Date: Mon, 12 Jan 1998 07:41:45 -0500
From: eub@ornl.gov (Cynthia M. Eubanks)
Subject: LMES Lessons Learned: Accidental Damage To Laboratory Equipment

The following Lockheed Martin Energy Systems, Lesson Learned originated at the East Tennessee Technology Park (ETTP). If you have any questions, please contact Joanne Schutt, (423)574-1248, e-mail schuttje@ornl.gov.

Thanks--
Cynthia M. Eubanks

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TITLE: Accidental Damage To Laboratory Equipment

IDENTIFIER: L-1997-OR-LMES-ETTP-1201
DATE: December 12, 1997

LESSONS LEARNED STATEMENT: When heavy equipment is being moved, planning should consider the incline of surfaces used to transport the equipment and employees should ensure wheels are locked when leaving equipment unattended.

DISCUSSION: On September 16, 1997, a piece of laboratory equipment, an alpha/beta proportional counter, rolled off the loading dock from Building K-1004-C, at the East Tennessee Technology Park (ETTP). Three alpha/beta proportional counters were being removed from Building K-1004-C laboratory as part of the move of the radiochemistry laboratory to a new off-site location. The damaged proportional counter had to be moved and installed in its new location to determine its operational status before the extent of the damage could be determined. The damage was determined to be extensive, therefore it was ruled a total loss.

ANALYSIS: On 9/12/97 a Maintenance Job Request was initiated to move the alpha/beta proportional counters. The planning included a walkdown of the K-1004-C building and it was determined that no hoisting and rigging plan would be necessary because the counters were on locking wheels and could easily be moved to the dock and loaded by forklift to the transport vehicle. The alpha/beta proportional counters were being moved from a loading dock to a transport vehicle when one of the counters accidentally rolled off the dock.

The counters have a base 48"x36" and weigh between 300 & 400 lbs. They are equipped with four large swivel wheels permanently attached to the equipment with two of the wheels having locking devices. One of the counters had been loaded and the workers were loading the second counter when the forklift operator noticed the third counter rolling toward the edge of the dock. By the time he got the attention of the workers is was to late to keep the counter from falling off the four foot high dock.
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The loading dock was evaluated after this event and even though it appeared to be level, it was discovered that the dock sloped downward away from the K-1004C building. Additionally, the workers failed to lock the wheels on the alpha/beta proportional counter. The equipment was not pushed or bumped when it started to roll off the loading dock. The workers felt that the weight of the counter and the freely moving wheels attributed to the equipment starting to roll. The workers stated they had no knowledge or expectation that the dock was sloped and had moved thousands of pieces of equipment on and off the dock and had never had this problem, which was why they didn't bother to lock the wheels.

RESOLUTION/RECOMMENDED ACTIONS: When planning the movement of heavy equipment, evaluations should take into account the sloping of surfaces used to transport the equipment. Additionally, employees should be reminded to ensure that the wheels are locked, even when it appears the surface is flat. To prevent reoccurrence the loading dock at K-1004C will be marked with warning striping accompanied by notations that say "WARNING! SLOPED SURFACE", with arrows painted on the surface pointing in the direction of the slope.

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DOE FUNCTIONAL CATEGORY: Maintenance, Engineering Design and Construction
LMES FUNCTIONAL CATEGORY: MA - Maintenance, EC - Engineering and Construction
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REFERENCES: Occurrence Report: ORO--LMES-K25GENLAN-1997-0018

FOLLOW-UP ACTION: Information in this report is accurate to the best of our knowledge. As means of measuring the effectiveness of this report please notify Joanne E. Schutt at 423/574-1248, e-mail at s6u@ornl.gov of any action taken as a result of this report or of any technical inaccuracies you find. Your feedback is important and appreciated.

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