure that all workers are protected from the hazards of Hot Work (welding and cutting) and to protect property and equipment from damage or destruction

## 2 SCOPE

This program shall apply to all Phosphate Business Unit employees and contractors who perform Hot Work (welding and cutting) on Mosaic Fertilizer property.

This Program addresses the following Hot Work related topics:

- Hot Work Hazard Assessment and Controls
- Safe Work Permit
- Fire Watch
- Fire Watch Monitoring
- Equipment Requirements
- Marine Terminals

This program does not apply to:

- Hot Work in maintenance and fabrication shops or other areas that have been evaluated and designated for Hot Work activities
- Phosphate Float Crews and Mine Maintenance & Reclamation areas performing Hot Work on noncombustible materials when there is no risk of igniting other appreciable sources of combustion such as grass, grease, combustible gases, etc.

## 3 APPENDICES


The following appendices are associated with this Program:

Appendix	Appendix Title
A	Definitions
B	Roles and Responsibilities
C	Safe Work Permit (Doc ID: 21493999)
D	Matrix for Final Safety Approval (Doc ID: 693381)

## 4 GENERAL REQUIREMENTS

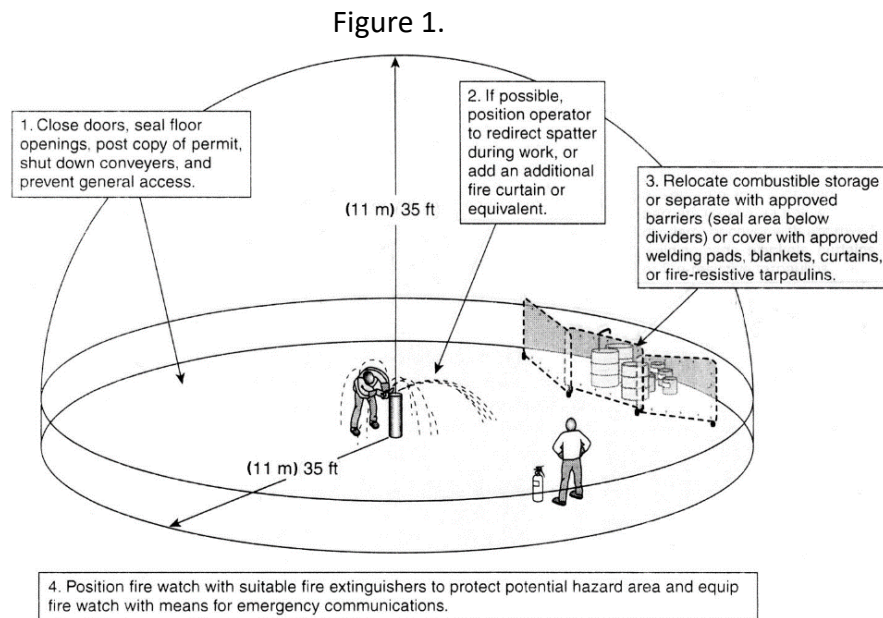
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- 4.1 Each facility shall implement the guidance and processes in this document to prevent incidents where Hot Work is conducted.
- 4.2 Where reasonably practicable, new and modified plant equipment shall be designed to minimize the need to perform Hot Work during regular maintenance
- 4.3 Prior to any Hot Work activities, a task-specific Hot Work hazard assessment shall be performed by a competent worker to evaluate whether the Hot Work can be replaced by alternative methods or by moving the Hot Work to a designated Hot Work area.
- 4.4 A task-specific Hot Work Hazard Assessment shall evaluate at a minimum:
  - 4.4.1 All moveable fire hazards (flammables) within 35 feet of Hot Work are relocated to a safe area known as the “Hot Work 35-foot rule.”
  - 4.4.2 All non-moveable fire hazards within 35 feet of Hot Work are shielded with fire resistant (FR) covers or other suitable fire protection to confine heat, sparks, slag, etc.
  - 4.4.3 Compressed gas cylinder placement for the work as they are not permitted on roofs containing combustible materials such as rubber or foam.
  - 4.4.4 Suitable fire extinguishing equipment shall be maintained in a state of readiness, immediately available where Hot Work is being performed:
    - A multipurpose dry-chemical fire extinguisher with a minimum rating of 2-A:10-B:C if an electrical hazard is present
    - A multipurpose dry-chemical fire extinguisher or other approved extinguishing equipment for non-electrical fire hazards
  - 4.4.5 Additional measures are required if the Hot Work is elevated above any structure, walkway or equipment.
- 4.5 If alternative methods are not feasible or introduce new hazards, a **Safe Work Permit** shall be issued to identify controls necessary to address the hazards.  
 **Note:** *Alternative methods to Hot Work include but are not limited to the following:*
  - Mechanical removal of frozen piping vs. thawing using Hot Work
  - Manual hydraulic shears vs. saw/torch cutting
  - Mechanical bolting vs. welding
  - Reciprocating saw vs. radial saw
  - Remove Hot Work from the general workplace to a designated Hot Work Area
- 4.6 A designated fire watch shall be assigned to the Hot Work operation before Hot Work commences;

