SAFETY OPERATING PROCEDURES

Metal Cutting Guillotine

DO NOT use this machine unless a teacher has instructed you in its safe use and operation and has given permission.

Safety glasses must be worn at all times in work areas.
Sturdy footwear must be worn at all times in work areas.
Rings and jewellery must not be worn.
Long and loose hair must be contained.
Close fitting/protective clothing must be worn.
Gloves must not be worn when using this machine.

Only one person may operate this machine at any one time.

PRE-OPERATIONAL SAFETY CHECKS
1. Ensure fixed guards are in place to prevent hands or other parts of the body from entering the trapping space.
2. Guards or safety devices must never be removed or adjusted, except by an authorized person for maintenance purposes.
3. Working parts should be well lubricated and free of rust and dirt.
4. The area around the machine must be adequately lit and kept free of materials, which might cause slips or trips.
5. Be aware of other personnel in the immediate vicinity and ensure the area is clear before using equipment.
6. Familiarise yourself with and check all machine operations and controls.
7. Ensure cutting table is clear of scrap and tools.
8. Faulty equipment must not be used. Immediately report suspect machinery.

OPERATIONAL SAFETY CHECKS
1. Do not attempt to cut material beyond the capacity of the machine.
2. Never attempt to cut rod, strap or wire with this machine.
3. Use correct lifting procedures when handling large sheets of material.
4. Take extreme care during the initial feeding of the workpiece into the machine.
5. The workpiece should always be held sufficiently far back from the edge being fed into the guillotine.
6. Ensure fingers and limbs are clear before actuating the guillotine.
7. Hold material firmly to prevent inaccurate cutting due to creep.
8. When cutting ensure feet are positioned to avoid contact with the foot operated lever.

HOUSEKEEPING
1. Remove all off cuts and place them in either in the storage rack or waste bin.
2. Leave the work area in a safe, clean and tidy state.

POTENTIAL HAZARDS
- Sharp edges and burrs
- Crush and pinch points
- Manual handling sheets

This SOP does not necessarily cover all possible hazards associated with the machine and should be used in conjunction with other references. It is designed to be used as an adjunct to teaching Safety Procedures and to act as a reminder to users prior to machine use.
### TASK: Operation of a Jig Saw

| HAZARDS: | Hand held machine with saw blade.  
| | Damage to hands and fingers.  
| | Eye and hearing damage.  
| | Trip hazards.  |

| PROTECTIVE EQUIPMENT AND EMERGENCY EQUIPMENT | Eye protection ie: goggles, visors.  
| | Hearing protection ie ear muffs, ear plugs.  
| | First aid equipment.  |

#### BEFORE YOU START
- Ensure area is clean and free from off cuts. Use saw blade appropriate to task. Set saw to correct speed. Inspect lead and plug. Check guard is operative. Adjust fence if being used.

#### NEVER
- Exceed the capacity of the saw. Force the blade. Cut without base plate being in contact with work. Put saw down with the blade running.

#### JOB STEPS
- Ensure hat the on/off switch works normally
- Check that material to be cut is held firmly in place
- Ensure clearance below blade for full length of stroke
- Drill pilot hole for external cut outs
- Place front of base plate on work
- Allow the saw to reach operating speed
- Keep lead clear of cutting area
- Use firm forward pressure without forcing blade
- Allow saw to stop before removing from work.

#### WHEN YOU FINISH
- Remove plug from power source. Ensure area is in clean condition.
OHS Consultation and Approval

(Ensure this section is completed and copied onto rear of SOP)

OHS Consultation

(Completion Instructions)
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SOP Approval

_Name Authorising (Printed):_ ...........................................................................................................

_Signature:_ ............................................................... _Date:_ ........................................
(Your organization's name) has prepared these guidelines for motor vehicle operations.

**GENERAL**
Only those employees who are specifically authorized and who possess a valid license or permit according to Federal and State Motor Carrier regulations shall operate motor vehicles on company business.

