

HEALTH CONSULTATION

BERRIEN COUNTY HIGH SCHOOL MERCURY RELEASE

BERRIEN COUNTY, MICHIGAN

Prepared by:

Michigan Department of Community Health
Under A Cooperative Agreement with the
U.S. Department of Health and Human Services
Agency for Toxic Substances and Disease Registry

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Summary

The Michigan Department of Community Health (MDCH) assisted on-scene in responding to an elemental mercury release in a high school. Several homes were contaminated with the mercury as well. During the emergency response, involved agencies treated the situation as an urgent public health hazard. As more information became known, MDCH determined that mercury vapor concentrations at the school were not harmful, but the mercury contamination still needed to be addressed. Two of the three homes tested had mercury vapor levels that were of concern. MDCH provided guidance to the cleanup contractor at the school and to the parents of the student who had brought the mercury to school. The school met cleanup standards. Because the parents have not allowed access to the responders since the initial screening, it is not known if the homes have been cleaned up.

Purpose and Health Issues

The purpose of this report is to:

1. Provide formal documentation of the response conducted by the Michigan Department of Community Health Division of Environmental Health at a mercury release in a school.
2. Demonstrate how an Incident Command (IC) structure was used in response to this incident.
3. Emphasize the need for outreach and education to those involved in an elemental mercury release, and show examples of the outreach provided in this case.
4. Show how social media may be an important consideration when developing a response plan.

Mercury spills in public settings need a coordinated response to prevent localized contamination from being tracked elsewhere, making a potentially difficult situation even more challenging. Children are especially vulnerable to the toxic effects of mercury. The health issues pertaining to this incident focused on the prevention or stopping of exposure to mercury for students and staff at the school as well as for the family members of the student who brought the mercury to the school.

MDCH conducts public health activities (assessments/consultations, advisories, education) for the federal Agency for Toxic Substances and Disease Registry (ATSDR) under a cooperative agreement. These activities are carried out at sites of environmental contamination and concern, such as National Priorities List (“Superfund”) sites, Brownfields, explosions and fires, and chemical spill sites. The purpose of a health consultation is not to evaluate or confirm regulatory compliance but to determine if any potentially harmful exposures are occurring or may occur in the future.

Incident and Response

Notification and Initial Response

At about noon on March 7, 2012, MDCH received notification from the Berrien County Health Department Emergency Preparedness Coordinator (EPC) that a “large” amount of mercury reportedly had been released in a high school classroom in Berrien County, Michigan. A student had brought a vial of mercury to school, storing it in a binder. Apparently, someone had stepped on the binder when it was on the floor, causing the vial to break and the mercury to be released.

The spill was not noticed right away, however, and the students went to other classes before the release was finally discovered at about 11:30 AM. It was not known when the mercury was first released. School personnel immediately isolated the classroom where the mercury was evident and moved the students (about 20) from that room into an unoccupied room across the hall. The school uses radiant heat rather than forced air ventilation, so no vapors would be carried to other areas via air ducts. At that time, no one knew about other potentially contaminated areas.

The EPC requested guidance for addressing the spill. MDCH indicated that the school would need a cleanup contractor and provided a list of known mercury hazmat professionals. MDCH also provided the link to its mercury website (www.michigan.gov/mercury) and referred the EPC to several specific factsheets to guide immediate actions. MDCH told the EPC that local agencies responding to the spill would want to screen, with a real-time mercury vapor analyzer, all students' and staff's shoes before they left the building for the day, to prevent any possible track-out. Berrien County does not have a mercury vapor analyzer but the EPC said he would request to use Kalamazoo County's machine (Lumex), under the counties' mutual aid agreement. The EPC would call MDCH again when he arrived on-site and assessed the situation.

Immediately following that phone call, MDCH received a voicemail message from the Berrien County Sheriff's Department regarding the same spill. The officer described the spill as "very small," then indicated it was about 10 milliliters or three ounces in volume. MDCH recognized this as a "reportable quantity" (greater than 1 pound mercury) and contacted the officer to let him know about the call with the EPC. County and city emergency management would go to the school to assist while MDCH notified the National Response Center (NRC) to report the release.

Shortly after talking with the Sheriff's Department, MDCH received a phone call from the Berrien County Health Department Environmental Health Division. A sanitarian who had partnered with MDCH at a residential mercury spill several years earlier was on his way to the high school to assist with the incident. MDCH discussed the action plan arranged with the EPC so that the sanitarian would be prepared when he arrived on-site.

