



# Job Safety Analysis Form

Safety information for TecXotic -Monterrey Institute of Technology and Higher Education- Morelos, Mexico	<b>Task:</b>	LAUNCH/RETRIEVE ROV
	<b>Name of Department:</b>	Safety Office/Pilot Team
	<b>Analyzed by:</b>	Ana Paola Serrano
	<b>Date:</b>	05/12/2019
<b>Required Personal Protective Equipment:</b>		
1. Two or more operators 2. Life jacket		3. Non-slip, closed shoes 4. Sun protection (when necessary)
<b>Required/Recommended Trainings:</b>		
Experience launching/ retrieving the ROV.		
TASK	HAZARDS	CONTROLS
Pre-launch	Falling	Wear the required non-slip footwear. Inspect pool area for hazards before launching the ROV. One of the operators must always have a hand on the tether.
	Electric shock	1. Verify all power in Control Unit is off 2. Verify electronic box is sealed 3. Ensure all tools are appropriately guarded and electrical appliances are protected by means 4. Ensure all extension cords are in a safe condition with plugs and connections properly wired.
	Back strain	1. Kneel down 2. Stay low and near to pool edge 3. Avoid sharp twisting movements and do not over reach for ROV.
Launch and Retrieval	Drowning	Never launch alone. Ensure all personnel wears a life jacket near pool.
	Sunburn	Sunhat / sunglasses / sunscreen / protective clothing.
	Electric shock	If leak is detected, immediately cut power to ROV.



# Job Safety Analysis Form

Safety information for TecXotic -Monterrey Institute of Technology and Higher Education- Morelos, Mexico

**Task:**

OPERATE ACRYLIC  
LASER CUTTER

**Name of  
Department:**

Safety Office

**Analyzed by:**

Ana Paola Serrano

**Date:**

05/12/2019

## Required Personal Protective Equipment:

1. Protective glasses, ocular protection is mandatory
2. Gloves (if available).

3. Extinguisher

## Required/Recommended Trainings:

Tutorial on laser cutting. Tutorial might be imparted by other members and/or experienced operators.

TASK	HAZARDS	CONTROLS
Carrying acrylic items	Dropping	<ol style="list-style-type: none"><li>1. Do not overload</li><li>2. Carry every acrylic item one at a time</li><li>3. Operate with a co-worker</li></ol>
	Airborne particles	Do not inhale particles generated as a result of laser applications. May cause irritation to the respiratory track.



# Job Safety Analysis Form

Safety information for TecXotic -Monterrey Institute of Technology and Higher Education- Morelos, Mexico

Task:

ROV  
MAINTENANCE

Name of  
Department:

Safety Office

Analyzed by:

Ana Paola Serrano

Date:

05/20/2019

## Required Personal Protective Equipment:

1. Antistatic wristband

## Required/Recommended Trainings:

Operator must be part of, or be supervised by, a member of the Electronics Department or the Manufacturing Department.

TASK	HAZARDS	CONTROLS
Maintenance	Electric shock	<ol style="list-style-type: none"><li>1. Verify all power in Control Unit is off</li><li>2. Verify electronic box is dry. If not, proceed to dry it before unsealing it</li><li>3. Ensure all tools are appropriately guarded and electrical appliances are protected</li><li>4. Ensure all extension cords are in a safe condition with plugs and connections properly wired</li></ol>
	Finger Damage	Make sure propellers have thruster guards before putting hands and fingers near them. Operator must wear protective gloves if thruster testing is needed.



# Job Safety Analysis Form

Safety information for TecXotic -Monterrey Institute of Technology and Higher Education- Morelos, Mexico

**Task:**

**OPERATE 3D  
PRINTER**

**Name of Department:**

Safety Office

**Analyzed by:**

Ana Paola Serrano

**Date:**

04/18/2019

**Required Personal Protective Equipment:**

1. Gloves.

2. Extinguisher

**Required/Recommended Trainings:**

Tutorial on 3D printing. Tutorial might be imparted by other members and/or experienced operators.

**TASK**

**HAZARDS**

**CONTROLS**

Retire 3D pieces  
from the printer

Hand burn

Do not touch the nozzle or heat bed when the printer is printing or is warming up. Note that the temperature of the nozzle is 210-260 °C; heat bed temperature can reach over 100 °C. Temperatures above 40 °C can cause harm to human body.

Airborne particles

Do not inhale particles generated as a result of 3D printing. May cause irritation to the respiratory track.



# Job Safety Analysis Form

Safety information for TecXotic -Monterrey Institute of Technology and Higher Education- Morelos, Mexico

**Task:**

**OPERATE  
CNC**

**Name of  
Department:**

Safety Office

**Analyzed by:**

Ana Paola Serrano

**Date:**

05/22/2019

**Required Personal Protective Equipment:**

1. Protective glasses
2. Gloves

3. Extinguisher

**Required/Recommended Trainings:**

Tutorial on CNC cutting. Tutorial must be imparted by experienced members and lab manager supervision is mandatory.

**TASK**

**HAZARDS**

**CONTROLS**

Cutting Rayna  
bond items

Dropping

Do not overload.  
Carry every item at the time.  
Operate with a co-worker.

Airborne particles

Do not inhale particles generated as a result of CNC applications. May cause irritation to the respiratory track.