



Connecticut Department of Public Health
Environmental & Occupational Health Assessment Program
Environmental Health Section
410 Capitol Avenue, MS # 11EOH, PO Box 340308
Hartford, CT 06134-0308
Telephone: (860) 509-7740 Fax: (860) 509-7785
<http://www.ct.gov/dph/IEQ>

Mercury Spill Response In Schools

EHS Circular Letter # 2009-48

September 2009

Dear School Administrator,

Situations involving environmental contamination can be extremely disruptive and often very costly to the school community. There is one such environmental problem that is largely preventable - **mercury spills in schools**. Most of these spills can be avoided by removing products containing mercury from the school environment and replacing them with products that do not contain mercury.

Unfortunately, there have been a number of mercury spills that have resulted from students bringing containers of mercury to school. In some cases, the mercury was obtained from parents, relatives, or friends who use metallic mercury in their occupations or hobbies such as dentistry, taxidermy, or during religious practices like Espiritismo (Puerto Rican-based), Santeria (Cuban-based), Voodoo (Haitian-based), and Palo Mayombe (Caribbean-based). Metallic mercury for ritualistic or religious practices can be purchased in stores called botanicas, commonly found in urban areas. It is sold under the name *mercurio* or *azogue*.

Exposure to metallic mercury can be extremely dangerous, especially for children, because it affects the central nervous system. **The Connecticut Department of Public Health urges every school to have a Mercury Spill Response Plan in place.** The Mercury Spill Response Plan should be part of the school's emergency plans. The plan identifies actions to be taken if a spill occurs, and who to call. A Mercury Spill Response Plan and fact sheet about mercury spills in schools is attached to this letter. You may use this plan or develop your own.

Please post the Mercury Spill Response Plan with your emergency response materials (such as Fire Escape Plans) in each school and review with staff annually. An ounce of prevention is worth a pound of cure. If you have further questions, please feel free to contact us.

Sincerely,

Brian Toal, MSPH
Program Supervisor
Environmental & Occupational
Health Assessment Program
860-509-7741
Email: brian.toal@ct.gov

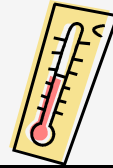
Marian L. Heyman, MPH
Coordinator, Indoor Environmental Quality Unit
Environmental & Occupational
Health Assessment Program
860-509-7742
Email: marian.heyman@ct.gov

Mercury Spill Response Plan

Plan Date:	Date Reviewed:
Contact 1:	Contact 2:
Facility Name & Address:	
✓	Check When Completed
	Contain area- Keep people out
	Place contaminated items in contained area
	Isolate potentially exposed persons for further evaluation
	Close interior doors
	Open exterior doors & windows, use fans blowing to outside
	Lower temperature in spill area
	Turn off or isolate HVAC system in spill area from rest of building
	Call CT DEP Emergency Response and Spill Prevention Division (24/7) 860-424-3338 or 1-866-DEP-SPIL (toll free)
	Call Your Local Health Dept.- Insert Phone #: _____
	Notify CT Dept Public Health: 860-509-7740
Spill Date & Time:	Spill Location:
Room Temp:	# Potentially Exposed:
Describe Incident:	



Mercury In Schools: Spill Response



Mercury spills can present a public health threat. Each year, several schools in Connecticut experience an incident involving mercury. These range from minor and localized spills to wide spread contamination. They can result in significant clean-up costs and interruption of normal school activities. Most incidents are preventable. There are two simple steps schools should take to control the problem.

What To Do	How To Do It	Contact
1. Remove all products or equipment containing mercury from the school.	The CT Department of Environmental Protection has information about CT's mercury products law, including collection and disposal.	CT DEP (860) 424-3242 Tom Metzner
2. Have a mercury spill response plan in place. Review it each year with staff.	See attached page for Mercury Spill Response Plan.	CT DPH: 860-509-7740

Why Is Mercury Exposure A Concern?