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- 4.7 Hot Work shall only be permitted in accordance with the **Hot Work 35 ft. rule** as defined below in Figure 1:



- 4.7.1 Task specific hazards and mitigating controls shall be identified and documented by completing the Safe Work Permit.
- 4.7.2 The supervisor shall authorize the task once mitigating controls have been physically confirmed to be in place.
- 4.7.3 Combustible materials - such as paper clippings, wood shavings, etc. – on the floor shall be swept clean for a radius of 35 feet.
- 4.7.4 Combustible floors shall be kept wet, covered with damp sand, or protected by fire-resistant shields.
- 4.7.5 Ducts and conveyors that might carry sparks to distant combustibles shall be suitably protected or shut down.
- 4.7.6 Where cutting or welding is done near walls, partitions, ceiling or roof of combustible construction, fire-resistant shields or guards shall be provided.
- 4.7.7 After welding operations are completed, the welder shall mark the hot metal or provide some other means of warning to other workers.

## 4.8 Safe Work Permit

- 4.8.1 Once issued, the Safe Work Permit shall require:

- **Three (3) authorization signatures** when performing Hot Work

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- **A fourth (4) authorization signature** is required when performing Hot Work in **high risk hazardous** areas or conditions:

Action	Signature required by	When required
Permit Issuer	#1 Supervisor OR designee	Prior to starting the Hot Work
Fire Watch	#2 Competent Worker, Supervisor, OR designee	Prior to starting the Hot Work
Permit Close Out	#3 Competent Worker, Supervisor, OR designee	Upon completion of both the Hot Work and the monitoring requirements
Authorize High Risk hazardous area/condition Hot Work <i>*Refer to the table in paragraph 5.12 for a list of examples determined to be hazardous</i>	#4 General Manager OR designee	Prior to starting the Hot Work in high-risk hazardous areas or conditions

- 4.1 The Safe Work Permit shall only be valid for one (1) shift up to 12 hours in duration.
- 4.2 The Permit shall be posted at the Work area or maintained by the Equipment Owner or Workers representative in a designated location. The Permit must be accessible for review for the duration of the job.
- 4.3 Per recent EPA RMP requirements (as of May 2024) sites with a PSM covered process shall retain Hot Work Permits for 3 years from the date of the permit. The permits may be stored in paper or digital format. This requirement applies to the following Phosphate and U.S. Distribution sites:
  - New Wales      Bartow      Riverview      Faustina
  - Port Sutton      Black Point      Henderson      Hookers Point

## 5 SPECIFIC REQUIREMENTS

### 5.1 Preparation for Hot Work

- 5.1.1 Whenever there are floor openings that cannot be closed, precautions shall be taken so that no workers or readily combustible materials on the floor(s) below will be exposed to sparks, slag, etc., which may drop through the floor.

