

Lesson Learned Briefing

No.: LL12-0037

Title: Laser unexpectedly fired into remote room

Event: Other Facility Event

Event Date: 06/14/2012

Category: ES&H - Laser Safety

Summary:

Recognizing hazards and performing a thoughtful risk analysis can minimize the occurrence of a laser unexpectedly firing into an occupied room.

Discussion: On June 14, 2012, a near miss occurred at NsTech Site Facility in Livermore California. A laser that could be triggered from a remote location unexpectedly fired into an occupied room. Initial evaluation indicates that no one was in the Nominal Hazard Zone (see attached document for more details). This is not the first laser incident involving a laser firing into a remote room without the occupant's knowledge or approval. This is why the Lawrence Berkeley National Laboratory laser safety program has a philosophy that in such conditions the person in the remote location needs active control of beam entry into the space.

A review of Department Of Energy laser occurrence reports from 2005-2011 shows that at least three of these incidents occurred during that time period. The reasons that the lasers were turned on range from a combination of procedures not being followed to equipment malfunction. These incidents are not the same as someone entering a laser use area and not being aware that a laser system is on.

How do we protect ourselves?

- If the beam is being delivered through a beam tube, some type of shutter, which can only be opened by the people in the termination room, is one solution.
- If the beam is delivered by means of a fiber, then some

system to capture the fiber ends.

- A modified lock out tag out solution might be one option to a shutter or laser power supply.
- An additional item might be an illuminated sign showing the status of the laser and beam.

The bottom line is solutions can be found if the hazard is recognized and a thoughtful risk analysis, including identification of appropriate controls, is performed.

Lessons Learned are part of the ISM Core Function 5, Feedback and Improvement. Applicable Lessons Learned are to be considered during working planning activities and incorporated in work processes, prior to performing work.

Please contact the following subject matter experts if you have any questions regarding this briefing.

- Barat, Kenneth L (KBarat@lbl.gov)

Uploaded documents/attachments:

[NA--NVSO-NST-OFFNTS-2012-0001 .docx](#)

[Give feedback for this briefing](#)

For other lessons learned and best practices, go to [Lessons Learned and Best Practices Library](#)
