




Safe Work Practice (SWP)

Name of Task: CNC Plasma Cutter	
Department/Unit: Trades	
Personal Protective Equipment or other required equipment or other safety considerations: <ul style="list-style-type: none">• Eye Protection Required• Long or loose hair must be tied back or contained• No loose-fitting clothing• No jewelry, watches, rings, necklaces etc.• Protective Apron Required• CSA Approved Safety Footwear required• Face Shield Required• Fume Hood Required• Approved Respirator Required• Hearing Protection Required• Welding Gloves Required• Protective Clothing Required	
Hazards: <ul style="list-style-type: none">• Dust/debris irritation• Noise Burns• Sparks• Fumes• Flashbacks• Radiation burns to eyes and body• Electric shock• Hot or molten materials	
Required Training	<ul style="list-style-type: none">• Successful completion of NBCC Safety Course (Work Safely or Workplace Safety Practices)• Shop safety orientation• Read and understand SWP• For students, practical demonstration and Instructor supervision required
Pre-Operational Safety Checks	<ul style="list-style-type: none">• Inspect required personal protective equipment and replace if required.• Ensure no slip/trip hazards are present in workspaces and walkways.• Make sure guards, if present, are installed and are working properly. • Faulty equipment must not be used. Immediately report suspect machinery.• Locate and ensure you are familiar with the operation of the ON/OFF starter.• Ensure the work area is clean and clear of grease, oil, and any flammable materials.• Keep plasma cutter and work area dry to avoid electric shocks.• Ensure the gloves are dry and free from holes to avoid electric shocks.• Ensure torch and ground leads and cable are in good condition.• Ensure fume extraction unit is on before beginning welding operation.• • Ensure other people are protected from flashes by closing curtain to welding bay or by erecting screens.
Prohibited Activities	<ul style="list-style-type: none">• Do not leave this equipment unattended while running• Do not use bare hands and never wrap electrode leads around yourself.• Never plasma cut or watch plasma cutting without using a protective shield.• Do not use around flammable materials.

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	<ul style="list-style-type: none"> Do not cut containers until you can determine whether they contained flammable liquids at one time. Do not use while wearing trousers with cuffs.
Steps to be taken to complete task safely:	
1	Wear appropriate personal protective equipment (PPE).
2	Make all adjustments with POWER OFF.
3	Make sure all guards are in place, properly adjusted, and secured.
4	Open fume hood and turn on fume extractor.
5	Ensure that work area is clean and clear of grease, oil, and any flammable materials.
6	Position metal and clamp if necessary.
7	Securely attach ground cable to work. Ensure the ground lead makes firm contact and does not create a tripping hazard.
8	Set-up plasma cutter current.
9	For drag cutting, keep the torch in contact with the workpiece.
10	For standoff cutting, hold the torch 3-9 mm (1/8 - 3/8 in) from the workpiece
11	With the torch in starting position, press and hold the Torch Trigger
12	Once on, the cutting arc remains on as long as the Torch Trigger is held down, unless the torch is withdrawn from the work or torch motion is too slow.
13	Release Torch Trigger to shut OFF torch.
14	Allow workpiece to cool to room temperature before handling.
15	Clean up work area
	<p>If an emergency occurs while conducting this task, or there is an equipment malfunction, shut the equipment off immediately and follow the lock out procedure.</p> <p>REPORT ANY HAZARDOUS SITUATION TO YOUR INSTRUCTOR/SUPERVISOR IMMEDIATELY</p> <p>Housekeeping</p> <ul style="list-style-type: none"> Ensure equipment is off. Place all materials in their proper storage areas. Switch off the machine and fume extraction. Close air supply valve. Hang up torch and ground cable. Ensure the equipment is safe, clean and tidy before you leave it.
Responsibilities, Completion and Review	
<i>Management and workers to ensure all duties performed in accordance to training, established health and safety regulations/guidelines, policies and procedures (e.g. utilizing personal, protective equipment as per SAFE Work Procedures). Notify Manager or designates (i.e. supervisors) of all occurrences, injuries illnesses or safety and health concerns which are likely to harm themselves, co-workers, or any others who enter the premises.</i>	
Completed by and Date: Ashley Ritchie, 1/28/2021	Approved by: 
Last Reviewed / Revised by and Date:	Note: This task will be monitored periodically to ensure compliance and effectiveness.

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