

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Margate Mercury Release - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: POLREP #4
Continuation of Clean-up and Clearance Monitoring
Margate Mercury Release
B4C2
Margate, FL
Latitude: 26.2351389 Longitude: -80.2305556

To:
From: Alyssa Hughes, FOSC
Date: 9/6/2010
Reporting Period: 9/4/2010 2000 hrs to 9/6/2010 2000

1. Introduction

1.1 Background

Site Number:	B4C2	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:	9/1/2010	Start Date:	9/1/2010
Demob Date:		Completion Date:	
CERCLIS ID:		RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

Emergency Response

1.1.2 Site Description

The owner of a property located 3 2-ounce bottles of mercury in a closet in the garage. The mercury reportedly belonged to the previous owner. He opened one of the bottles and spilled the contents onto the driveway. Some neighborhood children walked by and saw the mercury and started to play with it. The owner gave the children one of the bottles. The material was then carried into 4 other houses. Two additional properties were impacted at outside locations only.

1.1.2.1 Location

The residential area is located on flat ground in Margate, Broward County, FL. Margate is located just north of Fort Lauderdale, FL, approximately 40 miles from Miami.

1.1.2.2 Description of Threat

The material known on site is elemental mercury which is a CERCLA hazardous substance. At approximately 70 degrees F it becomes a vapor which can travel through small openings to surrounding apartments and the environment. In its elemental form it may also be tracked on shoes and clothing.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

FDEP Emergency Responder Steve Threet arrived on site on Tuesday, August 31 in order to perform an assessment of potentially impacted areas. FDEP responder reported his findings from the screening of 5 schools, 1 public library, 10 public vehicles, 9 houses and 5 school buses. The screenings in the schools, buses, and library were all well below EPA removal action levels (1,000 ng/m³). The values ranged from 0 to 87 ng/m³. Three of the residential properties exhibited levels of mercury vapor exceeding EPA's Removal Action Level, these residents were temporarily relocated with assistance from the Red Cross.

FDEP response personnel contacted EPA Region 4 Duty Officer to ask for assistance in conducting the

clean-up operations at the three residential properties.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

On 8/28/2010, a resident of Margate, FL, provided bottles of elemental mercury to several neighborhood children to play with. The children reportedly "squirted" each other with the mercury and dropped much of it on the ground outside of the residence; at least one partially filled bottle was reportedly dropped into the nearby canal. Weekend rains washed much of the outdoor mercury off the source location property, but several beads remain visible across the driveway and lawn. Later, the parents of the children discovered what had happened and one or more were taken to the hospital for screening. The local PD and FD responded on 8/30/2010.

EPA TEL coordinated with FLDEP and local PD on 8/30/2010 (FD and Hazmat demobilized by late evening); local responders requested assistance from EPA, having no resources to conduct or oversee cleanup activities, however, FLDEP took the lead on 8/31/2010 and performed an assessment of the affected locations with a mercury vapor analyzer.

2.1.2 Response Actions to Date

The following activities were conducted at each of the properties during the indicated time period.

9/4/10 2000 to 9/5/10 0700

7871 NW 3rd Place - Source

START crew performed clearance monitoring at the property overnight. The mercury vapor levels ranged from 2,700 ng/m³ to 6,700 ng/m³ throughout the house. The highest values were detected in the master bathroom.

7857 NW 3rd Place

START performed clearance monitoring at the property overnight. Mercury vapor levels ranged from 1,700 ng/m³ to 5,700 ng/m³.

OSCs Hughes and Negrón concluded that the properties may have been cross contaminated during mopping operations with Hg Cs-102 during the previous operational period. This issue will be addressed during the next operational period.

9/5/10 0700 to 9/5/10 2000

New HVAC filters were purchased and installed at each of the three properties.

7871 NW 3rd Place - source and 7857 NW 3rd Place

Due to the issues with cross contamination, the crews were directed to purchase enough mop heads to change each mop before every application of Hg Cs-102 and before each rinse with hot water. Two cycles of wash and rinse were performed in both 7871 and 7857. The houses were then opened up for ventilation and the fans were turned on for air exchange. Another clearance will be attempted in both properties tonight.

ERRS scientist continued work on replacing the traps and drains in the bathrooms in both of the residences.

The removal of the driveway was suspended to preclude the interference of dust during clearance monitoring.

141 NW 78th Ave

START performed a screening at the property to determine the results of the 24 hour scrubbing operations. The screening levels ranged from 600 to 2,000 ng/m³ in the breathing zone and 1,000 to 2,400 ng/m³ at the floor level. EPA decided to re-run the scrubber at the property for 12 hours to attempt to remove mercury vapors from the property.

