EPA Emergency Response Site Update

Helena Mercury Release

Operations Period 08
June 8-10, 2024

Safety Message

Mercury is a contaminant that is toxic to humans at very low levels and is easily spread.

Both the bathhouse and the garage have been cleared for use by guests and employees of the retreat.

Two roll-offs with secure lids containing contaminated debris occupy the southern portion of the parking lot. The liquid mercury that was recovered is secure in a locked metal box. The roll-offs and mercury will be removed once disposal vendors have been procured (3-4 weeks for the roll-offs, 1-2 months for the mercury).

Website

Site Description

On May 30, 2024, an employee picked up an unlabeled bottle while cleaning out a detached garage at a yoga retreat center. The bottle was heavier than expected and slipped from his hand. The bottle hit a work bench, shattered, and the mercury was released to the garage (the response team has recovered approximately 750mL of liquid mercury). The employee left the garage, bagged their contaminated clothing just outside the door, walked to a nearby bathhouse and rinsed themselves in a common shower used by guests. Staff at the retreat center closed and isolated the garage before calling the National Response Center.

An EPA response team arrived on May 31, 2024, and initiated a response effort. The team demobilized on June 10, 2024.

Site Objectives

- Safety of employees of the retreat center, its guests and response personnel is top priority (**always**).
- Clear the bathhouse for use (**complete**).
- Collect recoverable mercury (**complete**).
- Clear the garage for use (**complete**).
- Dispose of contaminated debris and recovered mercury.
- Provide timely + accurate communication of response information to public and stakeholders (**always**).

Operations Period Objectives

1. Maintain exclusion, contaminant reduction and support zones.
2. Complete effort in the garage.
3. Complete clearance air monitoring.
3. Demobilize response resources.

Operations Period Accomplishments

EPA's response team completed 5 cycles of heating/venting of the garage. During each cycle, the interior of the garage was heated to approximately 90 degrees fahrenheit. That temperature was held for roughly 1 hour before being vented using open doors, windows and fans for 15 minutes. Air monitoring readings taken after this process showed improvement but a hot spot was detected at the window near the location of the release. The entire window was removed, and the crew discovered approximately 15 milliliters of liquid mercury

trapped between the bottom window jam and the wood framing. This mercury was collected, and the window was added to the contaminated debris waste stream.

No beads of mercury were discovered in the soil outside the overhead garage door. To prevent any undetected microbeads that may exist from being tracked elsewhere, the soil in this area was carefully heated with a propane weed burner and covered with 4 inches of fresh dirt.

The cracks in the garage floor were sealed with caulk. The crew paid particular attention to the void beneath a section of the garage's base plate which was exposed when the plywood behind the work bench was removed. This section of the base plate remains a hot spot but cannot be removed because it is structural. The exposed base plate and the floor of the garage were painted with a concrete sealer.

The door to the electrical service panel which was behind the work bench was removed and replaced with cardboard. Power to the garage was switched off at the garage's meter. Power should not be switched back on until the service panels door has been replaced.

EPA's response team initiated an 8-hour clearance run using sensitive Lumex instrumentation. The clearance run measured levels of airborne mercury in the breathing zone of the garage over a continuous period of at least 8 hours. Over this time period, mercury levels increased from 82 nanograms per cubic meter (ng/m^3) and were leveling off at less than 2000 ng/m^3 when the clearance run was stopped. Given the temperature in the building dropped over the course of the run, it is probable that there are times during the day when mercury levels in the garage are higher. EPA's response team can locate no other sources of liquid mercury and cannot remove the baseplate. It will take time and ventilation but mercury levels in the building should continue to decrease over the summer months.

There are no standards for the clearance of commercial structures that are only occasionally used such as the garage. The standard for airborne mercury in a commercial space which is occupied 8 hours and 40 hours a week is 3000 ng/m^3. Based on this information and the data collected during the clearance run, the garage were cleared for use by staff of the retreat center. The exclusion, contaminant reduction and work zones were broken down and the response team demobilized from the Site.

Removing window with mercury trapped under bottom jam.

Clearing residual mercury from soil outside garage door.

Beginning to seal floor of garage.