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

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject:	**POLREP #3** **Final POLREP** **Sitka St Mercury Spill** **B4D8** **Tampa, FL** **Latitude: 28.0214650 Longitude: -82.4397780**
To:	Matt Taylor, USEPA R4 ERRB
From:	Subash Patel, On Scene Coordinator
Date:	2/9/2011
Reporting Period:	December 21, 2010 to February 09, 2011

1. Introduction

1.1 Background

Site Number:	B4D8	**Contract Number:**	EPS40703
D.O. Number:		**Action Memo Date:**	11/25/2010
Response Authority:	CERCLA	**Response Type:**	Emergency
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	11/23/2010	**Start Date:**	11/24/2010
Demob Date:	12/3/2010	**Completion Date:**	12/30/2010
CERCLIS ID:	FLN000410633	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category
Emergency Response

1.1.2 Site Description
Residential House

1.1.2.1 Location
1712 E. Sitka Street, Tampa, FL 33614

1.1.2.2 Description of Threat

High levels of mercury vapors within the residence. A four-year-old child went to the hospital. The child had have high levels of mercury in his body. X-rays and other tests showed visible beads in his digestive and respiratory system. Eight people, which consists of three children under the age of five, live on this property.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

EPA obtained access from the family to assess and treat the home. Florida Deparment of Environmental Proteciton (FDEP) and EPA screened the house using a Lumex mercury vapor analyzer. Concentrations ranged from 5,000 ng/m3 to 7,000 ng/m3 throughout the house. A dresser located in Bedroom 1 where the parents and the sick child slept had a mercury concentrations exceeding 50,000 ng/m3. Beads of mercury were also found in this room. OSC Subash Patel contacted Warren McDougle, MPH of Florida Department of Health and Bob Safay of ATSDR to inform them of findings. The source of elemental mercury was never found.

EPA and FDEP informed the residents of the concentrations and recommended the residents temporarily relocate until decontamination was complete. The residents relocated to a nearby hotel on November 24.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

The Florida Department of Health (FDOH) reported a private residence was found with high levels of mercury due to unknown causes. A child was taken to the hospital and was found to evaluated levels of mercury. FDEP screened the residence with a Lumex mercury vapor analyzer on 11/23/10. EPA Phone Duty spoke with FDEP personnel on-site concernin g mercury readings and remediation efforts. Mercury concentrations within the house ranged from over 50,000 ng/m^3 within the affected child's bedroom to 2,000-15,000 ng/m^3 throughout the remainder of the house. Based on the levels of mercury vapors within the house the EPA mobilized resources to Site for remediation activities.

2.1.2 Response Actions to Date

EPA OSC Subash Patel, START OTIE contractors and ERRS WRS contractors were mobilized on 11/23/2010.

After obtaining access from residents and completing the initial assessment with FDEP, items including furniture and clothes from the home were moved outside onto a tarp for screening and deconning. Small items were placed in plastic bags and set aside in a sunny location. Items too large to fit in plastic bag were set aside in a sunny location. Concentration of each bag and large item was checked periodically with a Lumex. By Saturday, items that exceeded 10,000 ng/m^3 were discarded. In addition, children's items that exceeded 1,000 ng/m^3 were discarded (ATSDR recommendation). Items discarded were photographed and documented. No elemental mercury beads were spotted on items. Readings of the house were found to be below Removal Action Levels if windows and doors were kept open and/or if the air conditioning unit was operating.

The floor tiles of the house was found to contain 5% asebetos. After discussions with ATSDR, the Removal Action Level for the home was increased from 1,000 ng/m^3 to 2,000 ng/m^3 in hopes to avoid removing the floor tiles due to the risk of releasing asbestos fibers.

The house was heated and vented to drive off mercury vapors from Wednesday to Friday. To heat the house, the home's HVAC unit was set to 90˚F. Space heaters were also used. Windows were cracked open to allow mercury vapors to escape during day time and closed at night time. Heating continued throughout Wednesday night. In addition, floor tiles were treated with HgX (mercury decontaminant) and vacuumed with a mercury vacuum several times. Baseboards were removed in the bedrooms where the Lumex was reading elevated concentrations. Sinks and toilets were treated with vinegar.

By Friday evening, the HVAC unit was turned off and the windows were shut in order to determine the ambient air concentration of the house. On Saturday morning, the house's mercury concentration uniformly ranged from 4,000 ng/m^3 to 5,000 ng/m^3. Heating and venting efforts restarted. Another effort was made to clear the house using the Eight Hours Clearance Confirmation Sampling, but it failed midway. The Regional Response Team was activated. The team included EPA, ATSDR, and FDOH. A conference call occurred at 1300 hours on Saturday to update and discuss findings. It was determined that the floor tiles that were unlikely to be impacted by the mercury spill needed to be sampled to determine if it contained mercury. EPA and contractors demobed on Saturday and most residents remained in the hotel. Residents that lived in a section of house that had minimal impact from the mercury spill (readings were below 500 ng/m^3), had different floor tiles than impacted house, and had no access or keys to impacted area of main house were allowed to stay at home.

On Tuesday, November 30, result from the kitchen pantry tile sample was nondetect for mercury. However, the detection limit was 90 mg/kg which appears to be too high. OSC Patel then had a conference call with the Section Chief of Technical Services Section, Science and Ecosystem Support Division, and OSC Chris Russell (Florida outposted OSC). It was determined that an air sample of the head space with a Lumex and Jerome with tile contained in a box in ambient temperature needed to be done.

