



Our Neighborhoods

Citizens, government and industry working to promote public understanding of chemicals and chemical safety

Hazardous Material Units Respond to Spills, Releases and Fires

A diesel truck spills fuel onto Interstate 75, a tank of chlorine ruptures and a vapor cloud escapes into the air, a propane gas tank ignites and explodes. While only examples, hazardous material incidents like these can and sometimes do happen in the Greater Cincinnati area.



In 1998, about 115 hazardous material incidents occurred within Cincinnati city limits. Hamilton County and Northern Kentucky experienced at least 40 additional incidents during the year. Most hazardous material emergencies are relatively small, like a fuel spill or a

laboratory accident, but sometimes there is an incident on the scale of BASF or Auxier Gas where people are harmed and property is destroyed.

So what happens during a hazardous material accident? Who is responsible for handling the situation? And how is the public notified and kept out of harm's way?

Emergency Response Teams

When a hazardous material incident occurs on an industrial plant site, the first responders to the scene are often members of the plant's Emergency Response Team. Both large and small industries use in-house teams to contain chemical spills, releases and fires until outside help arrives or the incident is under control. For example, during the recent nitric acid release at BF Goodrich Hilton Davis in Pleasant Ridge, the plant's Emergency Response Team used a water spray to help contain acid vapors until the Cincinnati Fire Division arrived.

In-house teams are professionally trained in spill containment, small fire

response, First Aid and CPR and conduct frequent mock emergency drills and plant evacuations to test their preparedness. For example, Morton International, a chemical manufacturer in Reading, holds mock drills with the Reading Fire Department and annually invites Reading and Evendale firefighters to the plant for an extensive tour of buildings and chemical storage areas.

Local Fire Departments

When hazardous material incidents occur on roads or railways or when a plant does not have an Emergency Response Team, local firefighters are first on the scene. All firefighters are required to complete basic hazardous material training to limit the spread of chemicals, and many are specially trained and equipped to control hazardous material incidents.

In Hamilton County, the Cincinnati Fire Division operates a dedicated hazardous material (HazMat) response unit called Squad 52. Numerous other fire

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Public Warned of HazMats by Sirens, Other Alerts

When a hazardous material incident occurs, the health and safety of citizens is critically important. In the majority of situations, the public is not at risk. But if there is potential for danger, local authorities will order a shelter in place or evacuation to keep the public from harm.

If a hazardous material emergency occurs in your neighborhood, local authorities will notify you in the following ways:

- Outdoor warning sirens (also known as civil defense sirens)
- Door-to-door notification
- Announcements over public address system on fire department vehicles
- Emergency Alert System, which broadcasts emergency messages on local TV and radio stations.
- If you hear the sirens or another alert, please follow these instructions:
 - Stay calm; do not listen to rumors.
- Go indoors and tune in to local TV or radio stations (WRRM-FM 98.5 or WLW-AM 700).
- Stand by until advised of what action to take. If a high-risk hazardous material emergency has occurred, you may be asked to shelter in place or evacuate. Shelter in place is more common.
- Use your telephone only for emergency calls.

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Hazardous Material Units (continued)

departments — including Anderson Township, Colerain Township, Evendale, Green Township, Reading, St. Bernard, and Sycamore — are also staffed and equipped to respond to hazardous material incidents.

“If the first responding fire department doesn’t have hazardous material responding capabilities, chances are other responding fire departments will,” said Chief Steve Ashbrock of the Reading Fire Department. “Beyond that, area fire departments can call in the Cincinnati Fire Division or a regional response unit like the Greater Cincinnati Hazardous Materials Unit.”



Response crews are trained to combat a hazardous material incident and are equipped with special gear such as supplied air, chemical-resistant suits, tools to plug leaks or close valves, chemical test kits, absorbent pads, and foam, water or neutralizing agents. Cincinnati Fire Division also employs a hazardous materials coordinator who determines what chemical is involved and how best to control it.

“One letter difference in the chemical’s name can make a big difference in how we handle it,” said Charles Perry, Cincinnati’s hazardous materials coordinator. “We need to know exactly what the chemical is.”

If airborne chemicals are involved, response crews use computer modeling programs to determine where the vapors are headed and whether an evacuation or shelter in place for neighbors or plant personnel is warranted (see sidebar on this page). Local environmental officials may be called in to monitor air quality in neighborhoods around the site.

Regional HazMat Units

In Greater Cincinnati, three regional response units are available to assist local fire departments with hazardous material incidents:

- Greater Cincinnati HazMat Unit
- Fernald Fire Department
- HazMat 7

These units primarily provide assistance to fire departments without “HazMat” teams, but will assist any agencies in a major emergency.