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Note: Precautions shall also be taken regarding holes in walls or open doorways.

- 5.1.2 Ensure welding cables and other equipment are arranged so that passageways, ladders, and stairways are clear from obstruction.
- 5.1.3 Ensure welding units and gas cylinders remain outside of confined spaces, securely blocked to prevent accidental movement.
- 5.1.4 Ensure welder/helper working on platforms, scaffolds, or runways are protected against falling.
- 5.1.5 Ensure welding screens are so arranged that no serious restriction of airflow exists.

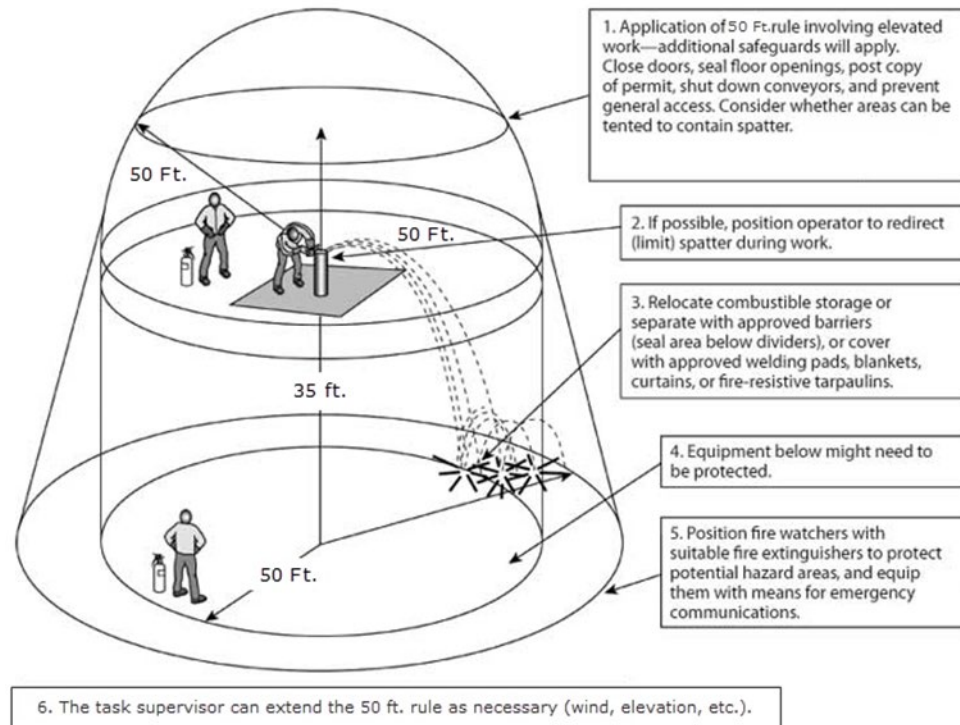
## 5.2 Cylinder Handling and Storage

- 5.2.1 Refer to Phosphates Business Unit Program Compressed Air and Gas for rules regarding cylinder handling and storage.

## 5.3 Elevated Hot Work

- 5.3.1 If Hot Work is elevated, the defined Hot Work area shall increase to a minimum of 50 ft. around horizontally and 35 ft. below. See Figure 2 below:


Figure 2.



- 5.3.2 All combustible materials in the defined Hot Work area shall be relocated to a safe work area or shielded with approved fire-resistant materials.


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 **Note:** *Areas containing non-combustible materials, below elevated Hot Work, may be barricaded to exclude access.*

## 5.4 Hot Work near Hazardous Chemicals


- 5.4.1 The task specific Hot Work hazard assessment shall determine initial and continuous air monitoring requirements.
- 5.4.2 Prior to Hot Work commencing, ensure oxygen content is within a range of 19.5-23.5%.

