



UNC
ENVIRONMENT,
HEALTH & SAFETY

Job Safety Analysis

Safety Information for The University of North Carolina at Chapel Hill

JOB SAFETY ANALYSIS TOPIC:

Operating a Drip Torch for Controlled Burns



Title	Work Task	Hazards	Controls
Preplan the work	<p>Gather proper tools</p> <p>Gather Proper PPE for the job and inspect it (flame resistant clothing, hard hat, leather gloves, safety glasses and safety shoes).</p>	<p>Improper tools</p> <p>Improper PPE inspection/selection</p>	<p>Using improper tools or parts can lead to lead to injury. Torch must meet Forest Service specification 5100-614 or 5100-616.</p> <p>Improper PPE use and inspection can lead to unnecessary hazards created by wrong PPE or faulty PPE.</p>
Before the job	<p>Don necessary PPE</p> <p>Check torch for damage and that all connections are tight</p>	<p>Improper Donning Eye Contact with debris Lacerations Hand Injury Burn Injury</p> <p>Fire/Burn hazard</p>	<p>Ensure all PPE is on correctly and passed inspection</p> <p>DO NOT use and TAG OUT torch if it is damaged or it leaks. Replace damaged parts if possible. Tighten any loose connections</p>

	Prepare special fuel mixture	Fire/Burn hazards from improper fuel mixture or fueling methods	<p>ONLY use gasoline and #1 diesel fuel.</p> <p>ONLY use approved fuel containers.</p> <ul style="list-style-type: none"> • Start with a 1:3 ratio of the fuels. • Adjust mixture based on requirements: For better ignition, increase the % of gasoline. For sustained burning, increase the % of diesel fuel.
	Prepare drip torch for use	Fire/burn hazards from improper preparation	<p>DO NOT fill tank near an open flame or while smoking. Ensure fuel containers are properly bonded during fueling (keep fuel nozzle in contact with container).</p> <p>DO NOT fill container in the bed of a vehicle.</p> <ul style="list-style-type: none"> • Remove lockring and fill the torch with fuel, leaving 1” air space at the top for expansion of gas vapors. • Wipe off any fuel that spills on tank. • Remove discharge plug and insert in blind socket. • Ensure gasket is in place. • Open breather valve 2 full turns. • Tip torch for fuel to wet igniter. Light igniter.
Using the torch	Hold torch properly during use	Burn hazard	<ul style="list-style-type: none"> • Hold torch to your side pointing the igniter away from your body. • Gradually tilt the torch forward until the fuel pours over the burning igniter casting a flame along the path you are travelling.

	Walking using torch	Fall/Trip hazards	Watch out for holes, limbs, and other tripping hazards while walking.
Storage and Clean up	Make sure PPE and torch are clean and properly stored.	Improper Storage of Equipment/PPE	<ul style="list-style-type: none"> • Stand the torch upright until the igniter burns out and cools off to room temperature. • Remove lockring and reverse the wand inside the tank. • Replace lockring securely. • Remove sealing plug from blind socket and insert into spout opening. • Close breather valve. • Store PPE and torch in designated areas.
Training	Employees must have hands on training in the proper use of this tool and on control burn procedures.	Supervisor must fill out the 'Supervisor Led Training Form' and turn in the form to UNC-CH Environment, Health and Safety for documentation of proper training	
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