

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Butler Road Mercury Spill - Removal Polrep
Final Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: POLREP #3
Final
Butler Road Mercury Spill
B4A6
Hopkinsville, KY
Latitude: 36.8785278 Longitude: -87.4346111

To: Matt Taylor, Section Chief, Emergency Response, USEPA R4 ERRB

From: Benjamin Franco, FOSC

Date: 1/12/2011

Reporting Period:

1. Introduction

1.1 Background

Site Number:	B4A6	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	CERCLA	Response Type:	Emergency
Response Lead:	EPA	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	6/24/2010	Start Date:	6/24/2010
Demob Date:	7/8/2010	Completion Date:	1/18/2010
CERCLIS ID:	KYN000410565	RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

Accidental Release of mercury into the environment.

1.1.2 Site Description

OSC Art Smith and OSC Ben Franco were mobilized at the request of the KDEP to respond to a release of an unknown amount of elemental mercury at a residence in Hopkinsville, Christian County, Kentucky. The mercury had been stored in a barn. When the owner passed away, a person hired to clean out the barn accidentally spilled the mercury onto the lawn and not knowing the hazards it presented, tracked it into his home, his vehicle, located about 9 miles away.

1.1.2.1 Location

The site of the original spill location is from a barn at a residence along Butler Road, east of Hopkinsville at N 36.878716
W 87.434716.

The site of the residence where the mercury was tracked to is on Madisonville Road, north of Hopkinsville at N 36.925466
W 87.489216

1.1.2.2 Description of Threat

OSC Art Smith and OSC Ben Franco were mobilized at the request of the KDEP to respond to a release of fifteen pounds of elemental mercury at a residence. The mercury had been stored in a barn at the residence. When the owner passed away, a person hired to clean out the barn accidentally spilled the mercury onto the lawn and not knowing the hazards it presented, tracked it into his home, and his vehicle, at a location approximately 9 miles away.

Mercury was discovered at concentrations in air inside the Madisonville Rd. residence which represents a threat to human health.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

KYDEP used a Lumex mercury vapor analyzer to identify an area outside of the barn that had found very high levels of mercury vapors in soil outside the barn area. In addition, KYDEP discovered that a house and a vehicle on Madisonville Rd had mercury vapor values above health based levels.

On April 25, 2010, EPA START conducted air monitoring using a Lumex mercury vapor analyzer and recorded the following readings:

Location	Breathing Zone	Floor
	nanograms/m3	
Living Room	1,800	25,000
Bedroom 1	1,500	4,000
Bedroom 2	2,800	12,000
Laundry Room	2,600	22,000
Bathroom	2,500	22,000
Kitchen	2,200	8,000

All of these values were above the 1,000 nanograms/m3 EPA Region 4's removal action level.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

EPA was notified of the release on 06/23/10 by KDEP, who had responded the previous day to a complaint from a resident. Upon entering the barn where the spill occurred, it was evident that the spill had migrated into the environment, requiring the services of a cleanup contractor. KDEP retained CMC, Inc. of Nicholasville, KY to respond and excavate soil contaminated with elemental mercury.

KDEP subsequently interviewed the person who had been hired to remove items from the barn. This individual acknowledged that the spill had occurred sometime earlier in June 2010, and that the mercury container was transported to a local scrapyard for recycling. KDEP visited the home of this individual, and found the ambient air immediately inside the residence exceeded 10 ug/m3 of mercury vapor. Unsure of what else that he might encounter he notified the KDEP Duty Officer and requested assistance from EPA Region 4 for additional investigative and mitigative actions.

2.1.2 Response Actions to Date

EPA OSCs Smith and Franco mobilized to the site on June 24th. OSC Smith arrived around 1100 hrs. CDT. At that time, EPA learned that the missing bottle of mercury had not been accepted at either of the two scrapyards previously cited by the individual responsible for the spill. EPA also accepted responsibility for CMC's continued cleanup services under a verbal task order issued in the amount of \$90,000.

