

United States Environmental Protection Agency
Region IV
POLLUTION REPORT

Date: Monday, January 8, 2007

From: Steve Spurlin

Subject: Final POLREP

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

POLREP No.:	2	Site #:	A4NP
Reporting Period:		D.O. #:	0204-F4-0069
Start Date:	11/6/2006	Response Authority:	CERCLA
Mob Date:	11/6/2006	Response Type:	Emergency
Demob Date:	12/1/2006	NPL Status:	Non NPL
Completion Date:	12/1/2006	Incident Category:	Removal Action
CERCLIS ID #:	KYN000409987	Contract #	68-S4-02-04
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. On 11/6/06, the school system retained the services of CMC Inc to remediate residual mercury contamination inside the middle school and school buses. From 11/6-11/11, 6 classrooms underwent cleanup, and on 11/11/06, EPA recommended lifting restrictions on access to the school. School re-commenced on a limited basis on 11/9, and resumed on a normal basis on 11/13/06.

From 11/7 through 11/10, nearly 1,000 articles including shoes, clothing, backpacks, etc. were bagged and tested at the school field house. Approximately 5% of the articles tested greater than 10,000 ng/m3 and were secured for disposal by the school.

At the Herring residence where the original mercury source was stored, vapor concentrations ranged from 980 ng/m3 to 50,000 ng/m3. Numerous readings taken at the surface of porous materials indicated that mercury had saturated the items. The juvenile who lived at the residence voluntarily relocated to another home, and the source bedroom was isolated and vented by the owner during which time EPA sought concurrence from the Health Department for a removal action.

By letter dated 11/14/06, the Health Department concurred with EPA's recommendation to clean the Herring residence.

Planned Removal Actions

The owner was notified by EPA and the Health Department that a cleanup of the home was needed. The owner indicated an inability to financially undertake the necessary actions.

On 11/29/06, EPA initiated an emergency removal action to mitigate mercury contamination in the Herring home. Readings collected at the initiation of the removal indicated that isolation and ventilation of the source bedroom had decreased the levels in the home allowing the removal to focus on the source bedroom. Actions consisted of removing the carpet from the bedroom; removal and decontamination of furniture/items from the bedroom; disposal of a small number of bedroom items exhibiting high mercury levels; and verification monitoring with the Lumex mercury analyzer. The residents were temporarily re-located to a local hotel during the removal.

After completion of the decontamination activities on 11/30, EPA monitoring indicated mercury levels were below EPA's level of concern of 1000 ng/m³. Monitoring indicated an average mercury vapor level of 515 ng/m³ in the breathing zone of the source bedroom, the worst case area. Additional readings collected on 12/1 indicated the levels to have reduced further in the bedroom to less than 100 ng/m³. EPA and EPA contractors demobed on 12/1, and the residents were advised that they could return to their home.

EPA has provided written notice to the residents, KYDEP, and the Purchase District Health Department, regarding the mercury levels and completion of the removal action.

response.epa.gov/CallowayMSMercury