

## JOB SAFETY ANALYSIS

Job Description : <b>BURNING UNDERWATER</b>		Date :
Location :	Vessel :	Job No :
Supervisor :	Client :	

Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedure
Test burning equipment prior to deployment.	Burns to operator. Fire hazards.	Full PPE to be worn, including facemask. Supervision/training where necessary. Hot work permit if required..
Deploy burning equipment to the divers.	Fouling the diver. Entangling other subsea equipment.	Flasher/light sticks on the burning equipment Diver's umbilical clear of descending burning rig.
Locate and mark the cut position.	Cutting in the wrong place.	Clear instructions to be given. Check and confirm cut position.
Cold cut vent hole.	O <sub>2</sub> build-up in tubular causing explosion	Before starting cut, always drill or grind vent holes to allow explosive gasses to escape. Position holes well above cut area.
Making a cut	Sudden release of tension may cause injury to diver.	Consider pull of gravity, pull of rigging and residual tension in piece to be cut. As cut progresses diver to continually monitor cut for signs of opening or closing. This will be an indication of residual tension in cut and the direction pieces will move to relieve the tension. Diver to position on clear side of movement.
	Cutting or gouging into wrong area. Cutting rigging.	Clear understanding of to task to be performed. Proper control of cut by diver.
	Suction into a void.	Prior knowledge of all essential contributing factors, no blind cuts. No short 'cuts'. Begin cut with mechanical cold cut to allow flooding of void..
	Hydrogen explosion.	Do not burn into mud; avoid gas pockets to exist in any mud in vicinity of cut. Beware of any gas build up in work area, especially in diver's gloves and suit.

## JOB SAFETY ANALYSIS

Sequence of Basic Job Steps	Potential Accidents or Hazards	Recommended Safe Job Procedure
	Poor visibility, Burning 'blind'.	Do not burn 'blind' unless it is safe to do so and the diver is satisfied that it is safe.
	Shock & burn from burning rig. Flash burns to eyes	Ensure burning rig is functioning correctly, observe oxygen flow. Adjust amperage if necessary to better performance. Use thick gloves. Check condition of equipment on the bottom, if it has been damaged during descent do not use. Do not burn the rod too close to torch head.. Ensure the rubber washers are in place behind the collets. Once rod his ignited make torch cold. In clear water use a welding lens.
Torch malfunctioning.	Torch blowback. Excessive O <sub>2</sub> release.	Ensure correct collets and washers are being used. Check flash arrestor is clean. Check torch for O <sub>2</sub> leaks. Test O <sub>2</sub> trigger to ensure proper function. Ensure rods are compatible. Check polarity is torch negative.
Recover Burning Rig	Entanglement	Monitor divers umbilical and down line while moving burning rig or any other item to and from the

### ADDITIONAL SAFETY EQUIPMENT REQUIRED FOR THIS JOB

<input type="checkbox"/> Work Vest	<input type="checkbox"/> Permit	<input type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Cotton Gloves
<input type="checkbox"/> Respirator	<input type="checkbox"/> Fall Protection	<input type="checkbox"/> Hearing Protection	<input type="checkbox"/> Leather Gloves
<input type="checkbox"/> Barricade	<input type="checkbox"/> Face Shield	<input type="checkbox"/> Lock-Out/Tag-Out	<input type="checkbox"/> Chemical Gloves

### ATTENDING PERSONNEL