 **Warning:** *Hot Work is not permitted in an oxygen enriched atmosphere where the oxygen concentration is greater than 23.5%.*

- 5.4.3 Immediately stop work if the atmosphere exceeds 1% of the LEL and implement necessary controls for the duration of the Hot Work and watch period before proceeding.

 **Note:** *Continuous air monitoring shall be required in atmospheric conditions greater than 1% of the LEL.*

- 5.4.4 Hot Work shall not proceed in atmospheres that exceed a concentration of 10% lower explosive limit (LEL).
- 5.4.5 Ensure the area is made safe by completely isolating or evacuating ignitable liquids and/or hazardous substances (e.g. appropriate equipment-specific lockout/tagout, line-break procedures).
- 5.4.6 Verify as being isolated with appropriate monitoring conducted prior to commencing Hot Work.
- 5.4.7 The potential health and safety risks associated with the work space (e.g. characteristics of previously stored substance) shall be clearly communicated to all employees conducting the work.

 **Warning:** *Consult Supervision and Safety when performing Hot Work on, or with, materials coated with lead, fluorides, cadmium, beryllium, mercury, zinc, galvanized metal or stainless steel.*

## 5.5 Hot Work in Hazardous Atmospheric Conditions

- 5.5.1 Same requirements as section 5.4, Hot Work Near Hazardous Chemicals.


## 5.6 Hot Work in a Confined Space or Partially Enclosed Space

- 5.6.1 Mechanical ventilation shall be provided when welding or cutting in a space less than 10,000 cubic feet per welder, in a room having a ceiling less than 16 feet, or in a confined space/welding space where cross ventilation is obstructed.


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- 5.6.2 Ventilation shall be at the minimum rate of 2000 cubic ft per minute per welder, except where local exhaust hoods, respiratory protection, or welding booths are provided.

 **Note:** *If minimum rates, stated above, cannot be achieved, supplied air respiratory protection shall be worn by all entrants in the confined space or partially enclosed space in conjunction with ventilation.*


- 5.6.3 All hollow spaces, cavities, and containers shall be vented to permit the escape of air/gases before Hot Work activities commence.

 **Warning:** *Oxygen shall never be used for ventilation.*

- 5.6.4 Welding or cutting on, or with, materials coated with lead, fluorides, cadmium, beryllium, mercury, zinc, galvanized metal or stainless steel requires special considerations.

 **Warning:** *Consult Supervision and Safety when performing Hot Work on, or with, materials coated with lead, fluorides, cadmium, beryllium, mercury, zinc, galvanized metal or stainless steel.*

- 5.6.5 All Hot Work operations shall be adequately ventilated to prevent the accumulation of toxic materials or possible oxygen deficiency.

 **Note:** *Consult 29 CFR 1910.1000, OSHA Air Contaminants, for maximum allowable chemical concentrations. (Either 5.6.4 or 5.6.5)*

### 5.7 Hot Work on Flammable or Combustible Containers

- 5.7.1 A tank/container that has held flammable, combustible, or other hazardous substances shall be made safe prior to performing Hot Work activities. Ensure personnel have a thorough understanding of the following:

- Characteristics of the substance that is stored or was previously stored in the tank or container;
- Potential health and safety risks associated with the work conducted; and
- Proper procedures for safeguarding the tank or container prior to conducting the work.

### 5.8 Hot Work in Marine Terminals

- 5.8.1 Hot Work shall not be permitted while vessels are refueling, during gas freeing operations, within 100 feet (30.5 m) of bulk cargo operations involving the loading or unloading of flammable/combustible materials, within 100 feet of fueling operations.




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5.8.2 Each operator of a waterfront facility handling liquefied hazardous gas (LHG) shall not permit Hot Work activities on the facility or on a vessel moored to the facility, unless:

- The Captain of the Port issues a permit for the Hot Work activity; and
- The conditions of the permit are met.