Drivers shall know and obey all federal, state, and local motor vehicle laws applicable to the operation of their vehicle.

The driver shall drive at safe speeds no greater than that allowed by law. Traffic, road, and weather conditions shall be given consideration in deciding the safe speed within the legal limit at which the vehicle shall be operated.

Seat belts shall be worn.

**INSPECTION OF EQUIPMENT**
The driver shall determine that brakes are in proper working condition before operating equipment. If not working properly, they must be repaired before the vehicle is used.

Drivers are to report any defects to their employer.

**OPERATION**
Always wear seat belts. Seat belts protect you by absorbing the forces of a crash. They help you stay in control of your vehicle by keeping you in your seat. If you have passengers, seat belts keep them in their seats.

The operator of a motor vehicle shall clearly signal his intention of turning, passing, or stopping.

The driver of a vehicle shall be courteous toward other operators and pedestrians. Drivers shall yield the right of way in all instances necessary to avoid an accident.

The driver shall stay a safe distance behind when following another vehicle so that they can safely stop the vehicle in the clear distance ahead.

Drivers shall exercise added caution when driving through residential and school zones.

Stay alert and drive defensively. When driving, scan the traffic around you. Ask yourself, what if the car ahead stops suddenly, do I have enough room to stop in time? What if the vehicle on the side road pulls out in front of me, what would I do?

Ignition systems shall be turned off and no smoking is allowed while refueling

When proceeding downgrade, the clutch shall not be disengaged. Trucks, particularly if heavily loaded, shall be in a lower gear on steep grades.

The driver shall not operate the motor in any garage unless driving in or out, and then the motor shall be operated as little as practicable. The motor shall not be warmed up inside a garage nor shall the driver
test motor operations in a garage unless the exhaust gas is carried directly to the outside atmosphere or doors and windows are open so that adequate ventilation exists.

**Parking**

When vehicles must be parked on the roadway, they shall be parked on the right-hand side facing in the direction of traffic flow. Flashers shall be on. At night, headlights shall not be used in a way as to confuse oncoming traffic.

When parking on a roadway, vehicles shall park off the traveled road surface whenever possible. When vehicles must park closer than ten feet to the traveled road surface, appropriate warning devices shall be used.

Proper warning lights, reflectors, or red flags shall be used for trucks or trailers stopped on any public roadway according to federal, state, or local regulations.

Vehicles shall not be parked on bridges or over culverts unless necessary for work.

When a truck (other than a pickup) is parked, the driver shall make sure the vehicle is left in a safe position. The engine shall be turned off, the transmission shall be placed in the lowest gear, and the parking brake shall be set. When parked on an incline, the front wheels shall be turned into the curb.

**Backing**

Whenever possible, the vehicle shall be positioned to avoid the necessity of backing later.

Exercise caution when backing a vehicle to avoid injury to persons and to prevent property damage. If another employee is present, that employee shall be stationed at the rear of the vehicle to help the driver in backing the vehicle safely.

When backing a vehicle that has an obstructed view to the rear:

1. A reverse signal (backup alarm) audible above the surrounding noise level shall be used or;
2. An observer shall signal that it is safe to back the vehicle.

During all backing operations, the vehicle operator shall:

1. Keep a constant lookout during the entire time.
2. Carefully check any blind areas.
4. Watch both sides. Do not depend entirely on mirrors.
5. Enlist the aid of another person to act as a guide, when such help is available.

**Passing**

Safe passing requires good judgement. Unsafe passing situations include:

- A long line of cars ahead.
- When a car ahead is signaling to stop or turn.
- When an oncoming car is too close.
- The car ahead is at or above the speed limit.
- The inability to clearly see the road ahead.
- When the pass cannot be completed before reaching a No-Passing Zone.
- Not enough time to pass safely.
- Just before a hill.
- Just before an intersection, railroad crossing, or a bridge.
- When a school bus is stopped.
- When you are not sure that it is safe to pass.
Safe passing situations include:
- When the roadway ahead is clear.
- When there is no close approaching traffic.
- When no cars are passing you.
- When no vehicles are in your blind spot.
- When it is safe to return to your lane.