As MDCH was filing the NRC report for the spill, they received another call from the EPC, who was now on-site. The visible spill pattern in the classroom covered an approximate six-foot by six-foot area. Local officials had not been able to contact Kalamazoo County staff in charge of the Lumex. MDCH has a Lumex but it would take staff nearly three hours to drive to the school. Emergency responders from the U.S. Environmental Protection Agency (EPA) could mobilize from the nearest office, Chicago, but the travel time would be about the same as for the state. School dismissal normally would start before either agency could arrive. There were about 400 students at school that day.

Based on the updated information, MDCH and the EPC modified the response plan:

- MDCH would mobilize to the scene with their Lumex.
- The school's automatic notification system would contact parents and ask them to bring another pair of their children's shoes to school.
- The students who were *not* in the affected classroom would be routed through the gymnasium in manageable groups, bag the shoes they wore to school and leave them there for later screening, and be dismissed.

- The students in the affected classroom would wait until a Lumex was on-site and their shoes and clothes screened and cleared.

On-Site Screening

MDCH arrived on-scene around 3 PM. Students were still bagging their shoes and being dismissed while parents waited to pick them up. Local and county emergency responders were managing the scene. The weather was clear and warm (about 63° F).

After starting the Lumex, conducting an internal check on the machine, and taking an ambient reading, MDCH entered the building and went to the incident command (IC) room in the superintendent's office. The IC structure included MDCH, Berrien County Health Department Emergency Preparedness and Environmental Health, Berrien County Sheriff Department, local police and fire departments, and school officials and personnel. MDCH learned that additional mercury beads had been discovered in another part of the building, near the principal's office.

IC prioritized the next set of actions:

1. Students from the affected classroom, not including the student who brought in the mercury, would be screened and evaluated for release.
2. Shoes of all school staff would be screened before staff left for the day.
3. The student who brought in the mercury would be screened and evaluated for release to the student's parents.
4. Using the Lumexes (Kalamazoo's was en route to the scene), staff would screen the school to determine other areas that the cleanup contractors should address, beside the affected classroom.

MDCH set several screening (maximum) levels, depending on the items being evaluated:

Table 1. Mercury vapor screening levels used during response to the elemental mercury spill release on March 7, 2012 in Berrien County, Michigan.

Screened Item	Screening Level*	Reason
Room air (breathing zone)	1,000 ng/m ³	This level is recommended by ATSDR (2012) for residential settings, or places where children are likely to spend much time, after spilled mercury has been cleaned up.
Just above floor	Greater than room air	If residual mercury is present, air concentrations typically would be higher near the beads, which may not be visible. If floor readings are similar to room air, this suggests mixing rather than residual contamination.
Clothing/shoes/book bags	1,000 – 10,000 ng/m ³	As concentrations of screened items increase, MDCH strongly encourages disposal but allows for professional judgment in determining actions. Items <i>above</i> 10,000 ng/m ³ should be disposed.

*Screening-level concentrations are shown in nanograms (ng) per cubic meter (m³). See *Toxicological Evaluation* section regarding health-effect levels.

Screening Other Students from Affected Classroom

MDCH first screened the breathing-zone (about four feet above the floor) air of the room in which the students from the affected classroom were being held. The 10-second average mercury concentration was between 700 and 800 ng/m³. There were some one-second readings near 1,000 ng/m³. These data indicated that some mercury had been tracked into the room, but the levels were not considered harmful.

Then MDCH screened each student individually, focusing on their pant cuffs and shoes. Nearly all students' shoes matched or were lower than the room air concentrations, indicating that there was no mercury contamination of the footwear. Each student was dismissed to the gymnasium after being cleared. One student's shoes registered about 12,000 ng/m³ in the tread, suggesting that mercury beads were still clinging to the soles. The student was instructed to bag his shoes and leave them there for further testing. He was dismissed to the gymnasium in his stocking feet with the recommendation that he dispose of his socks, as a precaution, when exiting the school.

Screening of Staff's Shoes

MDCH screened the shoes of school staff as they left the building through the gymnasium. None of the staff's shoes, including the teacher whose room was affected, exceeded screening levels. Most of the shoes had low concentrations of mercury (300-600 ng/m³) coming off the soles and would not cause harm. As a "peace of mind" recommendation, MDCH suggested that staff leave their shoes outside in the sun over the weekend to allow the warm weather to volatilize any remaining mercury.

