Lesson Learned Briefing

No.: LL14-0001

Title: Clear lines of supervision needed for radiological work

Event: LBNL Event

Event Date:

Category: ES&H - Radiological

Lesson Learned Statement:
Clear lines of supervision (work lead) must be understood and documented to ensure workers have the proper authorization and training when working with radiological material.

Discussion:
A student was doing work on a project that used radioactive sources to test a piece of electronic equipment. The student was working under a different person acting as the work lead; his official work lead was his supervisor. To test the equipment, the work lead utilized radioactive check sources mounted with screws to the side of a Ludlum 3 radiation survey instrument. When the work lead was unavailable due to travel commitments, the student decided to remove (unscrew) the check sources from the instruments to use them to further check the experimental set-up. The work lead had not yet communicated to the student the correct way to use check sources in their mounted configuration on the instrument. Radiation Protection Group (RPG) employees found the check sources disassembled from the Ludlum radiation survey meter instrument and issued a stop work order.

Analysis
The student had neither the required training nor authorization to perform work with radioactive sources. The student did not realize that he should not have worked with radioactive sealed sources or removed them from the Ludlum radiation survey instruments without proper training.

- The student's Job Hazards Analysis (JHA) was not updated to

show the change in the work lead. The acting work lead was unaware that the student lacked the required training and work authorization because the student's supervisor was listed on the JHA and he could not access the student's JHA to determine the proper work authorization.

- Similarly, the student's supervisor was unaware that the student would be working with radioactive sources.

The forthcoming Work Planning and Control (WPC) system, which will replace the JHA system, may help to minimize similar issues, as it is designed to accommodate more than one person serving as a work lead for a worker. Allowing persons other than just the supervisor / official work lead to see a worker's JHA would have helped in this incident since there is often collaboration between various groups in this division.

Corrective Actions
The following actions were taken in response to this incident and can be applied by others to minimize further incidents.
- Add the student to an appropriate Radiation Work Authorization (RWA).
- Ensure that the student completes the training required by the RWA.
- Change the work lead on the student's JHA to the researcher acting as work lead.
- Have the PI review the JHA, training and RWA status for all employees and affiliates under his/her supervision, and communicate any concerns with the work being performed, as necessary.
- Develop and communicate a Lessons Learned regarding the incident.

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.

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