The following are steps to be followed when passing vehicles:
1. Signal intent to pass
2. Check rear and sides for cars
3. Speed up
4. Recheck roadway ahead
5. Change lanes
6. Signal return to lane
7. Check blind spot
8. Return to the lane when you see both headlights in the rearview mirror
9. Turn off signal
10. Resume a safe speed of travel

When being passed, yield to the passing vehicle.

**EMERGENCY DRIVING SITUATIONS**

**Running off the pavement**
1. Hold the steering wheel tightly and steer straight ahead.
2. Stay on the shoulder of the road.
3. Ease up on the accelerator and brake gently.
4. Turn back on the roadway slowly at a low speed when it is safe to do so.

**Tire failure**
1. Pump the brake gently rather than braking hard.
2. Concentrate on maintaining steering control.
3. Continue braking gently.
4. Pull completely off the roadway.
5. A front tire blowout will cause the car to pull towards the blown tire.
6. A rear tire blowout will cause the car to swerve or fishtail.

**Brake failure**
Pump the brake pedal rapidly and hard several times. This will often build up enough brake pressure to stop the car.

**Engine fire**
Pull off the roadway and stop the car as soon as safely possible. Get out and away from the car.

**Accelerator jammed**
1. Keep your eyes on the road.
2. Slap the accelerator pedal hard with your foot.
3. Shift to neutral.
4. Brake the car.
5. Bring the car to a stop.
6. Turn off the engine.
Power steering failure
Ease up on the accelerator. You can steer the car, but the wheel will be very hard to turn.

Night driving
Driving during hours of darkness reduces your range of vision and the time to react to hazards on the roadway. A combination of darkness and less traffic on the road can lead to boredom, and falling asleep at the wheel presents a real hazard. If you feel drowsy, STOP! Remember that most accidents occur between midnight and 6 a.m.

Date
SCAFFOLDING SAFETY

Scaffold Accidents

Over a seven-year period, OSHA statistics report that about 28% of the scaffold accidents that occur are the result of construction deficiencies. These deficiencies include using substandard components, omitting essential components, or failing to complete the assembly.

Of the fatalities that occurred, 23% occurred as a result of construction deficiencies. About 14% occurred while climbing. Another 8% occurred while assembling/disassembling the scaffolding. About 10% of the fatalities occurred where the result of the scaffolding structurally failing. Another 18% of the fatalities happened as a result of electrocutions. Approximately 10% of the fatalities were from falling objects, while 10% happened because of falls while working on the platform.

General Scaffold Components

All metal frame scaffolds share common components. Platforms, base supports, side brackets, and support trusses.

General

Metal frame scaffolds must be designed at four times their rated carrying capacity. Trained personnel must erect all supported scaffolds. All scaffolds greater than 125 feet in height must be designed by a registered professional engineer.

Platforms

Each platform must be fully planked or decked. Platforms should be a minimum of 18” wide. Each platform unit (e.g., scaffold plank, fabricated plank, fabricated deck, or fabricated platform) shall be installed so that the space between adjacent units and the space between the platform and the uprights is no more than 1 inch (2.5 cm) wide, except where the employer can demonstrate that a wider space is necessary (for example, to fit around uprights when side brackets are used to extend the width of the platform).

Platform Loading:

Distribute the weight evenly. Place the heaviest load over vertical members. Scaffold platforms cannot deflect greater than 1/60 of the span distance when loaded.

Platform Overhang:

If a platform is less than 10 feet long, the maximum overhang is restricted to 12”. On platforms longer than 10 feet, the maximum overhang is 18”.