Screening of the Student with the Mercury

MDCH carefully screened the student who had brought in the mercury, since it was likely that the student's clothing would be contaminated from the binder containing the broken vial. It quickly became evident that the majority of the student's clothing was contaminated (higher than 10,000 ng/m³). MDCH instructed the student to change into clean clothes and bag the contaminated clothing and shoes for disposal. Some personal items were also contaminated and disposed of, whereas other items were not contaminated and returned to the student's parent. MDCH made arrangements with the parent to screen the home ("Home 1") later that evening.

Screening of the School Building

Working in two teams, MDCH, the EPC, and school personnel screened the rest of the school with the Lumexes so that the cleanup company could address any additional areas of concern. Special attention was paid to areas the student with the mercury had been in during the day. Results of the screening revealed that there was contamination in the art room and the library (higher than 1,000 ng/m³), along with the contamination already identified in the affected classroom and by the principal's office. MDCH recommended that the cleanup company conduct further screening of these areas and address the contamination as appropriate. Minor elevations of mercury vapor concentrations (lower than 1,000 ng/m³) were detected in another classroom the student had occupied, as well as a carpeted area of the hallway and the restrooms. MDCH recommended that these areas not receive additional attention beyond the cleaning the custodians typically conduct.

Off-Site Screening

Home 1

After completing the screening of the school and discussing recommendations with school officials, MDCH proceeded to Home 1. The EPC and the Berrien County Sheriff Department accompanied MDCH to the home.

Mercury vapor concentrations in homes with no known mercury spills have ranged from 10 to 100 ng/m³, with typical ambient (outside air) concentrations about 10 fold lower (ATSDR 2012).

At Home 1, the Lumex registered 900 ng/m³ upon entry, indicating that a mercury release had occurred (ambient levels were about 5 ng/m³). MDCH proceeded with the screening, working from the presumed uncontaminated area of the house toward the student's bedroom, which was the most likely area to be affected. The following table shows some of the readings obtained.

Table 2. Mercury vapor readings at Home 1 on March 7, 2012, in Berrien County, Michigan.

Room/area of house	Readings (ng/m³)
Entryway/living room	800-900
Master bedroom	Less than 1,000
Kitchen	1,900-2,800
Student's bedroom	6,200 (breathing zone)
Bed	7,000-9,000
Bedside table, inside drawer	30,000
Under bedside table	9,700
Behind bed	10,000
Under bed	7,000
Top of dresser	7,200
Dresser, middle and bottom drawers	8,600
Dresser, other drawers	6,000
Table by dresser	7,800
Carpet in front of table	20,000-30,000
Sibling's bedroom, next to student's	4,200 (breathing zone similar to floor)
Other bedroom	Less than 1,000
Washing machine, containing student's washed laundry	24,000
Clothes dryer	1,000-2,000
Vacuum cleaner	4,000 (beater bar); 30,000 (bag)

MDCH made the following recommendations to the parent:

1. Bedroom use - The student, as well as the sibling who uses the other affected bedroom, should not use their bedrooms until cleanup was done.
2. Student's bedroom - Remove the carpet and padding from the bedroom and dispose. Dispose of the bedding. Dispose of the clothes in the middle and bottom drawers of the dresser; air out the clothes in the other drawers. Dispose of the bedside table. Wipe down tops of dresser and table with household cleaning solution. Wash the subfloor. Air out the room.
3. Sibling's bedroom - The mercury concentrations in the sibling's bedroom (next to the student's room) suggested that there was carryover from the student's bedroom, not that there had been tracking into the sibling's room. This room should be aired out during and after cleanup of the student's room.
4. Washing machine and dryer – Remove the laundry and discard the items. Run several soap-only loads through the washing machine, to remove the mercury. It is possible that the washing machine may still have to be discarded. MDCH determined the dryer was acceptable to keep.
5. Vacuum cleaner - Make the vacuum cleaner unusable (cut off the cord, place parts in separate trash bags) and discard.
6. Kitchen - Wash down affected kitchen chairs with household cleaning solution. Discard throw rugs.
7. Retest – The parent should contact MDCH when the above actions are completed so that the house can be rescreened and cleanup verified.

MDCH also screened personal objects that had been collected in plastic totes. Based on the readings, MDCH recommended some of the totes' contents be discarded.

The student's parents share custody, and the student had been in the other parent's car that morning. MDCH obtained the other parent's contact information but that person was not available that evening, so MDCH returned to Lansing.