Shortly after arriving in Hopkinsville, OSC Smith met with representatives of the Christian County Emergency Management Agency (CCEMA), Christian County Health Department (CCHD), and the Christian County Sheriff's Office (CCSO). CCHD was seeking Orders to vacate the residence where mercury was discovered by KDEP. CCSO identified that the head of the household at that location was wanted for criminal activities, and that CCSO planned to interrogate that individual as to the whereabouts of the missing mercury container.

Once OSC Franco arrived onscene, all parties went to the Madisonville Rd. location to request official access to the residence to further investigate the extent of mercury contamination inside the home. CCHD served a Notice to Vacate to the property owner and by 1900 hrs. CDT on June 24th, official written access was obtained.

On June 25, 2010, EPA's START contractor conducted an assessment for mercury vapors of a home and a vehicle located on Madisonville Rd and reported mercury levels that were above EPA Region 4's removal action levels. OSC Smith made the determination that the mercury levels presented a threat to the children staying in the home and proceeded to conduct a removal action.

During the June 25th through June 30th period, EPA's ERRS contractor removed personal items from inside the home, removed the carpet and treated the wood floors with mercury absorbing solution. While conducting the removal action, START found mercury beads under the home's crawl space and on the ground near the front porch. A portion of the bathroom floor was removed in order to get to the crawl space. ERRS removed the beads with a mercury vacuum cleaner and removed contaminated soil from the crawl space. The mercury found at the front of the house was recovered using a siphon bottle and a 3 inch layer of contaminated soil was removed from the impacted area.

EPA's START contractor screened the personal items for mercury vapors and items containing elevated levels were segregated for later disposal. All items to be disposed of were photographed and entered on a spread sheet. Confirmatory soil samples were taken in excavated areas at the Butler Rd and Madisonville Rd residences and were sent for laboratory analysis. The soil results were below EPA Region 4's Regional Screening Levels and the areas were restored by ERRS contractor with new top soil and gravel.

On July 1st, START contractor conducted air monitoring over an eight hour period using a Lumex mercury vapor analyzer and determined that the air inside the residence on Madisonville Rd was below our clean up goal of 1,000 nanograms/m3. The temperature ranged from 75 to 82 degrees Fahrenheit. The house's windows and doors were closed and no forced ventilation occurred during the clearance test. The following are the averages:

Location	Averages
	nanograms/m3
Living Room	553
Bedroom 1	204

Bedroom 2 254
 Bathroom 381
 Kitchen 402

We did not conduct clearance testing in the laundry room because it was considered part of the living room and there were no partitions. Based on these results, the house met EPA's clean up goals. These results were forwarded to the Christian County Health Department with the recommendation to allow the reoccupation of the residence.

On July 2, 2010, Christian County Health Department sent a letter to the owner of the Madisonville Rd house lifting the vacate order and allowing the residents to enter their home.

On July 6, 2010 ERRS contractor completed restoration activities on the Madisonville Rd home.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

The potential responsible parties are most likely the owners of the Butler Rd. and Madisonville Rd. residences.

2.1.4 Progress Metrics (Estimated)

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>
Mercury contaminated soil	Soil (2 roll off boxes)	13.9 Tons	001/002	Non-Haz	Landfill
Elemental Mercury	Product	21 lbs	000244345JJK	Retort	Recycled
55 Gallon Drums	Contaminated Material	5	000244345JJK	Retort	

2.2 Planning Section

2.2.1 Anticipated Activities

All waste was disposed of and site activities have concluded.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	\$99,500.00	\$89,012.61	\$10,487.39	10.54%
START	\$50,000.00	\$20,000.00	\$30,000.00	60.00%
Intramural Costs				
USEPA - Direct	\$0.00	\$5,000.00	(\$5,000.00)	0.00%
Total Site Costs				
	\$149,500.00	\$114,012.61	\$35,487.39	23.74%

* 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.

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

No information available at this time.

4. Personnel On Site

No information available at this time.

5. Definition of Terms

No information available at this time.

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.

POLREP #3 Last Updated 2/2/2012