 **Note:** *The Captain of the Port shall provide emergency approval if Hot Work is deemed necessary while on vessel.*

## 5.9 High Risk Hot Work

5.9.1 Each facility will have areas/environments that present higher than normal risk based on their specific hazards. Therefore, before Hot Work can occur in or around those potential higher risk locations, additional precautions have been added for overall safety.

5.9.2 An additional management approval and extended fire watch requirements have been added for High Risk Hot Work. A few examples of High Risk Hot Work include work on rubber lined vessels and production areas with combustible dust deposits.

5.9.3 Refer to paragraph 5.12 for a table of High Risk Hot Work examples and associated additional fire watch monitoring details.

## 5.10 Prohibited Areas


5.10.1 Hot Work shall not be permitted in the following situations, **unless additional planning and preparations are in place to address the fire hazard:**

- In buildings equipped with an automatic fire suppression system while such protection is impaired
- In or near potentially explosive atmospheres (e.g., mixtures of flammable gases, vapors, liquids, or dusts and >10% LEL)
- On, or in the immediate vicinity of partitions, walls, ceilings or roofs with combustible coverings or cores (e.g., expanded plastic insulation sandwich panels)
- In areas near the storage of large quantities of exposed, readily ignitable materials (e.g., bulk sulfur, wood pallets, etc.)
- On rubber lined or other coated equipment, unless the rubber/coating has been removed from the specific Hot Work area
- Near or on ducts, conveyors or fans that may carry sparks to distant combustibles.

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- Areas/equipment that contain/handle ignitable liquids, flammable gases, combustible dusts or combustible metals (ex. Natural gas pipelines, micro-essential production systems).
- The area between 26 to 50 feet of where explosive materials are actively stored or transported.

 **Warning:** *No hot work is allowed within 26 feet where explosives are stored or transported.*

- In other areas or with tasks not authorized by management

### 5.11 Fire Watch

5.11.1 A continuous fire watch shall be required whenever permitted Hot Work is performed in locations where a potential fire and/or explosion hazard is present, or any one of the following conditions exist:

- Appreciable combustible materials are closer than 35 feet.
- Appreciable combustible materials are farther than 35 feet, but are easily ignited by sparks.
- Wall or floor openings within a 35-foot radius expose combustible materials in adjacent areas, including concealed spaces in walls, floors or ceilings.
- Combustible materials are adjacent to the opposite side of walls, floors or ceilings and are likely to be ignited by conduction or radiant heat.

5.11.2 A fire watch shall be positioned and prepared prior to the start of the Hot Work task.


5.11.3 A fire watch shall be maintained continuously during the active Hot Work phase.

5.11.4 The fire watch has responsibility to make sure the Hot Work area is maintained in a fire-safe condition throughout this work and has the authority to stop the Hot Work if unsafe conditions are observed.

5.11.5 A fire watch shall be maintained for at least 30 minutes after the completion of the active Hot Work phase to detect possible smoldering or flare up fire that could occur based on the hazards present.


5.11.6 For High Risk Hot Work, an additional period of intermittent monitoring may be required; refer to paragraph 5.9.3 for details.

5.11.7 Fire watch shall be trained in the use of fire extinguishing equipment.

 **Warning:** *If a fire occurs and is larger than the capacity of the equipment available, the fire watch shall request fire-fighting assistance immediately.*

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 **Note:** The fire watch shall have appropriate means of communication such that if a fire occurs and is larger than the capacity of the equipment available, the fire watch is capable of immediately requesting fire-fighting assistance.

5.11.8 Fire watch shall remain in a position that allows communication with those performing the Hot Work.

5.11.9 Additional fire watchers shall be used where it is necessary to observe areas that are hidden from the view of a single fire watcher.


