

United States Environmental Protection Agency
Region III
POLLUTION REPORT

Date: Monday, October 1, 2007

From: Marjorie Easton

Subject: Mercury ER - Final POLREP

Clendenin Mercury ER

503 Maywood Ave., Clendenin, WV

Latitude: 38.4903100

Longitude: -81.3388000

POLREP No.: 1

Reporting Period: March 31, 2007 - May 7, 2007

Start Date: 3/31/2007

Mob Date: 3/31/2007

Demob Date: 5/8/2007

Completion Date: 5/7/2007

CERCLIS ID #:

RCRIS ID #:

Site #:

D.O. #:

Response Authority: CERCLA

Response Type: Emergency

NPL Status:

Incident Category:

Contract #

Site Description

On March 31, 2007, OSC Easton received a call from the National Response Center (NRC Report # 830912) regarding a mercury spill at Clendenin Elementary School in Clendenin, West Virginia. The report stated that a student had brought mercury into the school. Four 1 pound vials of mercury had recently been stolen from a local dentist office. Mercury was found on the front steps of the school, the pavement, and in the students desk. The Kanawha County School representative, Mr. Hollandsworth, requested EPA's assistance. West Virginia Department of Environmental Protection (WVDEP) was on scene. On Saturday, March 31, 2007, OSC Easton and two START members mobilized to Clendenin, WV. A meeting was held at the school with the EPA, Kanawha-Charleston Health Department, Kanawha County Schools, WVDEP, and START.

Kanawha County schools had a contractor onsite working on cleaning up the spilled mercury from the school, and WVDEP had crews cleaning up mercury from various areas throughout the town.

Current Activities

Once on scene, Kanawha-Charleston Health Department (KCHD) requested EPA's assistance in screening the homes of approximately 15 students who were thought to have come in contact with the mercury.

On Sunday, April 1, 2007, START utilized Lumex mercury vapor analyzer's (MVA) to monitor the homes of 5 students. The address, the student's name, a GPS reading, and a photograph of each home was recorded. The mercury vapor readings from throughout the home were also recorded in a field logbook. START focused on the shoes, backpacks, clothes, student's bedrooms, high traffic areas, sink drains, and laundry rooms (i.e. any area or item suspected to have come in contact with the mercury vapors). On Sunday, the cleanup contractor at the school verified that the mercury had been removed from the school, and that it was safe to reopen on Monday. Kanawha-Charleston Health Department requested EPA to assist in screening the belongings, primarily shoes and backpacks, of the fourth and fifth grade students and their siblings as they arrived to school the next day. The mercury had been spilled in one of the classrooms that the fourth and fifth graders had been in. During the home screenings, elevated levels of mercury vapor had been detected, but only 5 of the 15 desired homes had been screened yet. The screening at the school was set up in an attempt to catch any potential elevated levels of mercury before it could be spread throughout the recently remediated school.

On Monday, April 2, 2007, EPA set up an air monitoring station in the school to ensure that mercury contamination was not brought back into the school. The backpacks and shoes of the students were checked by START by placing each into a plastic garbage bag and utilizing the Lumex MVA to check the airspace in the bag. If the mercury vapor value was above the predetermined action level then the item was temporarily set aside for re-examination. A conservative action level of 1 ug/m3 of mercury had been set by KCHD after consultation with EPA. If the value was below the action level then the item was given back to the student. Initially screening was only planned for the fourth and fifth graders, but eventually the

entire school population was screened. Screening at the school was scheduled to continue for the next several days, so EPA increased the number of START personnel from 2 to 5. START continued to screen children at the school and also at the homes of students who had either come in contact with the mercury or who during the school screening had elevated readings on their shoes or backpacks. The clothing items of approximately 300 people (students, faculty, town residents) were screened at the school, while 20 (homes, school buses, commercial buildings) were screened.

On April 3, 2007, a public meeting was held at the local community center. Kanawha-Charleston Health Department, EPA, WVDEP, local politicians, and local residents attended the meeting.

KCHD requested EPA to assist in collection of air samples from the school to verify that the elevated mercury vapors were not present in the school. On April 11, 2007, START collected 9 (including 1 co-located) air samples at the school on April 11, 2007. In addition 4 (including 1 co-located) air samples were collected from various buildings throughout the town to measure background readings of mercury. The air samples were collected following NIOSH method 6009. SKC and Gillian air sampling pumps were set at a flow rate of approximately 0.20 L/minute for a duration of at least 8 hours. Low flow adapters were used to maintain a steady constant flow. A SKC Carulite (HYDRAR) 500 mg sorbent tube was used for each air sample. Two air samples plus a co-located sample were placed in the affected classroom where the spill occurred. One sample was placed in the adjacent classroom which was only separated by a fabric folding wall. One was positioned in the hallway outside the classroom where the spill occurred. One was placed in Room 108, and two were placed in the cafeteria. Four background air samples were collected (one from the senior citizen center, one from the Smoke house (Community Center), and one plus a collocated sample from the local post office. A total of 5 media blanks were sent in for analysis as well for QA/QC purposes. All samples were set at breathing height for elementary school children and all samples were analyzed for mercury. The sample results indicated that no mercury vapors were detected above the sample quantitation limit. Sample quantitation limits varied from sample to sample due to differences of air volume for each sample. The low and high sample quantitation limits were 0.291 ug/m3 and 0.335 ug/m3 respectively. NIOSH Recommended Exposure Limit (REL) for mercury is a Time Weighted Average (TWA) of 50 ug/m3.

On May 7, 2007, as requested by KCHD, EPA provided two START members to perform mercury monitoring on previously contaminated items which had been detected and set aside during the initial school screening. START arrived at the school, met with the school principal, and began to set up monitoring operations outside behind the school. START allowed all personal items to sit out in the sun on plastic sheeting to allow mercury vapors to volatilize off. A total of 63 items were monitored of which only 15 items were above the action level. The items which were below the action level were given back to the school, and the items which were above the action level were placed in a small trailer and a recommendation was given to the school principal that they be disposed of. The school principal inquired about START performing air monitoring in specific areas of the school. START consulted and received approval from the OSC to perform air monitoring in the school. START performed the school monitoring at the end of day, when all students and faculty were gone for the day. All of the areas monitored inside the school had readings of 0.0 ug/m3 of mercury vapor.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
Intramural Costs				
Total Site Costs	\$0.00	\$0.00	\$0.00	0.00%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.