

## DUTIES OF THE LABORATORY LASER SUPERVISOR



The Laser Laboratory Primary Investigator (PI) and the Laboratory Laser Supervisor (LLS) are responsible for the safe operation of lasers in the department's laser lab in accordance with the Guidance for the Laser Site SOP notes issued by the LSO and the safety rules and suggestions found in the EHS Laser Safety Manual and laser slide presentation notes.

The PI and the LLS should ensure that:

- 1 All CASE lasers are registered with the EHS Laser Safety Officer.
- 2 All lasers are labelled in accordance with all handouts, the EHS Laser Safety manual and the ANSI Z136.1-2014, the American National Standard for the Safe Use of Lasers.
- 3 All personnel intending to work with Class 3B lasers or above are trained to work with lasers (EHS Laser Safety training and site specific PI/LLS laser training).
- 4 All Class 3B or 4 laser workers after receiving training noted above in the safe use of lasers declare and document that they have read and understood the lab site's laser SOP.
- 5 Laser safety goggles (for the correct OD and wavelength) are provided for all work with Class 3B lasers and above where the beam is not enclosed.
- 6 Always work with the minimum practical power to the laser.

The PI/LLS should undertake routine surveys of each laser installation to monitor compliance with the lab Laser Safety SOP. To facilitate these tasks, the EHS Laser Audit and Compliance checklist may be used. The LLS should check that the precautions specified have been fulfilled. Below are some explanations:

- 1 Remote Interlock interlocked to the door or the enclosure – required for all Class 4 and higher powered Class 3B lasers.
- 2 Key Control required for all lasers of Class 3B and above to ensure that only authorised personnel use the laser. The key should not be left in the laser controls but should be removed between use.
- 3 Emission Indicator required for all lasers of Class 3B and above to indicate laser is powered on. There may also be an emission indicator sited outside the door of

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the lab or laser enclosure to warn before entry to the lab or enclosure.

- 4 Beam Shutter should be provided for all lasers of Class 3B and above.
- 5 Beam Stop required for lasers of Class 2 and above to ensure that the laser beam is terminated within the confines of the laser bench or experimental area.
- 6 Beam Level avoid eye level to reduce danger of accidental beam impinging on eye.
- 7 Beam Enclosure required to guard against specular reflection from lasers of Class 3R and above. This can mean anything from screening the experimental area to total enclosure.
- 8 Eye Protection required for lasers of Class 3B and above in areas not screened by beam enclosure
- 9 Protective Clothing may be required for lasers of Class 4.
- 10 Eye Examinations only required after an accident but should be available to all laser users if they so request.
- 11 Training required for all laser users. The level of training required will depend on the class of laser.
- 12 Laser Signs all lasers should display the appropriate signs which will include class and/or power of laser and indicate the laser emission and direction.
- 13 Door Signs required for all areas where lasers of Class 3R or above are used.

It is highly recommended that you visit the following web site found under the search: "OSHA Technical Manual, Section III, Chapter 6"

This site gives an excellent overview of the ANSI Standards requirements and explains the requirements for laser interlocks, door closures, curtains, signs, labels, certifications, etc.