Created in 1991, the Greater Cincinnati Hazardous Materials Unit is staffed by 120 volunteers (including six chemists) and one full-time director. The unit currently covers Hamilton County, Clermont County, Fairfield in Butler County, individual cities in Northern Kentucky, and Dearborn and Franklin Counties in Indiana.

The Fernald Fire Department established a “HazMat” team in the early 1970s. All 37 department firefighters are certified to handle hazardous material incidents. The unit generally assists fire departments in western Hamilton County and southern Butler County.

HazMat 7, established in the 1970s, covers eight counties in Northern Kentucky including Boone, Campbell and Kenton. The unit, which is divided into north and south units, is staffed by 70 to 80 volunteers (including chemists).

Coast Guard/ORSANCO

The Coast Guard detachment on River Road in Cincinnati patrols the Ohio River on a daily basis for hazards and spills. The unit responds to about a dozen small oil spills a year, but most spills of oil or chemicals are handled by local emergency responders (e.g., local fire departments, regional HazMat units) or the responsible company.

The Coast Guard, companies, and emergency responders use containment booms (plastic floating devices) and absorbents to contain floating oils or chemicals until they can be pumped out of the river. For chemicals which mix with water, the Cincinnati-based Ohio River Valley Water Sanitation Commission (ORSANCO) uses a spill detection system to protect water intakes for city drinking water utilities. If drinking water is threatened, water utilities like Cincinnati Water Works will close its water intakes until the danger has passed.

Public (continued)



Shelter In Place

Shelter in place means taking shelter inside your home until the danger has passed.

Local authorities will order a shelter in place when a hazardous material is released into the air that potentially threatens human health and there is not enough time to safely evacuate.

“We do not want people outside if there is potential for exposure to a chemical, so there’s not much of a choice if you don’t have time to evacuate,” said Don Maccarone, director of the Hamilton County Emergency Management Agency.

In 1998, one shelter in place was ordered during the nitric acid release from BF Goodrich Hilton Davis.

During a shelter in place, you should:

- Stay tuned to the TV or radio.
- Close windows and doors.
- Turn off air conditioners, fans and heating systems.



Evacuation

An evacuation means leaving your home for the nearest safe shelter. Local

authorities will order an evacuation when a hazardous material release threatens the community and there is enough time to safely evacuate. To date, Hamilton County has experienced no large-scale evacuations due to a hazardous material emergency. On occasion, homes close to a release site have been evacuated. For example, residents near the BASF manufacturing plant were evacuated from their homes after the chemical explosion and ensuing fire in 1989.

During an evacuation, you should:

- Prepare your home for a three-day absence.
- Evacuate when advised.

If you’d like more information, please contact the American Red Cross at (513) 579-3010, the Hamilton County EMA (513) 851-7080, or see page 29 of your 1998/1999 Cincinnati Bell Area telephone book.

EPA Risk Management Regulation:

What is a Worst Case Scenario?

Can you imagine what the worst case scenario for a car would be? It might be the engine, brakes, transmission, seat belts and air bag all failing at the same time, resulting in a serious traffic accident. Because so many systems would have to fail simultaneously, this situation is truly worst case and unlikely to happen.

If you documented this worst case scenario, along with the safety features of your car, and what you would do during this emergency, you would have what the U.S. Environmental Protection Agency (U.S. EPA) calls a Risk Management Plan.

Risk Management Plan

The U.S. EPA will soon require companies which store or use certain chemicals to prepare a Risk Management Plan (RMP) for chemical accidents. The plan must include a worst case scenario, safe practices used by the company to prevent accidents, and emergency response procedures. Each company must submit this report to the U.S. EPA on June 21, 1999, and make it available to the public.



Chemical Accidents

Chemical accidents can occur in several ways. A liquid could spill to the ground and then evaporate to create chemical vapors, similar to spilling a bleach container at home. Another way is the release of gas from a container, similar to puncturing a propane cylinder used for a gas grill. When punctured, the liquid chemical in the can is released as a gas.

Depending on the type of chemical involved, the vapors could be flammable, toxic to your health, or both. For example, propane gas fumes could ignite and explode and chlorine bleach vapors could harm your health.

Worst Case Scenario

The worst case scenarios prepared by companies for chemical accidents must use the absolute worst possible conditions. The worst case scenario assumes the following:

- The greatest quantity of chemical on site is released.
 - The release occurs at the highest outdoor temperatures (which generates the most chemical vapors).
 - The release occurs during worst case atmospheric conditions (including a low-wind speed which minimizes mixing with air).
 - All safety precautions fail (even though many may be in place).
 - If the chemical is toxic, the chemical release potentially results in harm to human health.
 - If a flammable chemical, the chemical release ignites, potentially resulting in property damage and harm to human health.
- For each worst case scenario, the company must also identify exposed human populations and report how far downwind the harmful vapor concentration could reach.

