

Unit: **Plymouth & Cornwall Wing**

Activity / Exercise: **CAMPING STOVE – TRAINING AND USE**

Risk Assessment Number: TT0904	<b>GENERIC RA: YES</b>
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<b>Relevant Publications / Pamphlets/Procedures:</b>
<ol style="list-style-type: none"> <li>1. ACP 17</li> <li>2. ACP 5</li> <li>3. Manufacturer's Instructions</li> <li>4. GRA</li> </ol>

Assessor: Flt Lt K Hemsil
Date of Assessment: 28/12/08
Review Date: 28/12/09

Related RA's (e.g. Manual Handling)
COSHH

The following steps relate to the Risk Assessment Process.

<b>Ser</b>	<b>Activity</b> <i>(step 1)</i>	<b>Hazards Identified</b> <i>(step 2)</i>	<b>Existing Controls</b> <i>(step 3)</i>	<b>Residual Risk acceptable YES or NO</b> <i>(step 4)</i>	<b>Additional Controls</b> <i>(step 5)</i>	<b>Residual Risk Acceptable YES or NO</b> <i>(step 6)</i>
<i>(a)</i>	<i>(b)</i>	<i>(c)</i>	<i>(d)</i>	<i>(e)</i>	<i>(f)</i>	<i>(g)</i>
<b>1</b>	<b>Training in use of Methylated Spirit (Meths) Trangia-type Stove &amp; Gas stoves</b>	Incorrect instruction. Poor supervision.	<p>Training only to be undertaken by a person competent in the operation of the Trangia stove and who is able to teach the key aspects safely (may include instructor cadet).</p> <p>All staff who teach the use of the Trangia stove are to be authorised by activity commander.</p> <p>Instructor to work from a copy of operating procedure.</p>			

			<p>Training is to be carried out iaw ACO Policy.</p> <p>Training to include advice on lighting and extinguishing stove, refilling and general use.</p> <p>Cadets to be signed off and recorded as such as competent to use the stove unsupervised only on successful completion of training.</p> <p>Qualified First Aider, with first aid kit, to be present during all training.</p> <p>Training to include actions to be taken in event of burns or inadvertent ingestion of Meths.</p> <p>Availability of suitable blanket or similar to extinguish residual fires (ideally use material that cadets will have access to during expedition).</p> <p>Instruction to be given with the make of stove to be used on expedition.</p> <p>Instructor to cadet ratio determined by the experience and maturity of the cadets but to be not less than 1:10.</p> <p>When demonstrating lighting and refuelling the stove or replacing the canister, cadets are to be positioned out of range of possible flash back.</p> <p>Information, instruction, training and appropriate supervision.</p>			
		Horseplay				

<p><b>2</b></p>	<p><b>Operation of Stove</b></p>	<p>Incorrect assembly.</p> <p>Flashback when lighting stove</p> <p>Ignition of adjacent flammable material.</p> <p>Spillage of hot food/liquid.</p> <p>Burns from hot stoves or flames.</p>	<p>Correct training and practice.</p> <p>The method of ignition must be carefully considered. Safety matches or tapers are the preferred option although 'Swan Vesta'-type are acceptable provided that during expeditions they are stored in a hard container to reduce the risk of inadvertent combustion and not in a quantity that could pose a significant risk if they ignite Strike match away from body and light stove from the side or below, not above. Made-for-purpose gas 'turbo' lighters or equivalent are also acceptable. 'Zippo' or disposable gas cigarette lighters, which require the fingers being in proximity to the flame, are not to be used.</p> <p>Ensure that stoves are operated in a clear open area at least 1 metre from tentage and not near dry grass.</p> <p>Under no circumstances are stoves to be operated inside tents.</p> <p>Place stove away from walkways to avoid being inadvertently knocked over. Ensure that stove is placed on firm flat surface and that the pan/kettle is properly set on stove.</p> <p>Check before handling pans, lids, handles which may be hot. Cadets to be briefed on the measures to be taken in the event of burns when out on expedition.</p>			
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3	<b>Removal and replacement of Gas canister</b>	<p>Cross-threading of canister leading to leakage of gas</p> <p>Explosion due to collection of gas.</p> <p>Horseplay</p>	<p>Ensure that canister is correctly threaded and check by smell or sound of escaping Gas.</p> <p>Ensure that stove is switched off and cool before attempting to remove or replace canister.</p> <p>A suitable remote refuelling point is to be identified. Avoid hollows where gas can accumulate</p> <p>Refuelling is to be carried out by one person with the others standing clear.</p> <p>Ensure that empty canisters are disposed of correctly and never placed in an open fire. Full/part-used canisters are to be kept away from sharp objects which may puncture the canister</p> <p>Information, instruction, training and appropriate supervision.</p>	YES		
4	<b>Extinguishing Trangia Stove</b>	Burns	Fuel can be allowed to 'burn off' or the flame put out using the supplied 'extinguishing ring'. If the latter method is used, care should be taken to ensure that the flame is fully extinguished before attempting to move the stove or burner.	YES		
5	<b>Refilling of Trangia Stove</b>	Flashback due to volatility of fuel.	<p>Burners only to be refilled from a polythene or alloy fuel bottle (max 1 ltr capacity) fitted with a Trangia safety valve.</p> <p>A suitable remote refuelling point is to be identified. Refuelling is to be carried out by one person with the others standing clear.</p>	YES		

		Invisibility of flame in direct sunlight.	Ensure that <b>flame is extinguished</b> before refilling by use of wooden/paper splint.			
		Spillage of Meths.	Ensure that the <b>burner is cool to touch</b> .  <b>Burner must be removed from stove and</b> carried to fuel and not refuelled in the Trangia body.			
		Horseplay	All spillage to be immediately wiped up and any contaminated material isolated from naked flames until the fuel has fully evaporated.  Tighten Trangia safety valve immediately after use.  Information, instruction, training and appropriate supervision.			
<b>6</b>	<b>Storage of Trangia fuel</b>	Danger of Meths accelerating another fire source.	The fuel bottle is to be stored away from personal kit and placed in plastic bag when carried in rucksack. It should be stored well away from the stove when in use so there is no danger of the stove igniting the fuel.  Ensure that container holding Meths is clearly marked and cannot be mistaken for a water bottle.	YES		
		Ingestion of Meths.	First Aider and first aid kit available.			
<b>7</b>	<b>Storage of Gas canisters</b>	Danger of canisters exploding if exposed to extreme heat	The maximum quantity of canisters to be held at any one time is subject to justification of need and iaw COSHH assessment.	YES		

		Leaking gas	Canisters are not to be stored in tents.			
<b>8</b>	<b>Packing stove away on completion of exercise.</b>	Trangia Burner not emptied of fuel.  Burns  Bacterial infection	Meths is not to be left in the Trangia fuel cell. Surplus fuel should either be 'burnt-off' or decanted back into the fuel bottle before the stove is packed.  Ensure stoves are cool before packing away.  All cooking pots and utensils to be thoroughly cleaned to remove all trace of food and burn marks.			
<b>9</b>	<b>Poor quality Trangia 'clones'.</b>	Malfunction	All non Trangia-branded stoves to be carefully tested before being allowed to be used by cadets.			

**Details of person responsible for carrying out this Risk Assessment / Review**

<b>CONTROLS</b>	<b>NAME (print)</b>	<b>POST</b>	<b>DATE</b>	<b>SIGNATURE</b>
<b>Existing &amp; Additional Controls Agreed</b>	<b>K Hemsil</b>	<b>AATO</b>		
<b>Additional Controls Implemented</b>				