Planks:

Scaffold planks must be made from scaffold-grade lumber or be laminated planks. Do not use planks that are cut, split, chemically damaged, or painted. Plank overlap must be by 12” unless restrained. Ends should always be cleated or restrained. If the end overhang is less than 6”, the ends must be cleated or restrained.
restrained. Planks must be a minimum of 2” by 10” (nominal). A minimum of two planks no further than 1” apart must be used.

**Fabricated Wooden or Metal Decks:**

Load bearing limits and dimensions are determined by the scaffold deck manufacturer. The deck must be marked with its carrying capacity. Decks are not to be dropped from scaffolds. Never use bent or damaged decks. Standard lengths are 6’ and 10’. No overlap is required.

**Base Support:**

A firm, level foundation is required for all supported scaffolds. Scaffold base plates or casters are to be used on all scaffold legs. Plates and casters must be pinned or secured to the frame at all times.

**Mud Sills:**

Mud sills are platforms designed to distribute scaffold weight. The size of mud sills used is based on ground support conditions and maximum anticipated loads on the scaffold legs. Scaffold planks are sometimes used as mud sills. Do not use working planks for mud sills since this practice could damage planks.

**Screw Jacks:**

Screw jacks are designed for leveling the scaffold. The recommended maximum extension for fixed scaffolds is 18”, while 12” is the maximum for mobile scaffolds.

**Side Brackets:**

Can be used with all metal frame scaffolds. Manufacturers determine the requirements. Side brackets are designed only to support personnel unless engineered otherwise.

**Truss Bearers:**

These are used when it is necessary to span greater than standard distances such as doorways. The manufacturer set limits to the length and capacity. Truss bearers may require additional bracing on the scaffold system. Follow the manufacturer’s requirements when truss bearers are used.

**Ties:**

Ties provide protection against toppling. Ties are secured at the junction of the vertical and horizontal scaffold members. They must be of rigid construction. A positive anchor is required. Guys, ties, and braces must be installed according to the scaffold manufacturer's recommendations or at the closest horizontal member to the 4:1 height and be repeated vertically at locations of horizontal members every 20 feet or less thereafter for scaffolds 3 feet wide or less, and every 26 feet or less thereafter for scaffolds greater than 3 feet wide. The top guy, tie or brace of completed scaffolds shall be placed no further than the 4:1 height from the top. Such guys, ties and braces shall be installed at each end of the scaffold and at horizontal intervals not to exceed 30 feet (measured from one end [not both] towards the other).

Additional ties may be required under special circumstances, such as loads not centered, winds, hoisting, or on covered scaffolds. Guys are required if the scaffolding is free standing and are greater than four
times the minimum base width in height. Guys must be a minimum of 3/8” wire rope and should be tied at a 45° angle to the scaffold.

Supported Metal Scaffolds

Welded Frame Scaffold:

These consist of end frames and braces. All components must be inspected for damage/defects prior to being used. When erecting scaffolding, start at the highest point of the run and work downhill. Cross braces will automatically square the scaffold frames. Ensure that the scaffold is level, square, and plumb. Use pin connections on all frames to prevent separations of frames. Ladders provide access to the scaffold. Ladders are not to be used on scaffolding unless it is secured top and bottom, the scaffold is secured from any movement and the platform is stabilized to prevent deflection.

Mobile Scaffold:

Mobile scaffolds have restricted reach unless a guy wire secures them. They are more susceptible to overturning and require a smooth, level working surface. Additionally, they are the most frequent type of scaffold involved in power line accidents. A complete guardrail system must be used at elevations above 10 feet and shall be used at all working levels. Scaffold should be moved when unoccupied and only by pushing from the base. Wheel brakes must be set when scaffold is in use. Base dimensions may be extended with outriggers.