Example Worst Case Scenario

Here is an example. Company X makes a resin for paints which requires the storage of 20,000 gallons of formaldehyde. The worst case scenario is the release and evaporation of all 20,000 gallons. All safety precautions fail, and the accident occurs on a hot, windless August day. Calculations show that a harmful concentration of formaldehyde could travel 0.7 miles downwind of the facility. About 200 people live within this radius.

Summary

Why does the U.S. EPA want us to have this information? So industries, emergency responders and citizens will work together to understand and improve information about chemical uses and risks, safe practices to prevent accidents, and emergency response procedures.

"We hope RMP will bring groups together that have not previously interacted," said District Chief Charles Perry of the Cincinnati Fire Division. "Our goal is for positive, progressive interaction."

RMPs will be submitted soon, but the dialogue can and should begin now.



Contacts

Bayer Corporation
Duane Day, #467-2217

BF Goodrich Hilton Davis
Tom Eickhoff, #841-4073

Cincinnati Propane
Nelson Fisher, #271-1880

Cincinnati Specialties
Jim McKenna, #482-7350

Cincinnati Water Works
Bill Phelps, #591-7971

DuPont Specialty Chemicals
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GRACE Davison
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Henkel Corporation
Mike Groh, #482-2425

Hillshire Farm & Kahn's
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IMC AgriBusiness
Bill Chokran, #941-4100, x130

Metropolitan Sewer District
Ann Newsom, #557-7110

Morton International
Glenn Schaaf, #733-2132

Pilot Chemical - Cinti
Tom Melhorn, #733-4880

Pilot Chemical - Middletown
Dennis Callison, #513-424-9700

P&G's Ivorydale site
Ed Burcham, #627-7727

Rutgers Organics Corporation
Frank Canepa, #738-1255, x 118

Senco Products
Bob Schmidt, #388-2998

Shepherd Chemical
Bayard Pelsor, #731-1110

Please call these Alliance for Chemical Safety industry members if you have questions about chemicals in your neighborhood.

Who Can You Talk To

Citizens in Greater Cincinnati can use the information below to find out about or report chemical risks in their neighborhoods. In addition, citizens should call their neighboring companies directly with any questions or concerns.



- OEPA Div. of Drinking and Ground Water in Columbus: #614-644-2752.
- OEPA Div. of Emergency & Remedial Response in Columbus: #1-800-282-9378 (call to report an unauthorized release of contaminants into the air, land or water).

Telephone Numbers

- Alliance for Chemical Safety: #612-3074.
- Butler County Emergency Management Agency (EMA): # 844-8020.
- Cincinnati Office of Environmental Management: #352-4682.
- Clermont County EMA: #732-7661.
- Hamilton County EMA: #851-7080.
- Hamilton County Department of Environmental Services: #946-7777.
- Hamilton County Odor Hotline: #946-7777.
- National Institute of Occupational Safety and Health: #1-800-35-NIOSH.
- Ohio Environmental Protection Agency (OEPA), Southwest District office in Dayton: #1-800-686-8930.
- OEPA Div. of Air Pollution Control in Columbus: #614-644-2270.

Websites

- www.epa.gov
U.S. EPA website. Contains national environmental information, including "Envirofacts," which identifies regulated companies in your area by zipcode.
- www.epa.gov/ceppo/acc-pre.html
The U.S. EPA's Chemical Emergency Preparedness and Prevention Office website. Contains RMP data.
- www.epa.ohio.gov
Ohio EPA website. Contains environmental information on Ohio.
- www.rtk.net
Right-To-Know website. Contains Toxic Release Inventory (TRI) data.
- www.rtk.net/wcs
Right-To-Know website. Contains RMP Worst Case Scenario examples.
- www.scorecard.org
An Environmental Defense Fund website. Contains data on TRI releases from industries and health effects of chemicals.

Three Hills Community Advisory Panel kicks off

Citizens and companies in St. Bernard, Winton Hills, Winton Place and Bond Hill recently created an advisory group to discuss environmental, health and safety issues in their neighborhoods.

The group, called the Three Hills Community Advisory Panel (CAP), includes representatives from:

- American Red Cross
- Cincinnati Specialties
- Ohio Citizen Action
- GRACE Davison
- Henkel Corporation
- IAMS
- Local emergency responders
- Local schools
- Occidental Chemical
- Ohio Citizen Action
- Paddock Hills Small Bus. Group
- Procter & Gamble
- St. Bernard/Winton Hills

The CAP meets from 3:30-5 p.m. the fourth Wednesday of each month at the St. Bernard City Hall's Centennial Room. The meetings are open to the general public. Please call Ed Burcham of Procter & Gamble at 627-7727 for more information.



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