Tools for the laser safety officer

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Professional Development Tools

• Training – vendors like Kentek, Rockwell Laser Industries or Laser Institute of America

• Get Certified! Visit the Board of Laser Safety website to get started
Mission

To provide a means for improvement in the practice of laser safety by providing opportunities for the education, assessment, and recognition of laser safety professionals.

A non-profit organization
Types of Certification

**Certified Laser Safety Officer**

Scientific, R&D, manufacturing, or industrial

**Certified Medical Laser Safety Officer**

Hospitals, clinics or other medical facilities
CLSO Certification Requirements

• 4-year degree, or 2-year AS degree
• Exception for high school graduate with substantial experience in laser safety
• One year of experience with laser safety or acting as LSO
• Two professional references
• Completion of a BLS-approved LSO course (this may be waived in some cases)
General Information

• 100 multiple-choice questions
• Questions are categorized into areas of practice
• 3 hours allotted for exam
• Exam Reference Guide available on the BLS website
Exam Delivery Methods

• Pencil and paper exams are offered following LIA’s LSO with Hazard Analysis and MLSO courses; and sometimes following RLI courses (as requested)

• In conjunction with conferences and workshops, e.g., ILSC, ICALEO, or DOE LSO Workshop

• Computer-based through a testing center
Exam Content - CLSO

• 9 Areas of Practice
  – Lasers & Optics Fundamentals – 11%
  – Laser/Optical Radiation Bioeffects – 11%
  – Non-beam Hazards – 8%
  – Laser Control Measures – 17%
  – Regulations & Standards – 14%
  – Hazard Eval & Classification – 15%
  – MPEs – 11%
  – LS Program Administration – 10%
  – Laser Measurements – 3%
Maintaining Certification

- Certification Maintenance (CM) cycle starts on January 1 of the year following the year in which you pass the exam; and ends on December 31 of the 3rd year
- Ten (10) CM points must be obtained over the course of each 3-year cycle
CM Point Categories

- Laser safety experience
- Continuing Education
- Writing articles
- Teaching external to your job
- Professional organization membership

- Active participation on laser standards committees
- Attending conferences
- Presentations/posters at conferences
- Writing exam questions
Why Certification?

- LSO credential widely recognized as the standard of professional competence in Laser Safety
- Fairly exclusive credential to have - it distinguishes you from other safety and IH professionals
- Job security, career advancement
- Increased wages (hmmm)
Why Certification, con’t

• By preparing for the exam you increase your knowledge and understanding – you know what you know
• Help keep the standards for laser safety high – code of professional conduct and areas of practice
• Furthering the safety of the workers and reducing risk for our employers
Distribution of Certified Laser Safety Officers
127 LSOs in the USA

1 British Columbia Canada

13 Ontario Canada

1 Quebec Canada

2 NH

6 MA

2 RI

1 CT

1 DE

4 MD

4 Hong Kong

3 Israel
Contacting BLS

- BLS website [www.lasersafety.org](http://www.lasersafety.org)
- Email: [bls@lasersafety.org](mailto:bls@lasersafety.org)
- Call: Barbara Sams or Daniela Benitez at 407-985-3810 or 800-345-2737
Key DOE LSO Resources

- This workshop, next Workshop is TBD
- Presentations from these workshops available on the DOE EFCOG website
- Great talks still available for review
EFCOG Laser Safety Best Practices
EFCOG = Energy Facility Contractors Group

• **Best Practice #157** - Using Laser safety questionnaires to gather assessment information and performance metrics data. - 12/09/13

• **Best Practice #158** - Laser Safety Newsletter - 01/17/14

• **Best Practice #160** - Reference guides to help laser users with laser lab design, laser operations, and laser disposal. - 04/01/14

• **Best Practice #166** - Process for Safe, Efficient Laser Service Subcontractor Work - 07/28/14
Laser Safety Newsletter

- Quarterly newsletter published by LLNL
- Have something news-worthy? Send it to Jamie, pictures are great!
- Currently distributed to around 2500
  - National Labs
  - Industry
  - Academia
Documents you can access

Laser Safety Subgroup

Documents
Updated 04/02/14

Meeting Minutes

Documents

Report of Findings – ANSI Z136.1 to Z136.8 Comparison - 01/04/14
Special Operations Report - Laser Safety

Links

Laser Safety Best Practices - Updated 04/01/14
Laser Related ORPS Reports - Updated 12/13/11
Laser Related Lessons Learned Reports - Updated 11/24/13
DOE Lab Survey Results on Policies and Practices - Updated 11/24/13
LBNL Laser Reference Guides - Updated 11/24/13
FDA Laser Notices for Manufacturers - Updated 12/26/13
LLNL Laser Lessons Newsletters - Updated 11/24/13
Other resources- on the web

- **Naval laser safety**
- **OSHA Technical manual**
- Google “University Laser Safety”
  - Stanford
  - Berkeley
  - OSU (Ohio)
  - UT Austin
  - Harvard
  - MIT
  - Nevada, Reno
  - Penn
Google your favorite national lab

National DOE Laboratories and NNSA Sites
The Nonionizing Radiation Committee’s purpose is to provide a forum for exchanging ideas and information about nonionizing radiation and to participate in the development and analysis of technological and regulatory issues.
Health Physics Society - Lasers

Cartoon by Al Goodwyn, CHP
Our exhibitors

- Eyewear selection
- Laser barriers
- Rockwell’s Resources Page, accident history
- Power meters
- Optics, lasers and components
- Hazard analysis tools (Kentek online free)
The best laser safety resource is the person(s) sitting around you

- Before you leave this workshop, be sure to get business cards from as many folks as you can.
Make the most of your conference experience

• We are here to learn from others, but equally importantly we are here to meet folks that share the same challenges.
• Get new contacts you can call on to share solutions.
Not good at meeting new people?
Try some of these conversation starters

• “What did you think of that last talk?”
• “How was your lunch?”
• “Hi I’m Barb, I don’t think we’ve met”
• Sit at tables where you don’t know someone
• Talk to strangers
  – Include new folks in conversations
  – Make introductions
  – Invite new people out when your group goes to lunch or dinner
Get Involved

• If you are part of DOE, be sure to get your name on the EFCOG list
• Universities are setting up a Laser Safety Officer Group – companion to the EFCOG
  – First meeting is this afternoon
• Submit and application to join an ANSI Z136 subcommittee
LinkedIn

• Search “laser safety” groups
Conferences

• DOE Laser Safety Officer Workshops. Will be changing over to every other year

• Alternates with the International Laser Safety Conference (ILSC)

• Next ILSC is
  – March 23-26, 2015 Albuquerque, NM
More tools from the Audience?