Exposure to metallic mercury can affect the central nervous system and kidneys. Mercury vapor is colorless and odorless. It is impossible to detect without special measuring devices. Children and fetuses are at highest risk because the central nervous system is not fully developed and is highly vulnerable. Breathing in mercury vapor is more dangerous than swallowing or getting it on your skin. This is because nearly all of the inhaled mercury is absorbed by the body. Metallic mercury is not easily absorbed through the stomach or skin.

The severity and degree of adverse health effects depends on the concentration of mercury and length of time a person is exposed. Short term or acute exposure can cause cough, difficulty breathing, chest pain, nausea, vomiting, diarrhea, fever and metallic taste in the mouth. Long-term or chronic exposure can result in tremors,

irritability, difficulty sleeping, loss of appetite with weight loss, excessive shyness, emotional instability, headache and short-term memory loss.

Where Is Metallic Mercury Found?

Metallic mercury is commonly used in experiments in chemistry or physical science classes. This shiny, silver-white, odorless liquid can also be found in thermometers, barometers, blood pressure cuffs and gauges, Charles' law tubes, J tubes, mercury switches, fluorescent light bulbs, photo processing chemicals, and mercury vapor lamps.

We Removed Products Containing Mercury from Our School. Should We Still Be Concerned?

Yes! Many mercury releases are a result of students bringing containers of metallic mercury to school. This is why it is important for all schools to have a mercury spill response plan.

Do's and Don'ts During A Spill

The silver beads of metallic mercury vaporize and contaminate the air. The longer the spill is left unaddressed, the greater the potential is for exposure and more widespread contamination. If a mercury spill is not contained and cleaned up, mercury can be tracked into hallways, further spreading contamination. You can minimize exposure by following the recommendations below.

If There Is A Spill:

Do Not Vacuum



Do Not Sweep



Do Not Use
Metal Dust Pans



- **Do Not Vacuum!** Vacuuming is especially dangerous because heat from the motor turns solid/liquid mercury beads into dangerous vapor that gets blown out with the vacuum cleaner's exhaust.
- **Do Not Sweep!** Sweeping stirs up the air, dust, and mercury beads. This can spread the vapor. It also contaminates the broom.
- **Do Not use a metal dust pan.** Mercury can bind to the metal.
- **Do Not walk through an area** where there was a spill— your shoes can become contaminated, and spread the contamination further.
- **Do Not leave a spill un-contained.** Someone may walk through it and spread the contamination further.
- **Do Contain The Area** - Keep people out until clean-up is completed.
- **Do Leave Contaminated Items** (i.e., shoes, brooms, mops, clothing) in the contained area to reduce the potential for contamination spread.



- **Do Bring Potentially Exposed Individuals** to a cool, ventilated, staging area for evaluation by Connecticut Department Of Environmental Protection (CT DEP) or emergency response personnel.
- **Do Close Interior Doors** to reduce the amount of air that could circulate from the spill area into other parts of the building.
- **Do Open Exterior Doors And Windows** to ventilate the room to the outdoors. Put fans in windows blowing outside to help flush out the room.
- **Do Turn The Thermostat Down** in the affected area to slow the release of mercury vapor into the air.
- **Do Turn Off Or Isolate Heating, Ventilating And Air Conditioning (HVAC) Systems** to reduce the amount of air that could circulate from the spill area into other parts of the building.
- **Do Call CT DEP Emergency Response & Spill Prevention Division (24/7): 860-424-3338 or 1-866-DEP-SPIL.** They will advise you about how to proceed.
- **Do Call Your Local Health Department**- They will help you with risk communication to parents, students, and staff.
- **Do Call CT Dept Public Health**— Environmental & Occupational Health Assessment Program: 860-509-7740. They will provide you with technical assistance.

Be Proactive - Post A Mercury Spill Response Plan

The best defense is an offense. Know what to do and who to call before a spill occurs. This will help minimize exposure to students and staff, reduce disruption to the school, and allow clean-up to occur properly and in a timely fashion.

A sample spill response plan is attached to this document. Insert the telephone number for your local health department. Post the plan with other emergency information (like fire escape plans). Review the plan with staff annually.