

**United States Environmental Protection Agency
Region IV
POLLUTION REPORT**

Date: Saturday, October 10, 2009

From: Matthew Huyser, OSC

To: Matt Taylor, USEPA R4 ERRB

Shane Hitchcock, USEPA R4 ERRB

Subject: Contamination Reduction Ongoing

FedEx Mercury Spill

2903 Sprankle St, Memphis, TN

Latitude: 35.0645607

Longitude: -89.9661307

POLREP No.: 2

Site #:

Reporting Period: 10/09/2009 0530 to 10/09/2009

D.O. #:

2000

Start Date: 10/8/2009

Response Authority:

CERCLA

Mob Date: 10/8/2009

Response Type: Emergency

Demob Date:

NPL Status: Non NPL

Completion Date:

Incident Category: Removal

CERCLIS ID #:

Action

RCRIS ID #:

Contract #

Site Description

A faulty package leaked mercury among sorting equipment at the FedEx hub facility in Memphis. At approximately 1345hrs on 10/8/2009 FedEx personnel identified visible mercury on the floor and chute along one of the sorting conveyors. The safety office and dangerous goods office were immediately notified, and personnel in the affected area were promptly evacuated.

FedEx obtained USES, subcontractor to XL Environmental, to perform the response and flew in USES response gear from Jackson, MS on a FedEx aircraft to expedite appropriate response activity. USES conducted air monitoring and collection of visible mercury. During USES's first operational period, approximately 3 to 4 fluid ounce of free mercury was collected from an estimated spilled volume of 5 to 6 fluid ounces.

The source package was identified at 0830hrs on 10/9/2009 in an AMJ container containing parcels transported on behalf of the US Postal Service (USPS). Affected articles include one package chute, two conveyors, a container scale, a floor drain, the concrete floor, the AMJ container and its contents, computer equipment, and several handheld scanners. An industrial cleanup level of 3µg/m3 was used for clearance of equipment and ambient air space within the building.

Current Activities

START consultant Tetra Tech arrived on site at approximately 0530hrs on 10/9/2009 and began air monitoring as well as screening of process equipment and handheld computer equipment. Initial segregation efforts by USES and FedEx on 10/8/2009 had shut down both the impacted conveyor (R2) and another conveyor adjacent to it (R1) during the night sort (FedEx operational periods in the building are identified by "night sort" and "day sort"); START screened conveyor R1 (adjacent to the impacted conveyor) and reported to OSC Huyser that levels were below the industrial cleanup goal of 3µg/m3. Conveyor R1 was permitted by FedEx to run beginning at the day sort on 10/9/2009.

EPA OSC Huyser arrived on site at 0900hrs and met with FedEx, USES, and an inspector from USPS to evaluate the operational conditions. It was clarified that all known impacted areas are within a single sorting building which is only part of the FedEx hub complex. Pending matters of concern included the cleanup criteria for handheld industrial equipment, fate of AMJ container, fate of USPS mail within the container, pending investigation by USPS, and clearance procedures for the building. EPA requested a meeting of the participating entities before midday to prioritize operational objectives and identify entity responsibilities. A unified command was established with FedEx and EPA with USPS as a liaison; USES comprised the Removal Team and START comprised the Monitoring Team. The following is a prioritized

list of the operational objectives and resulting activities:

1. AMJ Container - The impacted AMJ contained free mercury and had holes in the floor. The unit was emptied, vacuumed with a Mercury Vacuum, and wrapped with plastic on all sides for containment by approximately 1400hrs. A roll-off box arrived at approximately 1700hrs to dispose of the unit and hazardous waste transporter Pollution Coastal Industries of Millington, TN, was obtained to provide immediate removal of the roll-off in order to avoid staging the box on site. The AMJ exceeded the box dimensions and USES elected to dismantle the AMJ using electric saws while wearing level C PPE. START provided air monitoring support during cutting to ensure the safety of personnel outside the CRZ. Due to the extended duration of the cutting effort, FedEx requested that the box be moved outside to make room for night sorting operations, but EPA advised against the change due to irregular rain and potential for cross contamination. EPA later permitted the container to be relocated outside for final transport preparation when the content height did not grossly exceed the box rim and the rain had ceased. The packed roll-off left the site at approximately 2330hrs.

