

Building: _____ Room Number: _____ Date: _____

Area Supervisor: _____ Area Use: _____ Phone: _____

Laser Classification: _____

General Laser Safety

These general precautions are applicable to all class 1, class 2, class 3, and class 4 laser systems. Class 1, 2, or 3a laser systems that enclose higher class lasers must comply with the requirement of the higher class laser during alignment, service procedures, and other operations that permit beam access. Fabricated or modified laser systems shall be evaluated by the Laser Safety Officer and, if necessary, reclassified. Areas in compliance with current standards should have all applicable items answered as "yes."

Administrative and Procedural Controls

1. Is the laser system classified appropriately?	Yes	No	N/A
2. Is the laser system included in the UofM inventory?	Yes	No	N/A
3. Are the class designation and warning labels prominently affixed to the laser housing?	Yes	No	N/A
4. Do the beam alignment procedures maintain exposures below MPE?	Yes	No	N/A
5. Is the beam directed away from doors and windows?	Yes	No	N/A
6. Has the beam path been leveled to AVOID normal sitting or standing eye position?	Yes	No	N/A

Engineering Controls and Protective Equipment

7. Is a protective housing or enclosure present and in good condition?	Yes	No	N/A
8. If the laser is operated without a protective housing, has a hazard analysis been conducted and the appropriate controls been implemented?	Yes	No	N/A
9. Are protective housings enclosing class 3b or 4 lasers equipped with interlocks?	Yes	No	N/A
10. Are the service access panels for any embedded 3b or 4 lasers equipped with an interlock, key access, or similar barrier?	Yes	No	N/A
11. Do the viewing windows or portals attenuate radiation to below MPE?	Yes	No	N/A
12. Can viewing windows or portals withstand direct and diffusely scattered beams?	Yes	No	N/A
13. Do the collecting optics maintain exposures below MPE?	Yes	No	N/A
14. Is a temporary laser controlled area established when MPE is exceeded?	Yes	No	N/A

Non-Beam Hazards

15. Is all high voltage equipment properly grounded?	Yes	No	N/A
16. Is all high voltage equipment located away from wet surfaces or water sources?	Yes	No	N/A
17. Are high voltage warning labels in place?	Yes	No	N/A
18. Are compressed gases properly secured?	Yes	No	N/A
19. Are flammable and oxidizing materials stored away from the laser area?	Yes	No	N/A
20. Are hazardous chemicals stored away from laser area and NOT used?	Yes	No	N/A

Class 3b Lasers

Additional precautions for class 3b laser systems.

Administrative and Procedural Controls

1. Has a Laser Safety Officer (LSO) been designated?	Yes	No	N/A
2. Is the LSO empowered with decision making and enforcement authority?	Yes	No	N/A
3. Has a Nominal Hazard Zone been established and demarcated for unenclosed systems?	Yes	No	N/A
4. Have warning signs and labels been placed at the entrance(s) to the nominal hazard zone?	Yes	No	N/A
5. Are only authorized laser users permitted to operate lasers?	Yes	No	N/A
6. Are education and training provided to all authorized laser users and documented?	Yes	No	N/A
7. Has a laser 3b (or 4) controlled area been established?	Yes	No	N/A
8. Have medical surveillance procedures been implemented for both incidental and laser personnel?	Yes	No	N/A

Engineering Controls and Protective Equipment

9. Is the service access equipped with an interlock, key access, or similar barrier?	Yes	No	N/A
10. Are skin protection and protective eyewear used for open-beam UV lasers?	Yes	No	N/A
11. Is skin protection used when UV exposures exceed MPE?	Yes	No	N/A
12. Are barriers, screens, and curtains flame resistant?	Yes	No	N/A
13. Do barriers, screens, and curtains avoid release of toxic fumes following laser exposure?	Yes	No	N/A

Class 3b Lasers

In addition to the requirements for lower class systems, class 4 laser systems must also meet the following:

Administrative and Procedural Controls

1. Is the laser area free from polished or reflective surfaces?	Yes	No	N/A
2. Is an activation warning system used during activation or startup?	Yes	No	N/A
3. Are written SOPs for laser use and maintenance operations (including beam alignment) available?	Yes	No	N/A
4. Are spectators only permitted with supervisory approval, appropriate training, and protective measures in place?	Yes	No	N/A

Engineering Controls and Protective Equipment

5. Is a master switch/key control available?	Yes	No	N/A
6. Is a remote interlock connected an emergency disconnect/interlock?	Yes	No	N/A
7. Is a "panic button" available for emergency deactivation?	Yes	No	N/A
8. Is laser protective eyewear available and in good condition?	Yes	No	N/A
9. Is protective eyewear of appropriate optical density for the laser system?	Yes	No	N/A
10. Is the protective clothing made of flame resistant materials?	Yes	No	N/A
11. Is there a permanently attached beam stop or attenuator?	Yes	No	N/A
12. Have control measures (e.g., isolation, local ventilation, PPE) been implemented for the vaporization of target materials and other laser generated air contamination?	Yes	No	N/A