### 5.12 Extended Fire Watch Monitoring for High Risk Hot Work


5.12.1 The table below outlines examples of work considered High Risk and when an extended Fire Watch is required:

High Risk Hot Work Examples	Extended Fire Watch?
Storage of combustible materials and any combustible building, including cooling towers constructed of combustible materials, and process equipment construction features (when construction includes concealed spaces in walls, floors, ceilings, or roofs or ignitable wall coverings)	Yes
Production operations where combustible dust deposits such as sulfur and ignitable liquids/flammable gases are present	Yes
Flammable/combustible liquid or gas systems	Yes
Ammonia storage, piping, and process equipment	Yes
Fiberglass Reinforced Plastic (FRP) Scrubbers, urethane screens or other similar processes with combustible/flammable construction materials	Yes
Rubber lined equipment evaporators, scrubbers, or other rubber lined equipment	Yes
Confined Spaces that present a flammable/combustible hazard (solids or gas)	Yes
Conveying systems excluding wet rock	Yes

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High Risk Hot Work Examples	Extended Fire Watch?
HDPE Pipe* – Cutting or welding in the vicinity of HDPE Piping that is within process areas or near other combustible materials identified by the Hazard Evaluation  *The fusion of HDPE piping using rolling fusion machines is not automatically classified as Hot Work, but may be managed as Hot Work if warranted by job specific risks  *The manufacturing of HDPE piping using standard manufacturing equipment is not automatically classified as Hot Work, but may be managed as Hot Work if warranted by job specific risks	Yes
Combustible materials adjacent to the opposite side of walls, floors, or ceilings and are likely to be ignited by conduction or radiant heat (dragline tubs, etc.)	Yes
Granulation plants during sulfur addition	Yes
Confined Space storing or containing flammable liquids	Yes
Wet rock mills using ammoniated pond water	No
Non-vented pontoon	No
Sulfuric acid vessels and processes where hydrogen could be present	No

 **Note:** Certain high risk Hot Work activities noted in the table above shall require 60 minutes (minimum) of **continuous monitoring** by a fire watch to be maintained to detect possible smoldering fires based on the hazards present.

 **Note:** An additional period of 60 minutes (minimum) of **intermittent monitoring** shall be performed and the Safe Work Permit shall be signed by a Supervisor or designee at completion of fire watch period. During intermittent monitoring, a periodic patrol shall take place at a minimum of every 15 mins.

### 5.13 Gas Welding and Cutting

5.13.1 Only approved gas welding and cutting equipment shall be used.

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- 5.13.2 All cylinders with a water weight capacity of over 30 pounds (13.6 kg) shall be equipped with means of connecting a valve protection cap or with a collar or recess to protect the valve.
- 5.13.3 Valve protection caps, where cylinder is designed to accept a cap, shall always be in place, hand-tight, except when cylinders are in use or connected for use.
- 5.13.4 Flash arrestors and back flow check valves shall be used on flame cutting and welding equipment, torches, etc., according to the manufacturer's recommendations.
- 5.13.5 Fuel-gas hose and oxygen hose shall be easily distinguishable from each other. The generally recognized colors are red for fuel gas hose and green for oxygen hose.
- 5.13.6 Torches shall be lighted by friction lighters or other approved devices, and not by matches, cigarette lighters or from other Hot Work.
- 5.13.7 Cylinders shall be kept away from radiators and other sources of heat.
- 5.13.8 Cylinders shall not be stored or used where overhead hazards are present (i.e., bridge cranes) unless protected from falling objects.
- 5.13.9 Cylinders shall be kept far enough away from the actual welding or cutting operation so that sparks, hot slag, or flame will not reach them, or fire-resistant shields shall be provided.
- 5.13.10 Cylinders shall never be used as rollers or supports, whether full or empty.
- 5.13.11 A wrench shall be maintained on or near acetylene bottles when in use and all connections are to be checked to ensure that they are leak free.
- 5.13.12 Gauges and regulators used with oxygen or acetylene cylinders shall be kept clean and free of oil and grease.

