Department of Energy
Office of Science
Washington, DC 20585

Office of the Director
JUL 19 2004

MEMORANDUM FOR DISTRIBUTION

FROM: MILTON D. JOHNSON
CHIEF OPERATING OFFICER MDJ

SUBJECT: Lessons Learned: Hoisting and Rigging Incidents in the Office of Science

Hoisting and rigging activities present the potential for serious accidents with severe consequences, as evidenced by the dramatic near-miss that recently occurred at Oak Ridge National Laboratory. In that near-miss, a one-ton hoist dropped 12 feet to the ground, landing just five feet from two workers. As indicated in the attachment, the Office of Science has experienced an increased number of hoisting and rigging incidents in the last six months. I am very concerned that the Science complex may, in the near future, experience a serious hoisting and rigging accident.

The purpose of this memorandum is to provide information on hoisting and rigging activities that may be used to improve safety programs. I request that the Science complex take the following specific actions:

1. Review the laboratory contracts to ensure that appropriate and adequate hoisting and rigging requirements exist in their contracts and ensure that these requirements flow down into their lab-specific processes and procedures; and

2. Review the documents listed in the attachment and apply those applicable lessons learned to the operations at the laboratories.

Please provide a report on the results of these reviews within 60 days to me with a copy to Jay Larson, at Jay.Larson@science.doe.gov.

Attachment

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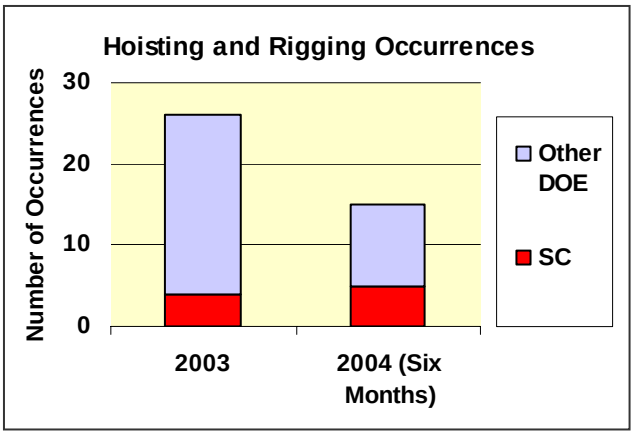
Lessons Learned:
Hoisting and Rigging Incidents in the Office of Science
July 2004

SC Lab's Hoisting and Rigging Occurrences

In 2003, the Department experienced 26 hoisting and rigging occurrences. Of those, 4 occurred at SC labs:

1. Transformer dropped during rigging (BNL)
2. Lifting magnet device releases steel plate during lift (BNL)
3. Potential inadequate safety analysis related to Cell A door Building 7930 (ORNL)
4. Forklift strikes overhead lines (BNL)



In just the first six months of 2004, the SC laboratories have experienced 5 hoisting and rigging occurrences out of a total of 15 for all DOE:

1. Near-miss crane incident (ANL-E)
2. Load falls off flatbed truck during transport (BNL)
3. Recurring material handling problems (BNL)
4. Inner shroud slipped from lifting tool (ORNL)
5. Near-miss dropped hoist at Building 7930 (ORNL)

The SC laboratories' share of hoisting and rigging occurrences has increased from 15 percent in 2003 to 33 percent thus far in 2004, while the relative rate of hoisting and rigging occurrences in the rest of the DOE is essentially constant.

Sources of Information

Three documents have recently been published that provide the Science complex with valuable information on developing and maintaining best-in-class hoisting and rigging programs. The content of these documents is summarized below:

1. **Department of Energy Hoisting and Rigging Events, Operating Experience and Lessons Learned Report, Office of Corporate Performance Assessment, January 2004.**
   http://www.eh.doe.gov/paa/reports/HR_INPO_Style_FinalDraft_01-20-04.pdf

This report describes the commonly made errors in previous hoisting and rigging incidents and identifies lessons learned and specific actions that should be taken to prevent similar incidents from recurring. Lessons learned include:

- Thinking through the entire activity before doing it, especially when reacting to unforeseen conditions.
- Provide sufficient work planning and controls.
- Eliminate deficient work practices, such as disregard for protocols, poor judgment, and bad habits.
- Select the proper equipment and maintain it.

2. Report of the Committee Investigation of the Category "R" Recurring Occurrence (CH-BH-BNL-2004-0005), Revision 1, Brookhaven Science Associates LLC, May 20, 2004. http://www.sc.doe.gov/sc-80/sc-83/docs/BNL_Hoisting_R.pdf

In March 2004, Brookhaven National Laboratory declared a Category R (Recurring) occurrence after a series of four hoisting and rigging occurrences from August 2003 to March 2004. This report presents the results of their investigation and includes findings, conclusions, and the following judgments of need for lab management:

- Evaluate methods for selecting and training personnel for mechanical material-handling tasks to ensure that they are able to carry out the essential functions.
- Ensure that risk assessments are implemented for all mechanical material-handling tasks.
- Ensure that safety aspects of all jobs receive the same focus as medium- and high-risk hazards.
- Ensure that information about object(s) to be moved is passed on to the people moving it.
- Improve or develop a formalized protocol for ordering, scheduling, and receiving to include disseminating information about materials.

3. Hoisting and Rigging Standard, DOE-STD-1090-2004, June 2004.
http://tis.eh.doe.gov/techstds/standard/std1090-04/toc.html

This DOE standard is intended as a reference document for personnel responsible for the safety of hoisting and rigging operations at DOE sites. It encompasses under one cover hoisting and rigging requirements, codes, standards, and regulations. It also goes beyond the minimum general industry standards and delineates the more stringent requirements and best practices for hazardous hoisting and rigging work found within the DOE complex.