2. AMJ Contents - The USPS parcels in the AMJ container were extracted and bagged by approximately 1500hrs; total volume of the bagged parcels was 3 to 4 CY. During the midday meeting, EPA proposed screening the bagged parcels prior to demobilization. EPA later determined that it would be best leave the bags entirely in-tact, and not compromise the seal with screening activities, when several parcels measured 100µg/m³ during bagging. The bagged parcels were loaded onto a separate AMJ, which was fitted with a poly liner, and was transported to FedEx's dangerous goods storage building. USPS will take responsibility for the parcel decontamination or disposal and will notify EPA prior to initiating efforts.

3. Conveyor R2 - Screening of conveyor R2 for reuse was projected to occur after the impacted AMJ was removed. Delays in the AMJ removal required that the screening occur while it was present in the building. A screening procedure conducted by START with ventilation yielded several hotspots above the cleanup goal, and the conveyor was not cleared to run during the subsequent night sort. The next screening opportunity will occur between the 10/9/2009 night sort and 10/10/2009 day sort when known source material is removed and ventilation can be reduced.

4. Floor and Chute - Elemental mercury was visible on the concrete floor beneath a metal grate and container scale below where the impacted AMJ had sat. USES continued recovery and removal efforts in the area with level C PPE up to 1700hrs using two Mercury Vacuums and HgCS-102 mercury binding compound. Several portions of the metal grate were removed manually or cut away to gain access. At 1800hrs, FedEx determined that the container scale would be removed and replaced rather than waiting on decontamination. Two floor drains were discovered below and near the container scale. It was determined that the drains would be cleaned during the next operational period. Initial screening levels from the chute indicated that chemical treatment would be necessary, but proximity to source material may have influenced readings. It was determined that the chute could be rescreened when source material was removed.

5. Handheld Equipment - EPA consulted via phone with ATSDR and determined that the cleanup range of 1-10µg/m³ was equally relevant for industrial settings as residential settings provided that the same necessary considerations be given to use and environment. START found that 6 of the handheld scanners were impacted within or above that range. FedEx determined that it would be appropriate to dispose of the devices.

The source package was bagged, sealed in a 5-gal 1A2 overpack, and placarded. USPS will retain the source package as part of its investigation. OSC Huyser contacted EPA R4 CID agents on behalf of USPS for consultation on retention of hazardous substances for reasons related to an investigation, but was unable to locate existing procedures related to the issue. During this reporting period, EPA advised USPS of RCRA requirements that may apply but was unable to advise USPS on packaging and storage procedures for an indefinite timeframe.

At approximately 1700hrs, the aircraft which originally transported the source package to the Memphis facility returned to Memphis for offloading. FedEx unloaded the aircraft in conjunction with EPA's START consultant who screened each of the offloaded containers for mercury contamination. No contamination was detected above ambient levels and the aircraft returned to regular service.

A unified command staff meeting took place at 1800hrs which was used to identify progress on each of the objectives and evaluate strategies for remaining activities. It was determined that the building bay doors would be closed following the night sort and up until the day sort to reduce air flow for screening and detection of remaining hotspots. Estimated shut down of night sort was 0500 on 10/10/2009; after an airflow reduction period of 60 minutes, EPA can begin screening impacted areas at 0600.

Planned Removal Actions

- Assess extent of migration of mercury; (ONGOING)

- Ensure safety of response and facility personnel; (ONGOING)
- Conduct oversight of removal activities; and, (ONGOING)
- Support removal activities with air monitoring and technical assistance where needed. (ONGOING)

Next Steps

- 1. AMJ Container** - Complete. The AMJ was condensed into the roll-off box and transported off-site for disposal.
- 2. AMJ Contents** - Stabilization complete, disposal pending. The contents were bagged and stored. USPS will take responsibility for the parcel decontamination or disposal and will notify EPA prior to initiating efforts.
- 3. Conveyor R2** - Screen for hotspots or possible usage beginning at 0600 on 10/10/2009
- 4. Floor and Chute** - USES will continue recovery and removal efforts with Mercury Vacuum and HgCS-102. The container scale will be removed by USES and replaced by FedEx. The two floor drains will be opened and cleaned. All chutes will be rescreened by START when source material was removed and cleaned by USES if necessary.
- 5. Handheld Equipment** - Complete. Impacted devices were disposed of and devices used in the affected area are being allowed to vent for several weeks as a precautionary measure.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
TAT/START	\$10,000.00	\$0.00	\$10,000.00	100.00%
Intramural Costs				
Total Site Costs	\$10,000.00	\$0.00	\$10,000.00	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.

response.epa.gov/FedExMerc

POLREP #2 Last Updated 10/11/2009