### 5.14 Fuel Gas and Manifolds

- 5.14.1 Manifolds shall bear the name of the substance that they contain. Letters 1 inch, or larger, shall be painted on the manifold or on a sign permanently attached to the manifold.
- 5.14.2 Manifold hose connections, including both ends of the supply hose that lead to the manifold, shall be such that the hose cannot be interchanged between fuel-gas and oxygen manifolds and supply header connections.
- 5.14.3 Fuel-gas hose and oxygen hose shall be easily distinguishable from each other.
- 5.14.4 Manifold systems and their components shall be visually inspected for safe operation at the beginning of each working shift.

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5.14.5 Hose connections shall be of the type that cannot be unlocked or disconnected by means of a straight pull without rotary motion.

5.14.6 Manifold systems shall have easily accessible shut off valves.

### **5.15 Arc Welding and Cutting**

5.15.1 The frames of all electric arc welding and cutting machines shall be grounded either through a third wire in the cable containing the circuit conductor or through a separate wire which is grounded at the source of the current.

5.15.2 All ground connections shall be visually inspected before each shift to ensure that they are mechanically strong.

5.15.3 A ground cable shall have a safe current carrying capacity equal to or exceeding the specified maximum output capacity of the arc welding or cutting unit which it services.

5.15.4 If a single ground cable is used to service more than one unit, its capacity shall equal or exceed the maximum output of all the units it services.

5.15.5 The ground should be as close to the weld as possible with no electrical circuitry or bearings in-between to prevent damage.

5.15.6 All welding and cutting cables shall be of the completely insulated, flexible type, capable of handling the maximum current requirements of the work in progress.

5.15.7 Ensure machines, which have become wet, are thoroughly dried and tested before use.

5.15.8 The operator shall report any equipment defect or safety hazard to their supervisor and the use of the equipment shall be discontinued.

### **5.16 Electrode Holders**

5.16.1 Electrode holders will be used, which are specifically designed for arc welding and cutting and are of a capacity capable of safely handling the maximum rated current required by the electrode.

5.16.2 When not in use, electrode holders shall be placed so that they cannot make electrical contact with persons, conducting objects, fuel or compressed gas tanks.

5.16.3 Only cable free of splices for a minimum of 10 feet from the electrode holder will be used unless the splice has the insulating quality that is equal to that of the original cable.


## **6 PERSONAL PROTECTIVE EQUIPMENT (PPE)**

6.1 Employees exposed to the hazards of Hot Work operations shall be protected by the following standard personal protective equipment:

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- 6.1.1 FR welding sleeves or welding jacket, at a minimum, for all welding, burning, brazing, cutting, or grinding activities

 **Note:** FR Welding jacket required for overhead welding, burning, brazing, cutting, or grinding activities.

- 6.1.2 Face shields for grinding activities
- 6.1.3 Gloves of non-combustible materials
- 6.1.4 Above the ankle safety-toed shoes (laced or slip on)
- 6.1.5 Aprons or leggings (as necessary to protect from shavings or slag when kneeling)
- 6.1.6 Welding helmet/hard hat or safety shield suitable for protection from Hot Work with appropriate UV radiation protection and
- 6.1.7 Properly tinted goggles or face shields shall be worn when performing work requiring the use of any type of flame-cutting equipment. When performing this type of work, the following tint protection is required, at a minimum:

Type of work	Tint Protection
Soldering	2
Light Cutting, up to 1"	3-4
Torch Brazing	3-4
Medium Cutting, 1" to 6	4-5
Heavy Cutting, 6" and over	5-6
Plasma Arc Cutting, 20-60 Amps	4-5
Plasma Arc Cutting, 80 - 400 Amps	8-12
Gas Welding (light), less than 1/8"	4-5
Gas Welding (medium), 1/8" to 1/2"	5-6
Gas Welding (heavy), 1/2" and over	6-8
Shielded Metal Arc Welding 1/16", 3/32", 1/8", 5/32" electrodes	10
Shielded Metal Arc Welding 3/16", 7/32", 1/4" electrodes	12
Shielded Metal Arc Welding 5/16", 3/8" electrodes	14
Automatic Hydrogen Welding	10-14

