

	<b>J. J. White, Inc.</b> <b>Training Toolbox Talk</b>		Doc Type:	TBT - Training
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<b>Welding, Cutting, and Hot Work</b>			Revision Date:	2/5/2019
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Preparation: V.P. HSE	Authority: President	Issuing Dept.: Safety	Page:	Page 1 of 1

## What is the Hazard?

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Cutting, welding, and hot work fires are usually caused by one of three things:

- 1) Sparks and Slag – can fall through cracks or openings in floors, under doors, on combustible material, or on flammable liquids. Sparks can fly 35 feet horizontally, may smolder in cracks with fire breaking out after the end of the shift.
- 2) Metal – being cut or welded can transmit heat by conduction or radiation and start a fire in adjacent or nearby combustibles.
- 3) Torch – the cutting torch accidentally coming to close to, or in contact with, combustible material can be a ready source of ignition.

## Prevent the Hazard

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- 1) Move work to a safe place. If work can't be moved, remove combustibles from the area.
- 2) Sweep the floors clean.
- 3) Keep fire extinguishers handy and be fully knowledgeable in their use.
- 4) Don't cut or weld in the presence of flammable liquids or vapors, in the presence of lint or dust, or on unpurged containers previously holding flammable liquids.
- 5) Acetylene gas can 'pool' and ignite; avoid situations where the gas can 'pool' if the valve is left open.
- 6) Choose a safe direction for the cut so that the sparks are going in the direction you want.

## Specialized Precautions

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In some cases, additional safety precautions are required. Areas to consider include, but are not limited to:

- 1) Piping – Prior to cutting or welding on pipes, the operator must ensure the pipes are purged and empty. Proper ventilation is required in order to prevent inhalation of fumes such as hexavalent chrome.
- 2) Containers – Must be cleaned to ensure no flammable materials or vapors are present.
- 3) Confined Spaces – Atmospheric testing must be performed as well as other precautions outlined in the facility's Confined Space Program.
- 4) Atmospheric changes – Oxygen levels could be higher than normal in certain operations (i.e. if a leak occurs when oxygen is used for Wort Aeration). Higher levels of oxygen could lead to an explosion.

## Additional Information

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Refer to JHA-003 (Grinders & Abrasive Wheels), and JHA-052 (Safe use of Angle Grinders with Wafer Cutting Wheels), and the JJW Safety Awareness Manual for supplementary information.

