

1. PURPOSE

To establish general requirements for employees working with or near hot work activities including, but not limited to, the use of a weed burner, welding, cutting, brazing, or grinding; and to insure hot work is performed in a safe manner in accordance with OSHA standards and other relevant regulations.

2. SCOPE

2.1 This Procedure Applies to – The use of any equipment that generates a source of ignition in an Associated Asphalt facility. This includes, but is not limited to, the operations listed in Section 4.10 below. This procedure applies to all employees, permanent, temporary and contractors, in our facilities.

2.2 Exclusions – This procedure does not apply to the following:

- a. Equipment manufacture and design.
- b. Areas designated specifically for hot work. These may include shop areas where welding, cutting or grinding is frequently done and asphalt unloading areas where weed burners are frequently used. Individuals performing hot work in such areas must adhere to the requirements for personal protective equipment, removal or protection of combustibles, and training in Sections 5.3, 5.4, and 7, respectively.
- c. Welding involving specialty metals and materials including fluorine, zinc, lead, beryllium, cadmium, mercury, or stainless steel.

Additional considerations are necessary for the activities listed above. Consult 29 CFR 1910.251 – 255 and the Associated Asphalt EHS Department for necessary requirements.

3. RESPONSIBILITY

The EHS Director is responsible for implementing and maintaining this procedure. Terminal Managers or their designees, are responsible for preparing site specific procedures and training employees in order to comply with this general procedure.

4. DEFINITIONS

- 4.1 **Abrasive Blasting** – propelling a stream of material against a surface using high pressure.
- 4.2 **Affected Employee** – An employee whose job requires him/her to work in an area in which hot work is being performed.
- 4.3 **Authorized Employee** – Any employee who has been deemed authorized to perform hot work. An authorized employee must be trained in this procedure.
- 4.3 **Combustibles** – materials that are able to catch fire and burn easily (i.e. paper, wood, fabrics, grass twigs, organic chemicals, petroleum products, and building partitions containing wood).
- 4.5 **Confined Space** – Is **a)** Large enough for a person to bodily enter & perform assigned work; **b)** Has limited or restricted means of entry/egress; & **c)** Is not designed for continuous occupancy (29 CFR 1910.146).
- 4.6 **Contractor** - Any person working at the Associated Asphalt who is not an Associated Asphalt Employee.

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- 4.7 **“Cutting”**- A method of separating metal using a torch, plasma cutter, cut-off wheel, or saw.
 - 4.8 **“Fire Watch”** – dedicated person(s) whose sole responsibility is to look for fires within the hot work area. The fire watch must be trained in this procedure.
 - 4.9 **“Grinding”** – process to smooth, sharpen, or remove material from a metal object using a portable or bench mounted grinder.
 - 4.10 **“Hot Work”** – any operation that generates heat, sparks or flame. This includes, but is not limited to abrasive blasting, cutting, drilling, grinding, soldering, and welding of metals or other materials (such as masonry) that could result in heat, sparks or flame. This also includes the use of a weed burner.
 - 4.11 **“Job Supervisor”** – A person responsible for planning and determining if hot work can be done safely as well as terminating the hot work permit when work is completed or an unsafe condition develops.
 - 4.12 **“Permit Required Confined Space”** – A confined space with one or more of these characteristics: **a)** Contains or has the potential for a hazardous atmosphere; **b)** Contains a material that could engulf or entrap an entrant; **c)** Has inward converging sides or floor that slopes down & tapers to a narrow opening; **d)** Contains *any* other *recognized* serious safety or health hazard. (29 CFR 1910.146).
 - 4.13 **“Soldering”** – process in which two or more metals are joined together by heating both parts then flowing a filler metal into the joint. Filler metal melts below 840°F.
 - 4.14 **“Welding”** – heat generated by burning gases or electricity to melt and join together metal pieces (i.e. arc welding, oxy-fuel gas welding).
 - 4.15 **“Weed Burner”** – a large propane torch used to heat asphalt hoses and fittings; or to melt hardened asphalt.

5. PROCEDURE

- 5.1 **Training and Authorization** - Associated Asphalt requires that only authorized and trained personnel be permitted to conduct hot work at its facilities.
- 5.2 **Permitting** - A hot work permit (included in Appendix A) shall be issued prior to performing hot work.
- 5.3 **Personal Protective Equipment (PPE)** - All individuals performing hot work shall be required to wear PPE. A list of PPE for specific hot work tasks is provided in Appendix B.
- 5.4 **Removal or Protection of Combustibles**
 - Remove** - All combustible materials within 35 feet from the work area.
 - Also Remove** – Combustibles that may be on the other side of metal walls or heat-conducting surfaces in the work area.
 - Clean** - Combustible trash, dust, or shavings within 35 feet from the work area.
 - Cover** - Combustibles that cannot be moved with flame-retardant material.

CAUTION – Wooden wall, floors, and ceilings are combustible and must be covered to prevent ignition

Ensure - Cracks, holes, windows, or separations in floors or walls are covered to prevent sparks or slag from entering them.

Shut Down – Ventilation systems that may carry sparks or slag to a different location.

Also Shut Down – Nearby process equipment that may generate combustibles or combustible vapors.

Shield – The work from wind when working in the open air.

