SOP - Laser Operation

DO NOT use this plant* or complete this task unless you have been inducted in its safe use and operation by an Authorised Experienced Operator

This SOP may not cover all possible hazards and risks and should be referred to as a control measure in the risk assessment process. Additional training may be required for high risk plant/work. Site and task may change required PPE.

PERSONAL PROTECTIVE EQUIPMENT

 Eye protection must be worn

 Foot protection must be worn

 High visibility clothing must worn

POTENTIAL HAZARDS AND RISKS

Electrical Shock or Burn
Burn injury from acute exposure to high power laser beams

Explosion
Explosion of gases, vapours or liquids

Slip, Trips, Falls
Slip, trip, fall due to electrical leads obstructing walkways

Other
Exposure to radiation

PRE-OPERATIONAL SAFETY CHECKS

- ✓ Complete site specific risk assessment
- ✓ Complete visual inspection before operation
- ✓ Ensure you are familiar with plant operations and controls
- ✓ Appropriate laser warning signs must be in place
- ✓ The laser category output intensity shall be checked by the operator and must be clearly marked on the laser

OPERATING PROCEDURES

- ✓ Ensure no person or animal is endangered when operating plant
- ✓ Where practical, use mechanical or electronic means to assist in laser alignment
- ✓ Special care must be taken when using magnifying ocular devices e.g. theodolite etc.
- ✓ Where practical the laser beam should be terminated at the end of its useful beam path
- ✓ Laser beams must be set up i, well above or well below eye level
- ✓ The laser beam path must be controlled to prevent misdirected or reflected beams

ENDING OPERATIONS

- ✓ Ensure plant is in good working order and stored in a secure location to prevent unauthorised access of laser beam plant

DO NOT

- ✗ Do not use if plant is faulty. Attach an Out of Service tag and report fault to your supervisor
- ✗ Do not look directly into the beam even when wearing eye protection
- ✗ Do not allow reflective or shiny objects in or near the laser beam path
- ✗ Do not track non targeted vehicles etc. This is strictly prohibited
- ✗ Do not leave plant running unattended
- ✗ Do not use mobile phone while operating plant

Description of Laser Classes

Class 1
Safe for use under all conditions of exposure

Class 2
Low-powered lasers that may require some administrative controls but present little hazard (for example, eye protection is usually provided by normal blink and aversion responses).

Class 3A These lasers emit higher levels of light and their use requires more stringent engineering and administrative precautions in order to ensure they are not used with optical instruments (for example, a builder's level or theodolite) which would concentrate the beam so that it would all enter the eye.

Class 3B
(Restricted)
These lasers operate at the same power levels as Class 3A but have higher levels of irradiance (power density). These lasers can be used for building or construction applications but should not be used in dimly lit building or construction applications (that is less than approximately 100 lux).

***Plant in this SOP refers to any machinery, equipment, appliance, container, implement and tool.**