

## Lesson Learned Briefing

**No.:** LL13-0001

**Title:** Employee Exposure to Unprotected Edges on Laboratory Rooftops

**Event:** LBNL Event

**Event Date:** 12/03/2012

**Category:** ES&H - Accident/Injury, Fall Protection

**Lesson Learned Statement:**

For life safety reasons, unauthorized personnel are not allowed beyond the safety railing on rooftops of Laboratory buildings. In addition, it is imperative that management and safety personnel communicate the complete scope of work to identify fall hazards adequately on Job Hazard Analysis (JHA). Fall protection and permits are required for areas on rooftops that are not protected from fall hazards.

**Discussion:**

Unidentified employees were photographed standing on the rooftops of Lawrence Berkeley National Laboratory (LBNL) Building 90 and Building 69. In both cases, the employees were standing within 6 feet of an unprotected edge without a fall protection system. All Laboratory roof accesses are demarcated with signage restricting access to authorized workers only.

Building 90

On 12/03/2012, five to six people were standing near the roof edge of Building 90, approximately 30 feet above ground. The four-story building rooftop has a fenced-in patio picnic area about 15 feet away from the roof edge, which is a designated safety area. However, the individuals were outside of the designated patio safety fence, standing about two to four feet away from the roof edge. No one was wearing fall protection or vests that identified him/her as an authorized worker performing work on the rooftop. They appeared to be watching the new FLEXLAB construction activities below.

Upon examination of Building 90, 4th-floor rooftop access points, fenced-in patio area, safety rails surrounding the patio and various gates on the rooftop, several corrective measures were implemented to prevent further issues. Some of the measures involved installing additional warning signage and barricading a gap found between the wall and a fence.

#### Building 69

On August 29, 2012, a safety engineer observed an unidentified individual on the roof of Building 69 within 6 feet of the unprotected roof edge. The safety engineer photographed the individual and e-mailed the picture to the Environment/Health/Safety/Security Division (EHSS) Construction Safety office. The employee left the rooftop before anyone was able to speak with him.

#### Analysis

Employees accessing rooftops at LBNL must be trained to protect themselves from fall hazards. The

employees in each case did not communicate their need to access the buildings' roof areas to anyone. The employees did not read (or ignored) the signage posted at each access to the roof area. In the case of building 90, each designated roof area has permanent guardrails and locked gates. Employees accessing areas beyond the posted guardrails are in direct violation of OSHA requirements and Laboratory policy.

#### Actions to prevent a recurring incident

- Staff are reminded that unauthorized personnel are not allowed to walk and/or work on rooftops with unprotected sides or edges that are 6 feet high or more to avoid fall hazards. Refer to the Roof Access attachment.

- All workers at LBNL must complete a Job Hazard Analysis, which initiates training for any employee who is required to work at a height. An employee's decision to work without a permit or a fall protection system results in a serious safety exposure and violation.

- During the pre-work evaluation of fall hazards, it is imperative that management, general contractors, subcontractors and safety personnel communicate the complete scope of work to individuals who are responsible for identifying fall hazards on JHAs. Omission of fall hazards creates a false impression that unprotected rooftop edges/areas are safe to access.

- The EHSS Division will modify the JHA to identify roof access as a "high-level hazard" requiring fall protection training. The change will include questions that identify roof access, aerial work

platforms, hillsides, trees, manhole, vault, tanks or confined space fall hazards.

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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