Home 2

MDCH visited the other parent's house ("Home 2") on March 9, 2012. Screening with the Lumex revealed that there were areas of contamination, but not as severe as in Home 1.

Table 3. Mercury vapor readings at Home 2 on March 9, 2012, in Berrien County, Michigan.

Room/area of house	Readings (ng/m³)
Entryway	1,000
Dining room	600
Kitchen	550
Living room	1,300 – 2,700
Student's bedroom	2,400 (breathing zone)
Near floor	4,000 – 6,500
Crack between floor planks	13,000
Sibling's bedroom	1,300 (breathing zone); 1,100 (bed)
Master bedroom	1,300
Washing machine	900
Bag of jeans and shirt	50,000
Vacuum cleaner	1,100 (beater bar); 13,000 (bag)
Cats' paws	1,200 – 2,400
Car	400

MDCH made the following recommendations to the parent:

1. Student's bedroom – Clean between floor planks using shaving cream or liquid soap on a paintbrush (artist's style). Clean planks themselves with shaving cream, scraping up the foam with a playing card or other stiff paper. Then, wash the floor with regular household cleaning solution. Air the room out during and after these steps.
2. Other bedrooms – The mercury concentrations in the other bedrooms appeared to be from mixing. Also, the cats have free access to the entire house and may be tracking contamination. These rooms should be aired out while cleanup steps are carried out in other areas of the house.
3. Washing machine – Contamination of the washer was minimal. No cleanup steps were necessary.
4. Bag of jeans and shirt – These items should be discarded.
5. Vacuum cleaner – The beater bar was not as contaminated as that in the vacuum cleaner at Home 1. The machine may be kept, but remove and dispose of the bag.

6. Cats – If possible, use shampoo containing selenium, such as a dandruff shampoo, to clean the cats and their paws. The selenium will bind to the mercury and remove it from the fur and footpads.
7. Car – Contamination of the car is minimal and not expected to be harmful. No cleanup steps were necessary.
8. Retest – MDCH offered to retest Home 2 during the same visit to retest Home 1.

Home 3

After screening Home 2, MDCH went to another family member’s house (“Home 3”) to screen it with the Lumex.

Table 4. Mercury vapor readings at Home 3 on March 9, 2012 in Berrien County, Michigan.

Room/area of house	Readings (ng/m³)
Kitchen/living/office areas	100 – 400
Bedroom 1	200
Bedroom 2	400
Washing machine	60
Vacuum cleaner	200
Dog’s paws	200

The readings indicated minimal contamination. MDCH concluded that cleanup was not necessary for this house.

During the screening visit, the homeowner gave a container with about one tablespoon (about one half pound) of mercury in it to the local health department sanitarian, who reportedly would deliver it to the county’s household hazardous waste facility.

Follow-Up Activities

Shoe Screening at School

During the cleanup activities, the hazmat company hired by the school conducted screening of the shoes the students had bagged. Only one pair of shoes exceeded the screening level recommended by MDCH (1,000 ng/m³). This pair was bagged and disposed as waste material. For the remaining shoes, the students were allowed to retrieve them the next day.

Post-Cleanup Verification at the School

After the contamination in the affected classroom and the other areas identified by MDCH was addressed, the hazmat company verified the cleanup using the NIOSH 6009 method, which is the test method approved by the EPA. Test results indicated that no levels of mercury could be detected (detection limit of 670 ng/m³; unpublished data, MDCH files).

Biomarker Testing Recommendations

Any exposure to the mercury that the other students and the school staff had was brief and at low levels. Therefore, no health effects would be expected and biomarker testing was not recommended for them.

Based on the information regarding how long the student with the mercury had been in possession of the vial (at least one year), MDCH conferred with Poison Control Center doctors to determine if the student should have biomarker (blood, urine) testing. The medical expert recommended that the student have a 24-hour urine sample tested for mercury content. MDCH relayed that recommendation to the student's parent, who agreed to have the testing done.

Attempts at Return Visit to Homes

MDCH contacted both parents several times after the initial home screenings, requesting access for follow-up indoor air screening with the Lumex, to verify that the mercury contamination had been adequately addressed. Neither parent wanted their homes rescreened. MDCH does not have enforcement authority to ensure that the mercury contamination has been removed.

