

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Velsicol Athletic Fields Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region V

**Subject:** POLREP #2  
Continuation of Removal Action  
Velsicol Athletic Fields Site  
0532  
St. Louis, MI  
Latitude: 43.4112240 Longitude: -84.6009850

**To:** Brian Schlieger, U.S. EPA  
Jason El-Zein, U.S. EPA  
Sam Borries, U.S. EPA  
Mark Durno, U.S. EPA  
Matt Mankowski, U.S. EPA  
Mick Hans, U.S. EPA  
John Glover, U.S. EPA  
Yolanda Bouchee-Cureton, U.S. EPA  
Carolyn Bohlen, U.S. EPA  
Gary Steinbauer, U.S. EPA  
Diane Russell, U.S. EPA  
Tom Alcamo, U.S. EPA  
Lindy Nelson, U.S. DOI  
Valencia Darby, U.S. DOI  
Mark Johnson, ATSDR  
Kristi Teall, St. Louis Public Schools  
Dan Rockafellow, MDEQ  
Rodney Stokes, Michigan DNR  
Bill Schuette, Michigan Department of Attorney General  
Dan Wyant, MDEQ  
Jennifer Wolf, MDEQ  
Joe Walczak, MDEQ  
Bruce VanOtteren, MDEQ  
HQ EOC, U.S. EPA  
Carol Ropski, U.S. EPA  
Kurt Giles, City of St. Louis  
Mayor Kelly, City of St. Louis

**From:** Jon Gulch, On-Scene Coordinator

**Date:** 6/10/2015

**Reporting Period:** June 1-12, 2015

1. Introduction

1.1 Background

|                            |             |                                |                |
|----------------------------|-------------|--------------------------------|----------------|
| <b>Site Number:</b>        | 0532        | <b>Contract Number:</b>        | EP-S5-08-04    |
| <b>D.O. Number:</b>        | 0079        | <b>Action Memo Date:</b>       | 5/5/2015       |
| <b>Response Authority:</b> | CERCLA      | <b>Response Type:</b>          | Time-Critical  |
| <b>Response Lead:</b>      | EPA         | <b>Incident Category:</b>      | Removal Action |
| <b>NPL Status:</b>         | NPL         | <b>Operable Unit:</b>          | 03             |
| <b>Mobilization Date:</b>  | 5/18/2015   | <b>Start Date:</b>             | 5/18/2015      |
| <b>Demob Date:</b>         |             | <b>Completion Date:</b>        |                |
| <b>CERCLIS ID:</b>         | MID00722439 | <b>RCRIS ID:</b>               |                |
| <b>ERNS No.:</b>           |             | <b>State Notification:</b>     |                |
| <b>FPN#:</b>               |             | <b>Reimbursable Account #:</b> |                |

1.1.1 Incident Category

Time Critical Removal Action

1.1.2 Site Description

The United States Environmental Protection Agency (EPA) Velsicol Chemical Corporation/Pine River Superfund Site (Site), National Superfund Database Identification Number MID00722439, is located in St. Louis, Gratiot County, Michigan. The Site has been divided into three Operable Units (OUs). OU1 includes 52-acres commonly referred to as the former plant site (FPS) and adjacent residential areas. The Pine River flows along the western and northern boundary of the FPS into Mill Pond, where a hydroelectric dam

is located (about ¼-mile east of the FPS). OU2 consisted of contaminated sediments in the Pine River upstream of the St. Louis dam and adjacent to the FPS. The remedy for OU2 was completed in 2006. OU3 consists of contaminated sediments in the Pine River downstream of the St. Louis dam, including the Athletic Fields of the St. Louis Public Schools.

The FPS was used for modern industrial operations beginning in the mid-1930s until the plant was closed in 1977. Historical operations at the FPS included a lumber mill, oil refinery, salt processing plant, and chemical manufacturing plant. In 1935, Michigan Chemical Corporation (MCC) purchased the property and operated a chemical manufacturing business. In 1965, Velsicol Chemical Corporation gained a controlling interest in MCC.