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Gas Shielded Arc Welding (non-ferrous) 1/16", 3/32", 1/8", 5/32" electrodes	11
Gas Shielded Arc Welding (ferrous) 1/16", 3/32", 1/8", 5/32" electrodes	12
Carbon Arc Welding	14

### 6.2 Equipment Inspection

All Hot Work equipment shall be visually inspected prior to use to assure it is in a safe, operable condition.

## 7 TRAINING

### 7.1 Training

The following table outlines the training required for Hot Work:

Audience	Training Elements / Topics	Frequency	Method
Employees or Contractors engaged in Hot Work related activities	<ul style="list-style-type: none"><li>Hot Work Safety</li><li>Fire Extinguisher Safety</li></ul>	•Initial and Annual	Instructor Led Training (ILT) Or Computer Based Training (CBT)

### 7.2 Retraining

7.2.1 In addition, an employee shall receive additional training (or retraining) if any of the following conditions exist:

- Program requirements change
- Changes in the workplace render previous training obsolete
- Inadequacies in the employee's knowledge is of concern

### 7.3 Training records

7.3.1 Training records shall be maintained by the Mosaic Learning Management System (LMS).

7.3.2 Training records shall be maintained as per the Mosaic Record Control policy.



**Reference: Mosaic Document and Record Control Policy**




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## 8 SELF-ASSESSMENTS

- 8.1 Site self-assessments shall be conducted in accordance with MMS requirements.
- 8.2 The following should be included as part of the self-assessment:
- A review of this document for accuracy and applicability
  - An evaluation of site compliance through field observations / audits
  - A review of the Risk Register for any entries related to the Program
  - A review of recent site and / or BU related incidents
  - A review of compliance with training requirements as per the Training Matrix
- 8.3 Document results of self-assessment and corresponding corrective actions.

 **Note:** Recommend any changes to the Program EHS Project Management Office (PMO) via the PMO Change Request form

## 9 PROGRAM REVIEW

- 9.1 Phosphates EHS team will review this program every 7 years and update as required.

## 10 RECORD RETENTION

- 10.1 Refer to the ***Mosaic Document and Record Control*** policy for record retention requirements.

## 11 REFERENCES

References (Number and title)
OSHA 29 CFR 1910.119, Process Safety Management of Highly Hazardous Chemicals
OSHA 1910 Subpart Q, Welding, Cutting, Brazing
OSHA 29 CFR 1917.152, Marine Terminals-Welding, Cutting, Heating
OSHA 1926 Subpart J, Welding and Cutting
MSHA 33 CFR 127.1603, Hot Work
FM Global Property Loss Prevention Data Sheets 10-3
MSHA 30 CFR 56.4600 - 56.4604, Welding/Cutting/Compressed Gases
MSHA 30 CFR 56.14213, Ventilation and Shielding for Welding
MSHA 30 CFR 56. 15007, Protective Equipment or Clothing for Welding, Cutting, or Working with Molten Metal
OSHA 29 CFR 1910.119, Process Safety Management of Highly Hazardous Chemicals

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### 12 REVISION LOG

Rev. No.	Rev. Date	Revised By	Reason for Revision
0	12/5/2006	Safety Dept.	Initial Issue for Mosaic
	7/26/2011	D. Allen	Reformat for ISO
1	8/16/2012	Eileen Nutt	ISO Audit
2	10/8/2012	Eileen Nutt	Safety Department
2	10/8/2012	R. Withers	ISO Format
3	10/01/2020	PMO	Align to Corporate Standard released January 2020
4	05/15/2024	PMO	EPA change requiring Hot Work Permits be kept for 3 yrs
4	11/17/2025	PMO	Scheduled review – no changes