On Monday, OSC Patel and START collected a whole tile from the back of kitchen pantry with a box on top of tile, back of bathroom closet with items on top of tile, and back of Bedroom #2 closet was removed. Each tile was then placed into its own tupperware box with a thermometer. The following tables were peak sampling results taken on December 1. Temperatures vary depending if tupperware boxes were placed in vehicle or sun to heat.

Tile Location	Instrument	Peak (ng/m3)	Temperature
Kitchen Pantry	Lumex	595	86˚F
Bathroom Closet	Lumex	2,400	86˚F
Bedroom #2 Closet	Lumex	668	85˚F

Tile Location	Instrument	Peak (ng/m3)	Temperature
Kitchen Pantry	Lumex	300	75˚F
Bathroom Closet	Lumex	730	75˚F
Bedroom #2 Closet	Lumex	140	75˚F

Tile Location	Instrument	Peak (ng/m3)	Temperature
Kitchen Pantry	Jerome	7,000 - 8,000	100°F
Bathroom Closet	Jerome	7,000 - 8,000	100°F
Bedroom #2 Closet	Jerome	~ 1,000	100°F

The following results are from analytical sampling where the tiles were digested using the SW846 Method.

Tile Location	Concentration (mg/kg)	Method Detection Limit
Kitchen Pantry	Below Reporting Limits	0.0310
Bathroom Closet	0.0448 J	0.0301
Bedroom #2 Closet	0.0476 J	0.0309

Tile Location	Concentration (mg/kg)	Method Detection Limit
Kitchen Pantry	Below Reporting Limits	0.0308
Kitchen Pantry	Below Reporting Limits	0.00311
Bathroom Closet	0.0667 J	0.0311
Bedroom #2 Closet	0.0337 J	0.0308

Tile Location	Concentration (mg/kg)	Method Detection Limit
Kitchen Pantry	0.052	0.0079

A sample tile that was not in the enclosed home was not available. Therefore, it cannot be determined if the tiles absorbed mercury from the release of the spill and/or mitigation efforts or if tiles' construction material contained mercury.

On Wednesday, December 1, EPA and START began the Eight Hours Clearance Confirmation Sampling. The average for each room was below 2,000 ng/m^3; however, there were instances where mercury concentration exceed 2,000 ng/m^3. The results were sent to Bob Safay and Larry Cseh at ATSDR. ATSDR stated that they do not anticipate any adverse health effects from the levels obtained from the test. FDOH and FDEP were informed of ATSDR's statement.

To obtain more information and to support FDEP and FDOH, EPA and START conducted an eight hour sampling test following the NIOSH Method 6009 on Thursday, December 2. Bedroom #1, Bedroom #2, Bedroom, #3, Dining Area and Living Area were screened using this test. A duplicate was placed in Bedroom #1. Vacuum pump's flow rate was set to about 1 L/minute. Sorbent tube was placed about three feet from the floor. Efforts were made to keep house temperature at around 75°F; however, HVAC had to be turned on several times during the test to heat the home in the morning. Concentration of each room were also measured hourly with a Lumex. NIOSH results are as follow:

Tile Location	NIOSH (ng/m3)
Bedroom #1	432
Bedroom #1 Duplicate	63.9
Bedroom #2	80
Bedroom #3	110
Kitchen	91.4
Living Room	66.8

Residents were informed on December 2 that they can return home on December 3. START demobed from site on December 2. OSC Patel met with residents at the house on December 3 to answer additional questions and to perform a quick walkthrough of house with residents. Residents have been advised to continue to ventilate home when possible to help dissipate mercury vapors. A box fan was purchased for the resident to use to help ventilate the house. The residents did not own a fan. OSC Patel demobed from site on December 3.

On December 30, 2010, EQ Florida, Inc. picked up the four drums containing nonhazardous, contaminated items for disposal.

Per diem and reimbursement checks for electricity and contaminated items have been issued to the head of household.

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

The residents are the PRP. The title of the house is currently under the head of household's name (father of sick child). No source or container that may contain elemental mercury was found. The house appears to be insured.

2.1.4 Progress Metrics

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*
55-gallon nonhaz drums	**Solid**	**4**	**NA**	**NA**	**NA**

2.2 Planning Section

2.2.1 Anticipated Activities

None

2.2.2 Issues

None

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	$90,000.00	$18,020.00	$71,980.00	79.98%
START	$30,000.00	$11,824.00	$18,176.00	60.59%
Intramural Costs				
Total Site Costs	$120,000.00	$29,844.00	$90,156.00	75.13%

* 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

2.6 Liaison Officer

2.7 Information Officer

2.7.1 Public Information Officer

There was no media or press attention during the response.

2.7.2 Community Involvement Coordinator

Sherryl Carbonaro was contacted for relocation information and appropriate paperwork that needed to be complete prior and during temporary relocation of residents.

3. Participating Entities

3.1 Unified Command

3.2 Cooperating Agencies

Florida Department of Health
Florida Department Environmental Protection
Agency for Toxic Substances and Disease Registry

4. Personnel On Site

OSC Patel
START OTIE (2)
ERRS WRS (7)

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 2/9/2011