United States Environmental Protection Agency
Region VII
POLLUTION REPORT

Date: Thursday, December 13, 2007
From: Heath Smith

Subject: FIRST AND FINAL POLREP
Mercury RAY Federal Building
1222 Spruce Street, St. Louis, MO
Latitude: 38.6242500
Longitude: -90.2004180

POLREP No.:	1	**Site #:**	07ZZ
Reporting Period:	May 2, 2007 through May 7, 2007	**D.O. #:**	
Start Date:	5/2/2007	**Response Authority:**	CERCLA
Mob Date:		**Response Type:**	Emergency
Demob Date:		**NPL Status:**	Non NPL
Completion Date:	5/3/2007	**Incident Category:**	Removal Action
CERCLIS ID #:	MON000705782	**Contract #**	
RCRIS ID #:			

Site Description
On May 2, 2007, the Missouri Department of Natural Resources (MDNR) requested that the U.S. Environmental Protection Agency (EPA) contact the General Services Administration (GSA) to inquire about a release of elemental mercury from a mercuric sphygmomanometer (blood pressure cuff) that had occurred in the fitness center of the RAY Federal Building in St. Louis, Missouri. MDNR was notified by the St. Louis City Health Department that a release of mercury occurred during the afternoon of May 1, 2007, and the St. Louis Fire Department conducted a simple cleanup. EPA maintains a Lumex® model RA915+ portable mercury vapor analyzer (MVA) in the St. Louis Metropolitan area with the ability perform mercury vapor analysis. MDNR requested the EPA assess the adequacy of the cleanup.

Current Activities
GSA granted access for EPA to perform assessment activities at approximately 1345 hours on May 2, 2007. EPA and MDNR responded.

Background concentrations of mercury vapors taken prior to EPA entering the RAY Federal Building on May 2 were approximately 80 nanograms per cubic meter (ng/m3). Light rain was falling at the time the background sample was taken and may have affected the background readings.

An initial reading inside the fitness center was taken at the south entrance. Mercury vapor levels were recorded to be approximately 362 ng/m3 at that location.

The spill area was centrally located on the west side of the fitness center. A blood pressure cuff mounted to the wall about 3 to 4 feet from the floor was the spill source. The mounting bracket identifying the former location of the blood pressure cuff was still fastened to the wall at the time of the inspection. An equipment cart loaded with a broken fitness machine was located directly under the mounting bracket. The floor of the fitness center was a nonporous, permanently affixed rubber mat with a pre-molded traction pattern.

Mercury vapor levels were 866 ng/m3; 1,500 ng/m3; and 1,183 ng/m3 on and around the equipment cart. A mercury vapor reading of 22,000 ng/m3 was recorded approximately one inch off of the floor directly above the spill area near the wall.

EPA and MDNR conducted a visual inspection of the area. Small “micro-beads” of mercury were visible on the floor, equipment cart, and against the wall.

Due to the elevated levels of mercury vapors and the identification of mercury beads on the floor and equipment cart, EPA recommended to that additional clean-up activities were needed. GSA agreed and asked the EPA to assist.

EPA utilized a Nikro Industries model MV00688-SS mercury recovery vacuum to physically remove mercury remaining on the floor and cart. EPA then moved the cart outside so that any remaining mercury could be ventilated. EPA then scrubbed the floor of the fitness center with HgX®, a mercury decontamination compound. The MVA indicated mercury was present behind the baseboard at the floor directly under the former location of the blood pressure cuff. EPA removed and disposed of the baseboard and vacuumed the exposed area.

At approximately 1700 hours the Heating, Ventilation and Air-Conditioning (HVAC) system was shut down for the evening.

On the morning of May 3, 2007, the EPA returned to determine if any sources of mercury remained and if vapors were adequately vented. MVA readings taken during the follow-up visit are represented in the following paragraph:

Area Sampled	Mercury Concentration Recorded
Background (outside bldg in back parking lot)	~450 ng/m3
Hall outside south entrance into fitness center	353 ng/m3
Kiosk near entrance to Occupational Health	362 ng/m3
One inch over the spill location	336 ng/m3
North end of track	332 ng/m3
East side of track	324 ng/m3
South end of track	329 ng/m3
Hall outside east entrance into fitness center	218 ng/m3
Men's locker room	382 ng/m3
Women's locker room	347 ng/m3

Mercury vapor concentrations in the crack at the base of the wall where the baseboard was removed indicated the presence of micro-beads. EPA recommended to GSA that a caulk or sealant be applied to the crack before the baseboard was replaced by GSA.

Planned Removal Actions

Mercury vapor concentrations observed in the fitness center on May 3, 2007, were below EPA emergency response guidelines for cleanup of non-residential structures and indicated all significant source areas of elemental mercury were removed.

No further action regarding this release is planned.

Next Steps

No further steps are required.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
Intramural Costs				

USEPA - Direct (Region, HQ)	$0.00	$2,000.00	($2,000.00)	0.00%
USEPA - InDirect	$0.00	$800.00	($800.00)	0.00%
Total Site Costs	$0.00	$2,800.00	($2,800.00)	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.

response.epa.gov/mercuryraybldg

POLREP #1 Last Updated 12/19/2007