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UNIVERSITY OF MINNESOTA  
TWIN CITIES

Boynton Health Service  
410 Church Street S.E.  
Minneapolis, Minnesota 55455

October 16, 1978

Memorandum

To: Donald Holberg, Associate Director, Physical Plant Administration,  
200 Shops Building, East Bank Campus

From: Maurice Tipcke, Safety Technician, Department of Environmental  
Health and Safety

Subject: Decontamination of Pesticide Building at Rosemount Research Center

Background

The cleanup/decontamination procedures, cleanup equipment, personnel protective equipment and necessary training was coordinated by Craig Moody from this department, and Steve Barker and George Dohmann from the Department of Physical Plant.

The training for the use of the self-contained breathing units was done by a representative of Continental Safety Equipment Company.

The cleanup/decontamination was done by Steve Barker, George Dohmann, Dio Brack and Vernon Demlow of the Department of Physical Plant.

I served as the support person at the time of the physical cleanup.

Cleanup equipment used

(Two) self-contained breathing apparatus units.

(Eight) cylinders for the air supply were available. These cylinders, when full, contain 2200 pounds of compressed air and will last approximately one-half hour.

(One) wet/dry vacuum (Shop Vac).

(One) gallon liquid detergent.

(1000) gallons water (from tank truck belonging to Rosemount Research Center).

(Two) coarse 18" bristle push brooms.

(One) portable electric generator.

(One) tank truck (to serve as a water source).

(Four) cartridge respirators with spare filters and cartridges.

Personnel protective clothing worn

- (Four) two-piece rainsuits with hoods.
- (Four) pairs of neoprene boots.
- (Four) pairs of gloves.
- (Four) full face shields.

Cleanup/decontamination procedures

The floor surfaces and wooden pallets were covered with an absorbent type material one week prior to cleanup.

On Tuesday, October 3, 1978, the pallets were removed from the building and the sweeping up of the absorbent material was started, using all protective clothing and the filter respirators. After approximately five minutes and observing the dust being generated, I asked the cleanup personnel to leave the building so I could check the respirators and filters. In the short period of time (5 to 10 minutes) they were in the building, the filters were heavily coated with dust. Dust was also inside the face pieces. I requested that the self-contained breathing units be put on immediately, though initial plans were to use the cartridge respirator throughout the sweeping up process.

After the sweeping process was completed, the material swept up was put into 55 gallon drums labeled as Pesticide Solid Waste and set with other pesticide waste to be shipped.

The floor surfaces and pallets were then saturated with a liquid detergent and water mixture that was agitated with the push brooms.

Full personnel protective equipment with self-contained breathing units were worn throughout this procedure.

No work procedures were performed without the buddy (two-man) system being exercised.

Recommendations

1. In the future, if sweeping is necessary in a confined area, I would suggest that SCBA units be worn, as cartridge respirators are difficult to assure a good seal. When a large amount of dust is generated, the disposable cartridges and filters have to be changed often; but, I am more concerned with not getting a good seal around the face piece.
2. I recommend that when any future cleanup/decontamination is done in an enclosed or confined structure, self-contained breathing apparatus be worn throughout the process when the chemical is toxic, pathogenic and/or unknown.
3. I would also recommend that the procedure for cleaning and decontamination be done by using a water-soap solution with a pressure spray (portable) unit like those generally used for auto equipment washing to minimize aerosolization of contaminants. The area should be lightly sprayed first. This type of unit is presently used in the University departments of Transportation, Grounds, and Maintenance. This unit would reduce cleaning time and increase cleaning

efficiency as a result of the water and soap solution being under pressure. Using the pressure to move the water to a holding tray at the door opening of the storage facility will eliminate sweeping and picking up the wet solution with a vacuum unit.

4. An equipment check list should be used to insure that all necessary equipment for the task is available and ready.

5. The procedures for accomplishing the work to be done should be planned and reviewed by those involved in the cleanup and/or decontamination, prior to cleanup, to understand all the steps necessary for a safe cleanup.

MWT:skh

cc: Warren Soderberg  
Dr. Phillip Harein  
Fay Thompson ✓