

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



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: POLREP #1
Initial POLREP
Margate Mercury Release
B4C2
Margate, FL
Latitude: 26.2351389 Longitude: -80.2305556

To: Alyssa Hughes,
Matt Taylor, USEPA R4 ERRB

From: Alyssa Hughes, FOSC

Date: 9/2/2010

Reporting Period: 9/1/2010 1100 to 2000 hrs

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

EPA OSC Alyssa Hughes and EPA OSC Jose Negron arrived on scene and met at the Margate Police Department for an initial briefing of the situation. Participants at the meeting included Margate Fire Rescue, Margate Police Department, Broward County School Board, Florida Department of Environmental Protection (Bureau of Environmental Response and Criminal Investigations Bureau) and the Broward County Health Department. Following the meeting EPA and START mobilized to the site and met with ERRS RM. The Margate Police Department had established a perimeter around the vacated contaminated properties with mercury beads outside the houses. FDEP and Margate Fire Rescue accompanied EPA to the scene. Media crews were on-site awaiting EPA's arrival. Interviews were given to ABC, CBS, FOX, NBC and Telemundo.

EPA, ERRS and START performed a walk thru and identified the affected properties to undergo a full scan assessment and subsequent clean-up. START teams conducted an assessment of the three properties where residents were relocated (7871 NW 3rd, 7857 NW 3rd and 141 NW 78th). The assessment indicated mercury vapor levels above EPA RALs throughout the properties. Clothes, shoes, door mats, trash cans, hampers and other removable items exhibiting mercury vapor levels above 10,000 ng/m3 were identified and staged outside to air out while the houses ventilate. The items will be inventoried tomorrow. The inventory will include name, description, photograph, mercury vapor level and fair market value.

While START members conducted the assessments, ERRS crews began conducting clean-up activities on the mercury beads present in the driveway of the source house (7871 NW 3rd). While awaiting the arrival of mercury clean-up equipment, crews utilized eye droppers to pick up the larger beads of mercury.

Operations ceased at 1900 hrs.

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

The mercury was found by the home owner at 7851 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:

Perform full scan assessment of property located at 7801 NW 3rd
 Reassess property at 141 NW 78th following the removal of visible mercury beads
 Compile spreadsheet inventory of all items removed from the residences

ERRS:

Continue removal of visible mercury beads at 7871, 7915 and 141 using HgVacs
 Install and run mercury scrubber at 7871
 Set up fans to aid in air exchange and ventilation process at all residences
 Apply Hg Cs-102 to impacted washing machines and drains

2.2.2 Issues

The contents of one of the containers of mercury was reportedly dumped into a nearby canal. Given the concerns surrounding the potential presence of mercury within this canal, a consultation from an EPA Region 4 ecological toxicologist was requested. The following outlines his findings:

Approximately 2-3 oz by volume (equivalent weight roughly 2 lbs) or less of liquid mercury was released into an approximately 14 foot deep freshwater canal in the Fort Lauderdale area. Liquid mercury has a density more than 13X that of water and therefore the released mercury would have sunk to the bottom of the canal and likely be present as liquid mercury on the sediment surfaces where it settles. The mercury may start to oxidize to Hg(2+) over the next few weeks to months. For mercury uptake (bioaccumulation) into the food chain to occur, the conversion of the Hg(2+) into methylmercury by sulfate reducing bacteria must occur. This process occurs most favorably in situations where a wetting/drying cycle occurs for the contaminated sediments. Because this canal evidently stays full of water, this wetting/drying cycle is not expected to occur which would slow the methylation process, although methylation is still expected to occur over time in the surface sediments. Depending on the size of the canal (bigger is better for dilution purposes), the amount of water flow through the canal (the more flow the better to dilute the mercury), and the migration of fish and wildlife into and out of the area (more migration is better than less to lessen exposure), it is not anticipated that the ecological impact from this mercury spill would be overly significant over time. Impacts to human health from mercury accumulation into fish tissue from this spill would be expected to be minimal, but it does depend on how long fish remain in the area near the spill.

2.3 Logistics Section

Two mercury vacuums have been ordered and are expected on-site tomorrow morning
 Six 36" diameter fans are being purchased
 Portajohns have been ordered and will arrive on site tomorrow

EPA mercury scrubber is being overnighted to the site

2.4 Finance Section

2.4.1 Narrative

An Emergency Action Memo will be signed in the amount of \$250,000.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	\$190,000.00	\$0.00	\$190,000.00	100.00%
TAT/START	\$50,000.00	\$0.00	\$50,000.00	100.00%
Intramural Costs				
USEPA - Direct	\$10,000.00	\$0.00	\$10,000.00	100.00%
Total Site Costs	\$250,000.00	\$0.00	\$250,000.00	100.00%

* 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.

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.

2.7 Information Officer

2.7.1 Public Information Officer

No PIO was provided for this response. OSC Hughes is currently serving as the PIO. Several local news channels were on scene upon EPA's arrival on site. OSC Hughes conducted four interviews over the course of the day. OSC Negron was interviewed by Telemundo Network.

2.7.2 Community Involvement Coordinator

A CIC is being requested to assist with relocation of the residents displaced at 141 NW 78th Ave. The residents lodging is presently being managed by the Red Cross, but this will cease on September 3rd. There are 3 adults and 2 children residing in this house. As previously stated, the residents from remaining two houses that were evacuated are making their own arrangements for lodging. Depending on the duration of the response actions, the need to arrange for their lodging may change.

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 - 2
FDEP - 1
START - 4
ERRS - 5

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