MCC manufactured a wide variety of products at the FPS from 1936 through 1977, including various salts, magnesium oxide, rare earth chemicals, fire retardants (hexabromobenzene [HBB], polybrominated biphenyl [PBB], tris (2,3-dibromopropyl) phosphate [TRIS]), and pesticides (dichlorodiphenyl trichloroethane [DDT] and 1,2-dibromo-3-chloropropane [DBCP]).

Velsicol closed the chemical plant in 1977 and demolished the facility. An agreement was reached through a consent judgment between Velsicol Chemical, EPA and the Michigan Department of Environmental Management (MDEQ) in 1982 to address the FPS. A slurry wall and cap was placed over the 52-acre FPS. The consent judgment did not require remediation of the contaminated sediments in the Pine River because the parties to the consent judgment concluded that the most appropriate alternative was to leave the contaminated sediments in place. The 1982 consent judgment gave Velsicol Chemical Corporation a release from any liability under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), Resource Conservation and Recovery Act of 1976 (RCRA), and State laws, with a limited reopener.

In January 2015, EPA sampled the St. Louis High School Athletic Fields as part of the Velsicol-OU3 Superfund Site. The objective of the investigation was to further define the nature and extent of hexabromobenzene and DDT at the fields. The field investigation activities were based on the additional scope of work identified in the Technical Directive Memorandum received from EPA on July 21, 2014. The results of the sampling event indicate that thirty-eight (38) sample results exceed the ecological Preliminary Remediation Goal (PRG) established for DDT (5 mg/kg) at the Site.

#### **1.1.2.1 Location**

The Site is located at the St. Louis High School athletic field complex in St. Louis, Gratiot County, Michigan. The Site includes a baseball field, softball field, practice football field, and green area near the flood plain of the Pine River. The Site is located behind the NS Nurnberger Middle School. The Site is located within OU03 and includes the flood plain associated with the Pine River. Land use around the Site includes school property, park and residential. Residential homes are located within 100 feet of the Site. The Site topography is relatively flat and dips slightly to the southwest towards the Pine River.

#### **1.1.2.2 Description of Threat**

Ecological receptors could become exposed to site contaminants through direct contact with soils contaminated by off-site deposited sediments; ingestion of soils contaminated by off-site deposited sediments; and ingestion of contaminated food (e.g., sediment- or soil-dwelling insects, vegetation).

Analytical results described above indicate that hazardous substances, as defined by CERCLA Section 101(14), pollutants, and contaminants are present at the Site, and represent an actual or potential exposure threat to nearby animal populations. Concentrations of DDT exceed the PRG (5 mg/kg). An initial PRG range of 2-9 mg/kg total DDT in soil for robin reproduction is based on a high quality laboratory toxicological study (performed with Japanese quail showing decreased post-hatch chick survival) and a robin exposure model based on site-specific data on soil-earthworm bioaccumulation. A laboratory study of ring doves performed with a single exposure treatment at a dose intermediate to the ones bracketing adverse effects in the Japanese quail study also showed decreased post-hatch chick survival. The soil PRG for Velsicol conditions derived from this study is 5.6 mg/kg. Selection of this PRG decreases the likelihood of encountering the possible developmental effects indicated by the aforementioned studies. A spatially-averaged 5 mg/kg total DDT soil concentration is recommended for a preliminary remedial goal (PRG) for acceptable robin reproduction and development of offspring.

The Site is located behind the Pine River Elementary School in a residential neighborhood and includes a baseball field, softball field, track and practice football field, and open play fields associated with the St. Louis High School. The Site is bordered on the south by the Pine River and by additional adjacent residential houses and properties to the north within 100 feet of the Site.

According to the Agency for Toxic Substances and Disease Registry (ATSDR), DDT (dichlorodiphenyltrichloroethane) is a pesticide once widely used to control insects in agriculture and insects that carry diseases such as malaria. DDT is a white, crystalline solid with no odor or taste. Its use in the U.S. was banned in 1972 because of damage to wildlife, but is still used in some countries.

