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From Meredith Brown [racer@lanl.gov](mailto:racer@lanl.gov)

Subject: Blue Alert- Employees Injured Inhaling Hydrochloric Acid Vapors From Spill

**Title: Blue Alert- Employees Injured Inhaling Hydrochloric Acid Vapors From Spill**

Date February 9, 2000 Identifier 2000-ALO-WID-0001

**Lessons Learned Statement-** Employees must follow established work practices and procedures when attempting to transport chemicals.

**Discussion of Activities-** A laboratory employee was attempting to transport several bottles (2.5 liters) of 37% hydrochloric acid in a non-approved carrier (cardboard box). The acid was being stored in locker located in an enclosed hallway that connects two buildings. The hallway is a high pedestrian traffic area. While placing the last bottle in the box, it struck another bottle and broke. The contents of the bottle spilled on to the cart that was being used to transport the bottles to a different location. The vapors emitted from the spill thus became airborne and permeated the breathing air inside the hallway. The laboratory employee did not notify the Central Monitoring Room of the incident nor did he warn other employees that entered the hallway that a spill occurred. All employees exposed to the hydrochloric acid vapors were transported to the local hospital. The affected employees were treated for irritation of the nose and throat. One employee also was treated for eye irritation. This injury resulted in one lost workday.

**Analysis-** An investigation revealed the employee failed to follow standard laboratory practices and procedures. The employee used approved padded transport containers for three bottles of acid, and then attempted to place three more bottles in a non-approved carrier (cardboard box) for transport. The initial failure by the employee to promptly notify the Central Monitoring Room of a hazardous material spill delayed the deployment of response teams and the notification to all employees that a spill had occurred. Such notification would have directed employees to stay clear of the affected area and may have prevented multiple chemical exposures to uninformed persons entering the area.

**Recommended Actions-**

- \* The training program for laboratory workers will be evaluated to determine if it adequately addresses the process and precautions related to handling and transporting hazardous material.
- \* Ensure future procurement orders for hazardous materials specify containers that are coated with plastic or similarly protected to minimize breakage.
- \* Remind persons to immediately contact the Central Monitoring Room in the event of a chemical spill.
- \* Relocate hazardous material storage lockers to a more suitable, low pedestrian traffic area of the facility.

Estimated Savings/Cost Avoidance Not applicable

Priority Descriptor Blue/Informational

Work/Function(s) Conduct of Operations - General

User-Defined Category Chemical Spill

Hazards Hazardous materials

ISM Core Functions(s) Analyze Hazards

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Authorized Derivative Classifier Not applicable

Reviewing Official J. R. Galle

Keywords Chemical spill, hydrochloric acid, transporting chemicals

References ALO-WWID-WIPP-1999-0008