Chapter 10: Laser Safety

Class 2 and Class 3R Laser Operation Requirements

1 Purpose

The purpose of these requirements is to protect workers from harmful exposure to low-power lasers, which can create a startle hazard and temporary flash-blindness, after images, and glare responses. They cover using Class 2 and 3R lasers and posting of hazards. They apply to workers whenever they are using lasers of this classification and their supervisors.

Note Laser pointers are also classified as Class 2 and 3R but the requirements they are subject to are in Laser Safety: Laser Pointer Requirements. Class 3R lasers were formerly known as Class 3a lasers and may still bear a label with the former classification.

2 Requirements

<table>
<thead>
<tr>
<th>Type</th>
<th>Construction Project</th>
<th>Non-construction Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training</td>
<td>Documented training required</td>
<td>Basic laser safety training recommended (such as ESH Course 132)</td>
</tr>
<tr>
<td>Operation</td>
<td>Unattended operation not permitted</td>
<td>Unattended operation should not be permitted unless additional controls such as appropriate barriers are used</td>
</tr>
<tr>
<td>Equipment label</td>
<td>Label must be attached to the laser and specify its classification, wavelength, pulse duration (if applicable), and maximum output power</td>
<td></td>
</tr>
<tr>
<td>Signage</td>
<td>An area hazard warning sign must be posted when a construction laser is in operation, and should be posted when a non-construction laser is in operation. This sign must indicate type of laser, wavelength, power, and classification. (Templates for labels and signs are available on the Laser Safety Program Site.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Required signal word for Class 2 lasers: CAUTION</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Required signal word for Class 3R lasers: CAUTION (Note construction lasers and commercial lasers may use DANGER, which is also acceptable.)</td>
<td></td>
</tr>
</tbody>
</table>

3 Forms

The following are forms required by these requirements:

- None
4 Recordkeeping

The following recordkeeping requirements apply for these requirements:

- None

5 References

SLAC Environment, Safety, and Health Manual (SLAC-I-720-0A29Z-001)

- Chapter 10, “Laser Safety”
  - Laser Safety: Laser Pointer Requirements
  - Laser Safety Program Site (SharePoint)

Other SLAC Documents

- ESH Course 132, Laser Safety Basics (ESH Course 132)

Other Documents