5.5 Hot Work in Confined Spaces – Refer to the Associated Asphalt Confined Space Procedure if hot work is to be performed in confined spaces. However, hot work introduces additional hazards in confined spaces that are not addressed in the Confined Space Procedure. These include:

5.5.1 Ignition Sources from Arc Welding - When arc welding is to be suspended, all electrodes must be removed from the holders and the holders located so that accidental contact cannot occur. The welding machine must be disconnected from the power source.

5.5.2 Leaking Gases – Compressed gas cylinders are prohibited from being placed inside a confined space. When gas welding or cutting is to be suspended, the torch valve must be closed and the gas supply to the torch shut off at a point outside the confined space. If practical, remove the torch and hose from the confined space.

5.5.3 Welding Fumes – Welding fumes are toxic. In circumstances where adequate ventilation cannot be achieved, supplied air respirators as specified in 29 CFR 1910.252 (c)(4) must be used for the welder and others working in the confined space.

5.6 Hot Work in or on Containers, Pipes, and Tanks

No hot work shall be performed on drums, barrels, tanks, or other enclosed containers until they have been cleaned as to make certain there are no flammable materials present or any substances such as greases, tars, acids or other material which when subjected to heat, might produce flammable or toxic vapors. These vessels shall be vented to permit the escape of air or gases before preheating, cutting or welding. Purging with inert gas is recommended. Pipes, lines, and connections to these vessels shall be disconnected or blanked.

5.7 The Job Supervisor shall

5.7.1 Be responsible for the safe handling of the cutting or welding equipment and the safe use of the cutting or welding process.

5.7.2 Determine the combustible materials and hazardous areas in the work location.

5.7.3 Inspect the work area before hot work is performed to ensure that combustibles are protected from ignition as specified in section 5.4.

5.7.4 Complete and sign the hot work permit included in Appendix A.

5.8 The Fire Watch shall

- 5.8.1 Maintain a line of site with the area in which the hot work is being performed at all times.
- 5.8.2 Perform no other tasks that would interfere with fire watch responsibilities stated herein.
- 5.8.3 Have fire extinguishing equipment readily available and be trained in its use.
- 5.8.4 Know how to contact emergency services in the event of a fire.
- 5.8.5 Watch for fires in all exposed areas, try to extinguish them only when obviously within the capacity of the equipment available. Should a fire spread rapidly, evacuate to a safe area, call emergency services, and keep others away.
- 5.8.6 Monitor for LEL if tanks containing organic materials or any type of flammable vapors are suspected within 35 feet of the hot work.
- 5.8.7 A fire watch shall be maintained for at least a half hour after completion of welding or cutting operations to detect and extinguish possible smoldering fires. **Check all adjacent areas!**

CAUTION – Flammable conditions may exist on the other side of walls, barriers, or the surface on which hot work is being performed. Check for LEL on both sides of these surfaces and on the inside of containers, pipes, and tanks when hot work is being performed.

5.9 The Terminal Manager or His Designee shall

- 5.9.1 Be responsible to ensure that these procedures are safely implemented.
- 5.9.2 Designate the authorized individual.
- 5.9.3 Ensure that individuals performing hot work are suitably trained in the safe operation of their equipment.
- 5.9.4 Advise contractors about the potential for ignition of combustibles and hazardous conditions that may exist in the work area.

HOT WORK SHALL NOT BE PERMITTED IF 1) FIRE PROTECTION IS UNAVAILABLE OR IMPAIRED, 2) EXPLOSIVE ATMOSPHERES ARE PRESENT, OR 3) COMBUSTIBLES CANNOT BE REMOVED OR PROTECTED FROM IGNITION.

6.0 PERMIT LOCATION, TRANSFER, EXPIRATION, AND RETENTION

- 6.1 **Location** – A copy of the hot work permit and all necessary attachments will be kept at the job site at all times while the job is being executed.
- 6.2 **Transfer** – The permit may be transferred to other work groups or individuals joining the work group provided that:
 - a. The permit and its attachments are reviewed with all oncoming individuals, **AND**
 - b. The oncoming individual(s) initial the hot work permit.

CAUTION: Complacency causes accidents. To avoid complacency, a walk-down or field verification is recommended during transfer of the permit to oncoming work group members.

6.3 Expiration – The permit is valid for up to 12 hours after it is issued. A new permit must be issued at the beginning of each work shift.

6.4 Retention – Retain all hot work permits on site for one year.

7.0 TRAINING AND AUTHORIZATION

Only trained **and** authorized individuals may perform hot work.

7.1 Initial training shall be given to newly hired employees within the first 90 days of employment, if practical.

7.2 At least once every three years, refresher training will be conducted annually for ALL Employees.

7.3 Training will be conducted by the Terminal Manager, EHS department, or other competent person.

8.0 CONTRACTORS

Contractors working at Associated Asphalt must be suitably trained in the use of their equipment. All contractors must have a hot work program that meets the requirements of 29 CFR 1910.252 - 255, at minimum.

9.0 AUDITS - One safe work permit at each site shall be audited each calendar quarter by a qualified Associated Asphalt employee. Audit findings shall be shared with the EHS Director.

10.0 REFERENCE

OSHA 29 CFR § 1910.252 – 255, Subpart Q – Standards for Welding, Cutting, and Brazing

APPENDICES

Appendix A – Combined Safe Work Permit



Combined
Permit.docx

Title: Hot Work Procedure



Document No.: 1810-1

Appendix B – Hot Work PPE Matrix



Appendix B - PPE
Matrix for Welding, Supplement - Table



Appendix B

REVISION LOG

Date	Revision