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Subject: Blue Alert: Allergic Reaction

Title: BLUE - Allergic Reaction to Chemicals While Painting

Identifier: INEEL Lessons Learned #98192
Date: April 22, 1998

Lessons Learned Statement: Chemicals should not be brought from home to work areas. Material safety data sheets should be reviewed periodically and followed. Hazard analyses should be performed in work areas to ensure safe work environments.

Executive Summary: An employee developed an apparent allergic reaction to a chemical or combination of chemicals, some of which were brought from home. The employee required medical attention. This event underscores the need to review and adhere to material safety data sheets, follow Company procedures concerning bringing items from home to work, and analyze chemicals used in work areas.

Discussion of Activities: A Test Reactor Area shift employee at the Idaho National Engineering and Environmental Laboratory was painting some archery arrows during his lunch break. The employee had brought several bottles of model paint and a small bottle of mineral spirits (paint thinner) from home. During the employee's lunch break, he used some spray paint, model paint, and mineral spirits to paint the shafts of the arrows.

At the end of the painting process, he found that he had spilled some paint on the workbench where he was working. He obtained some 2-propanol (rubbing alcohol) from the flammable storage cabinet and cleaned up the spilled paint. A short time later, the employee's tongue and cheeks began to swell. He reported the problem to the shift supervisor, who sent him to the dispensary for evaluation. The shift nurse administered epinephrine and had the employee transported to the local hospital for further evaluation. The hospital physician gave the employee Benadryl, which almost immediately reversed the symptoms. The analysis of the chemicals that were used did not reveal a source for the symptoms experienced. It is assumed that the employee had an allergic reaction to one of the chemicals or a combination of the chemicals.

Analysis: An analysis by an industrial hygienist was not able to identify the specific chemical that caused the reaction.

Recommended Actions:

1. Personnel should not bring chemicals from home to work areas.
2. A Company policy exists that prohibits employees from bringing chemicals to work. Managers and supervisors should periodically discuss this policy at staff meetings.

3. Personnel should periodically review applicable material safety data sheets and adhere to them.

4. Work areas should have hazard analyses performed to ensure that chemicals normally used in an area do not pose a hazard to employees.

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Functional Categories (DOE): Occupational Safety and Health, Training and Qualification

Functional Categories (User-Defined): Occupational Safety and Health,
Training/Qualification/Education

Key Word(s): allergy, reaction, chemical, paint, thinner, alcohol

References: ORPS Report ID--LITC-ATR-1998-0006