Swing Stage Scaffold:

Platforms shall not be less than 20”. The platform shall be securely fashioned to the hangers. Hangers shall be capable of sustaining four times the maximum rated load and shall be designed with support for guardrailing. Roof irons or hooks shall be of mild steel or equivalent material. Tiebacks of ¾” manila rope or equivalent shall serve as a secondary means of anchorage, installed at right angles to the face of the building and secured to a structurally sound portion of the building. All scaffold components must be inspected before each use and periodically while in use. On suspension scaffolds designed for working load of 500 pounds, no more than two employees shall be permitted to work at one time. On suspended scaffolds with a working load of 750 pounds, no more than three employees shall be permitted to work at one time. Each employee shall be protected by an approved safetyline attached to a safety harness. The safetyline shall be securely attached to substantial members of the structure independent of the scaffold. A minimum of slack in the lifeline must be maintained.

Guardrail System/Fall Protection

Fall protection is required on all scaffolds where the working height is above 10 feet. A guardrail is required above 10 feet on all scaffolds if fall arrest system is not used. Guardrails must be able to withstand 200 pounds of force. Top rails shall be about 42” in height. Mid rails and toe boards are required. Toe boards must be a least 3½“ in height. Cross braces may be used as mid rails if the cross height is 20” to 30” above the platform. Interior guardrails are not required when the working face is less that 14” from the platform. Guardrails must be installed on all open ends and sides of platforms more than 10 feet in height. Upright supports must be no more than 8 feet apart.

Scaffold Access

All metal frame scaffolds must have a means of access. This access can be gained from attached or portable ladders, stairways, or the adjacent structures. Ladders must extend 3 feet above the working
surface. Gates or removable guardrails or safety chains must be used at the ladder landing. Employees shall not work on scaffolds during storms or high winds.

**Scaffold Erection**

Scaffold shall only be erected, moved, dismantled, or altered under the supervision of competent persons. A fall protection plan must exist when erecting scaffolding.

__________________________________________

Date
STANDARD OPERATING PROCEDURE

TASK: PAINTING – SPRAY

SOP No: PA9........................ Version: 1 ........................... Date: 1 September 2006

Dept/Div/School: SVPA
Supervisor/Manager: COURSE COORDINATOR
Other Contacts: LECTURING/TECHNICAL STAFF

HAZARDS:  
• Paint cleanup and disposal  
• Exposure and absorption via Inhalation, Skin absorption and Ingestion

PROTECTIVE EQUIPMENT AND EMERGENCY EQUIPMENT  
Gloves, Masks, Eye protection, Hearing Protection  
Any requirements specified in the appropriate MSDS for the products  
As per SOPs PA2, PA3, PA4  
First Aid Kit

BEFORE YOU START  
Check to MSDS for the paint & cleaning products being used.

ALWAYS…………………..  
• Only use common one part acrylic paints for spray painting.  
• The following substances are prohibited for use by students in the SVPA in painting operations on SVPA premises: Enamel based paints, carbon bisulphide and tetrachloride, tetrachloroethane, arsenic or any of its compounds, any compound containing > 1% benzene or methanol and 2 pack paint products.

THINGS TO NOTE  
• Don’t allow paint to come into contact with any building or fixtures except for the paint washing facilities in Bld 77.  
• Ensure adequate drop sheets and masking are used  
• For the application of less hazardous paints ie.acrylic based paint, a half-face respirator with spray paint canisters (type: A1 P2 with pre-filter) may be used. Eye protection, eg safety glasses or goggles, is also required.  
• When paint is mixed, transferred or there is a risk of splashing safety glasses or goggles must be worn.  
• Acrylic paints may be allowed to dry/harden. The solid waste can then be disposed of in normal rubbish.  
• Paint and brush/roller washings are not allowed to enter the sewage system.  
• No substances are to be stored in food or glass containers, or drink bottles. All containers to be marked with their contents.

WHEN YOU FINISH  
• Cleanup area and dispose of paint products appropriately.  
Unopened new paint cans may be stored in cupboards. The number of active, half used paints should be kept to a minimum. They shall be stored with the lid firmly secure.
OHS Consultation and Approval

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OHS Consultation

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_Signature:_ ................................................. _Date:_ .................................