9/5/10 2000 to 9/6/10 0700

7871 NW 3rd Place - source

START performed clearance monitoring at the property overnight. Mercury vapor level averages ranged from 500 ng/m³ to 1,300 ng/m³. The property passed clearance monitoring and efforts will be focused on removal and replacement of the driveway. Final clearance monitoring results can be viewed in the documents section of the website.

7857 NW 3rd Place

Room averages of mercury vapor levels ranged from 1,400 ng/m³ to 8,000 ng/m³ in the bathroom. Remediation techniques will be re-addressed during the next operational period.

9/6/10 0700 to 9/6/10 2000

7871 NW 3rd Place - source

ERRS crews focused efforts on removing the driveway. PM is working to identify a concrete contractor for replacement of the driveway. Margate FD informed Margate building inspector of removal and replacement of driveway to ensure installment according to code regulations. The exposed dirt was screened with the Lumex following removal of the concrete. Values ranged from 1,500 ng/m3 to 45,000 ng/m3. Any areas of dirt exceeding 25,000 ng/m3 were removed and placed in a roll-off container.

7857 NW 3rd Place

START clearance monitoring indicated several items emitting higher mercury vapor levels. These items, including a bed, pillows, blankets, chair and carpet in the master bedroom, were removed by the ERRS crew. All items were added to the master inventory sheet.

141 NW 78th Ave

The scrubber was shut down and START conducted a screening of the property. EPA made a decision to remove the carpet from bedrooms 1 and 2 showing elevated levels of mercury vapors (greater than 10,000 ng/m3).

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

The mercury was found by the home owner at 7871 NW 3rd. He reportedly found the mercury in a closet that was left on-site from the previous owner. He stated that he didn't understand the dangers of mercury and that's the why he let the children handle the material. The Margate Police Department and FDEP CID are conducting an independent investigation.

2.1.4 Progress Metrics

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

START will complete full scan assessments of potentially impacted properties
Address gross contamination outside
Remove contaminated items exceeding 10,000 ng/m3 from within the homes
Employ mitigation techniques to reduce the level of mercury vapors within the homes
Provide clearance sampling of properties following sufficient mitigation

2.2.1.2 Next Steps

START:

- Begin assigning thrift market values to confiscated items
- Conduct clearance monitoring at 7857 during night operations.
- Conduct clearance sampling at 141

ERRS:

- Complete removal of concrete driveway at 7871
- Identify carpet contractor
- Identify concrete contractor
- Continue to work on restoration of the bathroom drains

2.2.2 Issues

2.3 Logistics Section

An additional 30 yard rolloff
One back hoe

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

2.5.1 Safety Officer

ERRS and START contractors are responsible for their respective health and safety plans. Each contractor has a HASP and it has been reviewed by the OSC.

2.6 Liaison Officer

Captain Jeff Gary with the City of Margate Fire Rescue is serving as the liaison officer.

Officer Tom McNally will serve as the City of Margate Police Department liaison.

2.7 Information Officer

2.7.1 Public Information Officer

No PIO was provided for this response.

2.7.2 Community Involvement Coordinator

Two of the families are being provided with lodging assistance. CIC will be assisting with reimbursement of personal items from Regional office.

3. Participating Entities

3.1 Unified Command

EPA
FDEP
City of Margate Fire Rescue
City of Margate Police Department

3.2 Cooperating Agencies

Broward County School Board
Broward County Health Department
Florida Department of Health
ATSDR

4. Personnel On Site

EPA - 1
FDEP - 1
START - 3
ERRS - 6

5. Definition of Terms

No information available at this time.

6. Additional sources of information

6.1 Internet location of additional information/report

N/A

6.2 Reporting Schedule

Daily for previous day's operational period

7. Situational Reference Materials

EPA Mercury Website - Spills, Disposal and Site Cleanup including the Mercury Response Guidebook

www.epa.gov/mercury/spills/index.htm

ATSDR - Metallic Mercury FAQs <http://www.atsdr.cdc.gov/mercmetal5.html>

<http://www.atsdr.cdc.gov/MercMetallic05.pdf>

NIOSH- Safety and Health Topic: Mercury

<http://www.cdc.gov/niosh/topics/mercury/>

OSHA – Mercury Vapors <http://www.osha.gov/SLTC/healthguidelines/mercuryvapor/index.html>

ACGIH - Threshold Limit Values (TLVs®) and Biological Exposure Indices (BEIs®)

<http://www.acgih.org/TLV/>

CDC- Elemental Mercury Releases Attributed to Antiques

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5623a2.htm?s_cid=mm5623a2_e