Social Media Concerns

During the response to the spill at the school, MDCH learned that the Facebook® pages of the student and the student's parent were receiving hate mail related to the mercury release. While it is not within a public health agency's purview to address potential cyber-bullying, agencies responding to mercury spills, especially those caused by children, should be aware that this phenomenon may occur and alert responsible parties, parents, and guardians to this possibility. In this specific case, the matter was handled by school officials and the sheriff department.

Outreach and Education

Besides providing resource materials to the school and agencies responding to the mercury release at the high school, MDCH brought about 100 copies of their "Is Your Home Mercury Free?" brochure¹ to the school for distribution to parents.

During the response to the mercury release, media coverage showed interviews with students and parents. These interviews, along with comments following on-line news reports, suggested that the public did not understand the hazards of mercury. MDCH issued a press release on March 11, 2011² to help inform people about mercury's toxicity and how to clean up a mercury spill.

Another Michigan school experienced a mercury spill at about the same time that the release and response occurred in Berrien County. MDCH edited the press release mentioned above (Appendix A) and asked the Michigan Department of Education to distribute it to school personnel statewide.

Discussion

General Concerns about Mercury Exposure

The primary route of exposure to elemental mercury is inhalation of its colorless and odorless vapors. Elemental mercury that is swallowed is poorly absorbed through the intestinal walls. Dermal (skin) contact is considered a minor exposure route (ATSDR 1999, 2012).

¹ http://www.michigan.gov/documents/mdch/Is_Your_Home_Mercury_Free_Brochure_376326_7.pdf

² <http://www.michigan.gov/mdch/0,4612,7-132-8347-273452--,00.html>

The human organ or organ system most sensitive to all forms of mercury differs by age of the person exposed. For a fetus or young child, the most sensitive endpoint is considered to be the developing central nervous system (CNS). Women who are confirmed or suspected to be pregnant are also considered a sensitive population, to protect the fetus. No evidence indicates that persons with deteriorating nervous systems, such as Parkinson's or Alzheimer's patients, are more susceptible to the effects of mercury than healthier adults; however, a person's underlying conditions may mask the more subtle effects of mercury (ATSDR 1999, 2012).

Inorganic forms of mercury are excreted almost exclusively through the kidneys, making that organ the next most sensitive to mercury. The age at which young children become less sensitive to the CNS effects of mercury is unclear, but the concern is usually for pre-school children. Individuals that have matured beyond this window of greater vulnerability may experience effects on the kidneys before the effects on the CNS become evident. Generally speaking, the concentration of mercury that may pose a CNS threat to the young is less than the concentration that could affect the kidneys in older children or adults under the same conditions of exposure (ATSDR 1999, 2012).

ATSDR derives exposure-length-specific Minimal Risk Levels (MRLs) for hazardous chemicals. MRLs are concentrations below which harm to one's health would not be expected. The ATSDR chronic (exposure greater than a year) MRL for inhaled mercury is based on an occupational study in which exposed workers developed hand tremors. The lowest concentration causing these effects was 26,000 ng/m³. Applying safety factors to account for human variability and the fact that a no-effect level could not be determined, and adjusting from a workday to continuous exposure, results in a chronic MRL for mercury vapor of 200 ng/m³ (ATSDR 1999). Exceeding an MRL does not automatically imply that harm will result, just that the risk of harm is increased. Further evaluation of the situation is necessary in such cases.

ATSDR guidance states that cleaning up a residential mercury spill so that indoor air levels do not exceed 1,000 ng/m³ is sufficient to protect the health of the occupants of the house. Note that "cleanup" means that all visible sources of mercury have been removed. Removing those sources, as well as ventilating the house to remove residual vapors, allows mercury indoor air concentrations to return to pre-spill levels, which should be less than the MRL (ATSDR 2012).

Conclusions

Upon learning of the mercury release in the school, but not having mercury vapor concentration data, MDCH determined that the situation posed an urgent public health hazard and required immediate action to prevent or stop any exposure.

Once the indoor air concentrations of mercury at the school were known, MDCH determined that, even though mercury contamination was present, the vapors were not expected to cause harm. However, cleanup of the contamination in the school was necessary.

The student who had brought in the mercury had heavily contaminated clothing and belongings. The contamination posed a health threat to the student and the student's family members. Further investigation of the homes indicated varying levels of contamination. While Home 3 did not pose a health threat, Homes 1 and 2 needed to be addressed. MDCH does not know whether

the parents followed the recommendations for cleanup or, if they did follow the cleanup steps, how effective their efforts were.

