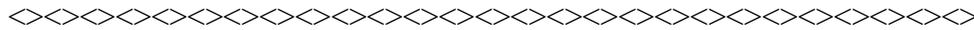


Date: Tue, 24 Nov 1998 15:00:57 -0500
From: "Eubanks, Cynthia M. (EUB) " <eub@bechteljacobs.org>
Subject: **Yellow Alert: Smoldering Fire**

The following Bechtel Jacobs Company, LLC Lesson Learned was generated as a result of an incident that occurred at the East Tennessee Technology Park (ETTP). It is being disseminated for potential generic implications, as similar situations could occur at other facilities. If you have any questions, please contact Joanne Schutt at (423)574-1258, e-mail=s6u@ornl.gov

Cynthia M. Eubanks
Performance/Quality Assurance Org.
Bechtel Jacobs Company, LLC
Phone: (423)576-7763



TITLE: Smoldering Fire at K-1410

IDENTIFIER: Y-1998-OR-BJCETTP-1102 DATE: November 23, 1998

LESSONS LEARNED STATEMENT: Covering combustible materials within an appropriate distance and increasing monitoring time by the fire watch personnel following hotwork are positive enhancements to existing fire prevention measures. These actions, coupled with the added requirement for a final inspection by a responsible supervisor prior to cessation of the days activities, will provide added assurance that all smoldering materials have been extinguished and adequately cooled down.

DISCUSSION: The fire department was called to respond to smoke in the old K-1410 plating building. The building is presently undergoing demolition. A wooden platform, consisting of two-inch by four-inch timbers, was found to be smoldering over a two feet by five feet area. The subcontractor had been burning over the area on the previous day and had performed a fire watch until one-half hour after all burning had stopped. The area had also been wet before, during, and after burning operations. The fire was extinguished with a garden hose at the site. No injuries or environmental impact occurred as a result of this incident.

ANALYSIS: The direct and root causes of this occurrence are work organization/planning deficiencies. The fire was a direct result of inadequate planning by the organization performing the work. The conditions of the building warranted that careful planning was needed as a part of fire safety. The workers had been working in the building for some time before this incident occurred. The procedures required wetting of the wood before and after burning and also for the fire watch to remain in the area an additional half-hour after completion of work. The procedure as followed was inadequate in this case. The K-1410 Fire Investigation Report concluded that the fire was probably caused by a hot piece of slag that fell into a wood crevice that had not been adequately wet down. This slag caused a slow smoldering fire that eventually burst into flame. Two contributing factors also noted in the report were as follows: 1) the wood was extremely dry with a very low moisture content; and (2) the building was dark and the area under the wooden

work platform required flashlights to allow one to see the lower side of the platform.

RESOLUTION/RECOMMENDED ACTIONS:

1. The subcontractor changed the method of operation for areas requiring the uses of welding or burning around wood and all other highly combustible-type materials. The new method of fire prevention will include the following:

- a) all combustibles will be moved 35 feet away from the operation;
 - b) if the combustible can't be moved, wetting with water and covering with a fire retardant cover will be used as a preventive method to limit the chance of fire spreading; and
 - c) the fire watch will be increased from 30 to 45 minutes when working in similar conditions.
- This would probably have prevented this fire had it been used on this job.

2. Requirements of "Welding/Burning/Hotwork," Procedure SH-A-2007, will be included in future subcontracts.

ORIGINATOR: Bechtel Jacobs Company, LLC

Gary A. Person, (423) 574-9686

Engineering and Technical Services

VALIDATOR: Carl J. Witherspoon, (423) 574-9907

CONTACT: Joanne E. Schutt, (423) 574-1248

NAME OF AUTHORIZED DERIVATIVE CLASSIFIER: S. P. Parks

NAME OF REVIEWING OFFICIAL: G. W. Hall

PRIORITY DESCRIPTOR: Yellow/Caution

KEYWORDS: fire, hotwork, welding, burning, fire watch, buffer zone

REFERENCES: Occurrence Report: ORO--BJC-K25GENLAN-1998-0011;

Critique #: CR-98-28

DOE FUNCTIONAL CATEGORIES: Fire Protection, Conduct of Operations

BJC FUNCTIONAL CATEGORIES: FP - Fire Protection, OP - Conduct of Operations

HAZARDS: Fire

WORK ACTIVITY: Welding/Burning/Hotwork

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.

Cynthia M. Eubanks, eub@bechteljacobs.org

Performance/Quality Assurance Org.

Bechtel Jacobs Company, LLC

Phone: (423)576-7763; Pager = 873-6968

Fax: (423)574-5398