

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Ohio River MCHM Spill - Removal Polrep  
Initial Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region IV

**Subject:** POLREP #1  
Initial Polrep  
Ohio River MCHM Spill

Louisville, KY  
Latitude: 38.2827594 Longitude: -85.7025508

**To:**  
**From:** Art Smith, OSC  
**Date:** 1/15/2014  
**Reporting Period:** 01/15/2014

## 1. Introduction

### 1.1 Background

Site Number:	B438	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	CERCLA	Response Type:	Emergency
Response Lead:	PRP	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	1/15/2014	Start Date:	
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 spill originated at Freedom Industries, located at 1015 Barlow Drive, Charleston, Kanawha County, WV 25311. The contaminants flowed down the Elk River and have now impacted the Ohio River as far as the Northern Kentucky and Greater Cincinnati area.

##### 1.1.2.1 Location

As of 0700 hrs. EDT on 01/15/2014, the Ohio River has been impacted in Kentucky from Mile Marker (MM) 317 near Catlettsburg, KY through MM 463 near California, KY.

##### 1.1.2.2 Description of Threat

A chemical release of 4-methylcyclohexanemethanol (MCHM) into the Ohio River which serves as a source of drinking water to residents in neighboring states.

##### 1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

The spill at the Freedom Industries facility occurred from one of three above-ground storage tanks that contain the MCHM. Reportedly, the secondary containment around the tanks was inadequate and failed. It was estimated that 5,000 gallons of the material were released. However, the volume of the compound that actually entered the river is uncertain.

EPA Region 3 "Hotspot Reports" indicate that the Responsible Party (RP) utilized facility personnel and initiated the hiring of contractors to place boom along the shoreline of the Elk River, adjacent to the area of the spill. The RP also hired contractors to conduct land clean-up operations. However, due to the miscible nature of the compound, the release was not sufficiently controlled and the spill migrated from the Elk River, into the Kanawha River, and subsequently the Ohio River.

The Ohio River Valley Water and Sanitation Commission (ORSANCO) has tracked the plume in the Ohio River from the point where the Kanawha River emptied into the Ohio at Point Pleasant, WV. In the early stages of this event, the Agency for Toxic Substances and Disease Control (ATSDR) published an action level of such that less than 1 milligram per liter (mg/l) of MCHM in drinking water was protective of human health. Potable water utilities along the Left Descending Bank (LDB) of the Ohio River have measured MCHM in their raw water at concentrations up to 50 micrograms per liter (ug/l). However, MCHM has a licorice odor to it, which is detectable at about 5 ug/l in air. Powdered activated carbon (PAC) is capable of

removing trace amounts of MCHM in water to an extent where the odor is not noticeable. Some drinking water plants are choosing to treat the water with PAC due to inadequate reserves of finished water. Others are allowing the plume to pass by if they have adequate finished water storage capacity.

## 2. Current Activities

### 2.1 Operations Section

#### 2.1.1 Narrative

On 01/14/2014, OSC Smith mobilized to the ORSANCO offices in Cincinnati, OH, at the request of the Kentucky Department for Environmental Protection (KDEP). The purpose of the deployment was for EPA to better understand the issues associated with the plume in the Ohio River, to monitor the status of the drinking water plants in Kentucky, and to respond to any requests for assistance from KDEP. The OSC has also mobilized the EPA Environmental Response Team (ERT) to assist with evaluation of analytical methods for detecting MCHM in water. The OSC also deployed the Region 4 Superfund and Technical Assistance Team (START) contractor Tetra Tech to compile data produced during this incident and to map the plume as it travels downstream.

#### 2.1.2 Response Actions to Date

On 01/15/2014, KDEP collected surface water grab samples at the following locations along the Ohio River: Catlettsburg, KY, South Shore, KY, Vanceburg, KY, Trinity, KY, Carrollton, KY, Westport, KY, and Louisville, KY.

Also on this date, KDEP collected samples of both raw and finished water at the following surface water intakes along the Ohio River:

Ashland, KY, Russell, KY, Maysville, KY, Northern Kentucky Water District, and the Louisville Water Company (LWC).

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

Freedom Industries, located at 1015 Barlow Drive, Charleston, Kanawha County, WV 25311 is the PRP for this incident

#### 2.1.4 Progress Metrics

Waste Stream	Medium	Quantity	Manifest #	Treatment	Disposal

## 2.2 Planning Section

### 2.2.1 Anticipated Activities

#### 2.2.1.1 Planned Response Activities

On 01/16/2014, KDEP plans to collect surface water grab samples at the same sampling stations established on 01/15/2014, and will add the following locations:  
Augusta, KY, California, KY, Newport, KY, and Rabbit Hash, KY

#### 2.2.1.2 Next Steps

Evaluate the ability of Louisville Water Company (LWC) to treat raw water to below 3 ug/l. LWC plans to continue operations at their drinking water plant during the time the plume passes by if treatment operations are successful. The leading edge of the plume at the LWC intake is expected to arrive around 0000 hrs. EST on 01/17/2014.

#### 2.2.2 Issues

Comparison of results derived from samples collected by different parties has been complicated by the use of differing analytical methods. The goal is to standardize an analytical method employed by KDEP so that results can be compared more easily.

## 2.3 Logistics Section

No information available at this time.

## 2.4 Finance Section

No information available at this time.

## 2.5 Other Command Staff

No information available at this time.

## 3. Participating Entities

### 3.1 Unified Command

EPA is the lead federal agency and KDEP is the lead state agency for this response.

### 3.2 Cooperating Agencies

ORSANCO, US Coast Guard, Kentucky Department for Public Health, and the various drinking water utilities in Kentucky along the Ohio River.

**4. Personnel On Site**

EPA Region 4 - 1  
EPA ERT - 1

**5. Definition of Terms**

No information available at this time.

**6. Additional sources of information****6.1 Internet location of additional information/report****6.2 Reporting Schedule**

On a daily basis until the risk to drinking water utilities is mitigated.

**7. Situational Reference Materials**

No information available at this time.