

United States Environmental Protection Agency
Region IV
POLLUTION REPORT

Date: Saturday, November 11, 2006

From: Steve Spurlin

Subject: Initial Polrep

Calloway Middle School Hg Spill
2112 College Farm Rd, Murray, KY
Latitude: 36.6194000
Longitude: -88.3428000

POLREP No.:	1	Site #:	A4NP
Reporting Period:	11/6/2006-11/11/2006	D.O. #:	
Start Date:	11/6/2006	Response Authority:	CERCLA
Mob Date:	11/6/2006	Response Type:	Emergency
Demob Date:		NPL Status:	Non NPL
Completion Date:		Incident Category:	Removal Action
CERCLIS ID #:		Contract #	
RCRIS ID #:			

Site Description

On 11/5/06, the Kentucky Department for Environmental Protection (KYDEP) notified the EPA Region 4 Emergency Response and Removal Branch (ERRB) of a mercury release at the Calloway Middle School in Murray, KY. A detailed NRC Report was filed by the Calloway County Emergency Management Agency (NRC 817228).

The incident, which was reported to the Kentucky Poison Control Center on 11/4/06, originated when a thirteen year old female student brought a small vial containing approximately 1-1.5 oz. of elemental mercury to onto a school bus on 10/30/06. From 10/30/06 to 11/3/06, the mercury was transferred among 13 or more students, while attending class. The incident was confirmed by Calloway County Emergency Management Agency, Purchase District Health Department, and KYDEP on 11/4/06 @2230 hrs., following confirmation of elevated mercury vapor readings inside the home where the mercury originally was stored, and on a school bus. After learning of the mercury release, the Calloway County School System was shut down on 11/5/06, at the recommendation of the Purchase District Health Department. On 11/5/2006, EPA OSC Smith and the Region 4 Superfund Technical Assessment and Response Team (START) were dispatched to oversee cleanup activities.

Current Activities

From 11/6/06 through 11/11/06, assessment and cleanup activities were conducted at the school and over 50 offsite locations where mercury was tracked throughout the community. Details are as follows:

- On 11/6/06, the school system retained the services of CMC, Inc. to remediate residual mercury contamination inside the middle school and the school buses. Initial readings taken with a Lumex analyzer on 11/6/06 disclosed the presence of mercury vapor concentrations inside the building exceeding 50,000 ng/m3. EPA Region 4 and the Kentucky Department for Public Health have established guidelines where mercury vapor concentrations inside schools may not exceed 1,000 ng/m3. From 11/6/06 through 11/11/06, 6 classrooms underwent extensive cleanup, and on 11/11/06, EPA recommended lifting all restrictions on access to the middle school, as average reading in the breathing zone were below the 1,000 ng/m3 standard. School sessions, which re-commenced on a limited basis on 11/09/06, are expected to resume on a normal basis on 11/13/06.

- Because the incident went unreported for 7 days, the spread of mercury contamination throughout the community was extensive. Leads on the likely places where assessments were needed were provided by the Health Department to EPA and KYDEP for followup. The leads were generated through student interviews and through a shoe screening program operated by EPA from 11/7/06 through 11/10/06. During this period, nearly 1,000 articles including shoes, clothing, backpacks, etc. were bagged and tested at the school field house. Approximately 5 % of the articles tested at greater than 10,000 ng/m3 and were secured for proper disposal.

- At the residence where the original 1-1.5 oz. source of mercury was stored, mercury vapor concentrations ranged from 5,690 ng/m³-12,100 ng/m³. Numerous readings taken at the surfaces of porous materials including carpeting, mattresses, furniture, and articles of clothing indicate that mercury vapors have saturated these items.
- Of the total number of offsite locations which were assessed, two other residences were flagged as having carpeting and other furnishings which were recommended to be removed, due to elevated mercury vapor concentrations inside the homes. While most all of the remaining 48 sites had detectable amounts of mercury contamination, none had levels exceeding EPA's 1,000 ng/m³ mercury vapor concentrations in the breathing zone.
- At least 5 residents denied EPA and or KYDEP access for testing. These cases were turned over to the Health Department for followup.

Key Issues

The residence where the incident originated will require a cleanup in order to mitigate the release of mercury to the environment. EPA has requested that the Purchase District Health Department review EPA's findings and concur with EPA's recommendations regarding this residence by 11/16/06. In the interim, EPA will consult with the Kentucky Department for Environmental Protection regarding assignment of the lead agency role with respect to cleanup of the residence.

response.epa.gov/CallowayMSMercury