Recommendations

- ❖ Provide the parents of the student who brought the mercury to school more information about mercury and encourage them to have their homes rescreened for contamination.
- ❖ Conduct new or improve current efforts of public outreach and education, using various means of communication (fact sheets, YouTube® videos, social media, public service announcements), to increase awareness of mercury's toxicity.
- ❖ Encourage local agencies (county health departments, hazmat teams) to take mercury spill-response training and to develop partnerships with sister agencies so that a real-time mercury vapor analyzer is readily available if a mercury spill occurs in their jurisdiction.
- ❖ When a spill occurs, make agencies aware of the possibility of threats against those who caused the spill so that proactive steps can be taken.

Public Health Action Plan

- MDCH has called the parents and sent each a letter, encouraging them to take advantage of the free screening, to ensure that their homes are no longer contaminated with mercury.
- MDCH, through a Mercury Outreach Project grant, is updating its mercury fact sheets and working with Michigan State University to develop several videos and public service announcements, with an expected completion date of February 2013. As part of this grant, MDCH also is working with the Michigan Department of Education (MDE) to develop materials for educators, administrators, and building management to recognize mercury and manage it safely.
- MDCH conducts two mercury spill-response training workshops each year in the state and recently provided a half-day “refresher” course at the Michigan Environmental Health Association’s Annual Education Conference³. The Michigan Emergency Management and Homeland Security Training Center also offers a mercury spill-response training session each year⁴. MDCH’s trainings provide continuing-education contact hours for sanitarians and fire inspectors.
- MDCH will incorporate discussion of potential cyber-bullying into its workshops and has informed MDE about the Facebook® threats that occurred during this investigation.

MDCH will remain available as needed for future consultation at this site. If the parents allow rescreening of their homes, MDCH will provide an update to this report.

If any citizen has additional information or health concerns regarding this health consultation, please contact MDCH’s Division of Environmental Health at 1-800-648-6942.

³ <http://www.cvent.com/events/2012-annual-education-conference/custom-21-c0eece30cda4425a9629830738c9f09e.aspx>

⁴ http://www.michigan.gov/documents/msp/Final82809_09-10_training_center_training_291086_7.pdf

Preparers of Report

This Health Consultation was prepared by the Michigan Department of Community Health under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). Editorial review was completed by the cooperative agreement partner.

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Appendix A: Insert prepared for Michigan Department of Education newsletter

Mercury Hazards and Spill Response Reminder

LANSING – Earlier this month, the Michigan Department of Community Health (MDCH) was notified of two mercury spills that occurred in Michigan schools. Although Michigan State Law (PA 376 of 2000) required that all K-12 schools rid their buildings of mercury by December 31, 2004, mercury spills continue to happen in schools. While this month's incidents were addressed and student and staff safety ensured, MDCH would like to remind school personnel about the dangers of mercury poisoning.

Elemental (liquid) mercury gives off vapors that cannot be seen, but can be inhaled. Breathing in too much mercury vapor over a long period of time can be harmful to people's central nervous system and kidneys. Children and fetuses are most at risk of the harmful effects of breathing mercury vapors.

Symptoms of too much exposure to mercury vapor include memory loss, irritability, tremors, and increases in blood pressure and heart rate. Children who are exposed to mercury vapor may also develop learning disabilities and behavioral disorders. While many adults may have played with mercury as a child, it is now known that no one should handle the liquid metal or breathe mercury vapor.

Many items may contain mercury, such as fever and lab thermometers and switches on commercial equipment. Mercury may be released when these items are broken. Fluorescent light bulbs also contain a very small amount of mercury but usually are not a problem if broken. Some school spills are caused by students who have brought mercury to school.

Mercury can stick to shoes, carpet, and the inside of vacuum cleaners. Therefore, MDCH recommends responding to a mercury spill quickly using the right methods:

1. Do not vacuum or sweep up the spill.
2. Get all people out of the room.
3. Cover the spill area with plastic.
4. Close all air returns, vents, and registers in the room.
5. Open all windows and doors which lead outside.
6. Close all doors to other rooms that lead to the rest of the school.
7. Call your health department. From there, you can find out if the spill can be cleaned up by school personnel or if you'll require assistance.

The best way to avoid a mercury spill is to get mercury out of schools before a spill happens. Household Hazardous Waste and Clean Sweep sites are good places to recycle mercury.

More information about mercury, spill response, and where to recycle mercury can be found at www.michigan.gov/mercury or call MDCH at 1-800-648-6942.