

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



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region IV

**Subject:** POLREP #2  
Continuation of Clean-up  
Margate Mercury Release  
B4C2  
Margate, FL  
Latitude: 26.2351389 Longitude: -80.2305556

**To:**  
**From:** Alyssa Hughes, FOSC  
**Date:** 9/3/2010  
**Reporting Period:** 9/2/10 0700 - 2000 hrs

**1. Introduction**

**1.1 Background**

|                            |          |                                |                |
|----------------------------|----------|--------------------------------|----------------|
| <b>Site Number:</b>        | B4C2     | <b>Contract Number:</b>        |                |
| <b>D.O. Number:</b>        |          | <b>Action Memo Date:</b>       |                |
| <b>Response Authority:</b> | CERCLA   | <b>Response Type:</b>          | Emergency      |
| <b>Response Lead:</b>      | EPA      | <b>Incident Category:</b>      | Removal Action |
| <b>NPL Status:</b>         | Non NPL  | <b>Operable Unit:</b>          |                |
| <b>Mobilization Date:</b>  | 9/1/2010 | <b>Start Date:</b>             | 9/1/2010       |
| <b>Demob Date:</b>         |          | <b>Completion Date:</b>        |                |
| <b>CERCLIS ID:</b>         |          | <b>RCRIS ID:</b>               |                |
| <b>ERNS No.:</b>           |          | <b>State Notification:</b>     |                |
| <b>FPN#:</b>               |          | <b>Reimbursable Account #:</b> |                |

**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, START and ERRS began operations at 0700 with a morning safety briefing and presentation of the operational period IAP.

ERRS crews began the day utilizing the Hg Vacuums on the driveway of 7871 NW 3rd. The crew attempted to pick up all visible mercury beads then relocated to the driveway at 7915 NW 3rd. Crews used the Hg vacs to collect visible mercury beads. START team then arrived at 7915 to perform a screening of the driveway. No mercury vapor levels of concern were detected in the driveway of 7915. The homeowner was notified and the police tape was removed. The perimeter isolating response actions was reduced to encompass the properties located at 1871 and 7857.

ERRS then began applying Hg Cs-102 to the driveway of 7871. The solution will be washed and dried in cycles.

Crews installed six 36" diameter fans in the residences of concern to aid in ventilation and air exchange.

The EPA mercury scrubber arrived on site and was installed at 7857.

START performed a full scan assessment of property at 7801 NW 3rd. Mercury vapor levels ranged from 134 ng/m3 at the entry way to 2336 ng/m3 in bedroom 2. The highest levels were detected in the drains in the sink and shower located in bathroom 3 (10,473 and 4,227 ng/m3, respectively). ERRS will return to this location and apply Hg Cs-102 to the drains exhibiting mercury vapor levels of concern. OSC Hughes presented the results of the assessment to ATSDR for a recommendation regarding temporary relocation of the family. Based on the results, ATSDR recommended isolating the family from bathroom 3 until mitigation techniques lower the presence of vapor levels. The remaining levels do not present a health risk for the family to remain in the house.

ERRS crew relocated to 141 NW 78th to remove visible mercury beads from tiled foyer area and outside the front door. START team traveled to 141 NW 78th to perform scan. Mercury vapor levels ranged from 800 ng/m3 in bedroom 1 to 5415 ng/m3 in the kitchen. Several grossly contaminated items were removed from the residence and placed outside including both the small and large couches (14,830 ng/m3 and 6,284 ng/m3 respectively). Mercury vapors were detected on the carpet at the foot of the small couch on the order of 38,410 ng/m3. The carpet will have to be removed. Smaller items removed included mats, trash cans, clothes hamper, brooms and vacuums.

START members removed contaminated items from the three residences of concern to attempt to reduce ambient mercury vapor readings. Members began compiling a spreadsheet inventory of all items removed from residences. The items with readings above 10,000 ng/m3 will be segregated and entered into a spreadsheet of potentially confiscated items. The spreadsheet will contain an item ID, a photograph, a description of the item and a Lumex reading. The remaining items will be aired out for return to the properties following clean-up.

#### 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><b>Waste Stream</b></i> | <i><b>Medium</b></i> | <i><b>Quantity</b></i> | <i><b>Manifest #</b></i> | <i><b>Treatment</b></i> | <i><b>Disposal</b></i> |
|----------------------------|----------------------|------------------------|--------------------------|-------------------------|------------------------|
|                            |                      |                        |                          |                         |                        |
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## 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:  
 Re-screen the property located at 7801 NW 3rd PI following the application of Hg Cs-102  
 Re-screen the property at 7815 NW 3rd PI following the application of Hg Cs-102  
 Perform survey at 7857 to determine if clearance monitoring can be conducted  
 Re-screen 7871 following the removal of carpet from master bedroom and area rug from dining room  
 Compile spreadsheet inventory of all items removed from the residences

ERRS:  
 Utilize Hg Cs-102 solution on 7871 driveway  
 Remove a portion of the carpet in the master bedroom and the area rug in the dining room  
 Remove entire carpet and foyer tiles from 141 NW 78th Ave  
 Re-vacuum and rewash the floor in 141 NW 78th Ave  
 Set up fans to aid in air exchange and ventilation process at all residences

### 2.2.2 Issues

## 2.3 Logistics Section

Two mercury vacuums - arrived  
 Five containers of Hg Cs-102 solution - arrived  
 five 55-gallon drums - arrived  
 Six 36" diameter fans - purchased  
 Portajohns - arrived

EPA mercury scrubber - arrived

Additional Lumex - ordered

## 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

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.

One of the other families requested assistance with lodging. The family consists of 3 adults and 4

children. Assistance will begin tomorrow, September 3rd.

### **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 - 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](http://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](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5623a2.htm?s_cid=mm5623a2_e)