DDT affects the nervous system. People who accidentally swallowed large amounts of DDT became excitable and had tremors and seizures. These effects went away after the exposure stopped. No effects were seen in people who took small daily doses of DDT by capsule for 18 months. A study in humans showed that women who had high amounts of a form of DDE in their breast milk were unable to breast feed their babies for as long as women who had little DDT in the breast milk. Another study in humans showed that women who had high amounts of DDT in the blood had an increased chance of having premature babies. In animals, short-term exposure to large amounts of DDT in food affected the nervous system, while long-term exposure to smaller amounts affected the liver. Also in animals, short-term oral exposure to small amounts of DDT or its breakdown products may also have harmful effects on reproduction.

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

EPA documented the presence of elevated levels of hazardous substances at the Site, as defined by

Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), including DDT within the flood plain boundary. Samples taken in the area showed total DDT in the soil at depths of 1-2 bgs in levels exceeding the PRG (5 mg/kg).

## 2. Current Activities

### 2.1 Operations Section

#### 2.1.1 Narrative

##### 2.1.2 Response Actions to Date

From June 1-12, 2015, EPA performed the following activities: conducted additional sampling to determine the extent of contamination; installed silt fencing along the Pine River in excavation areas; and established daily perimeter air monitoring with DataRAM 4000 particulate monitors.

From June 1-10, 2015, EPA continued excavation activities in the practice football field area (B5). An estimated 900 cubic yards of contaminated soil was stockpiled awaiting disposal. An estimated 673 tons of clean backfill was received on-site for restoration activities.

On June 11, 2015, an estimated 130 tons of contaminated soil was shipped to the Brent Run Landfill (MID985632819) in Montrose, Michigan for disposal.

On June 12, 2015, all site activities were cancelled due to a large rain event in the area.

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

N/A

#### 2.1.4 Progress Metrics

| <i>Waste Stream</i> | <i>Medium</i> | <i>Quantity</i> | <i>Manifest #</i> | <i>Treatment</i> | <i>Disposal</i>                                          |
|---------------------|---------------|-----------------|-------------------|------------------|----------------------------------------------------------|
| Contaminated Soil   | Soil          | 130 Tons        | N/A               | N/A              | Brent Run Landfill, 8335 Vienna Road, Montrose, MI 48457 |

### 2.2 Planning Section

#### 2.2.1 Anticipated Activities

- Receive laboratory data and establish the exact extent-of-contamination for the excavation;
- Establish perimeter and personal air monitoring;
- Continue excavation; and
- Conduct restoration activities.

##### 2.2.1.1 Planned Response Activities

- Complete excavation; and
- Perform restoration.

##### 2.2.1.2 Next Steps

- Continue Removal Action.

#### 2.2.2 Issues

None

### 2.3 Logistics Section

N/A

### 2.4 Finance Section

#### 2.4.1 Narrative

On May 5, 2015, the Action Memorandum for the Site was signed by the U.S. EPA Superfund Division Director.

On May 15, 2015, the EPA Contracting Officer (CO) issued a verbal order (Task Order 0079) to the ERRS contractor for \$50,000.

On May 28, 2015, the EPA CO issued a Task Order to the ERRS contractor for \$800,000.

#### Estimated Costs \*

|                           | <b>Budgeted</b> | <b>Total To Date</b> | <b>Remaining</b> | <b>% Remaining</b> |
|---------------------------|-----------------|----------------------|------------------|--------------------|
| <b>Extramural Costs</b>   |                 |                      |                  |                    |
| ERRS - Cleanup Contractor | \$850,000.00    | \$100,000.00         | \$750,000.00     | 88.24%             |
| TAT/START                 | \$30,000.00     | \$14,000.00          | \$16,000.00      | 53.33%             |
| <b>Intramural Costs</b>   |                 |                      |                  |                    |
| USEPA - Direct            | \$10,000.00     | \$3,000.00           | \$7,000.00       | 70.00%             |

|                         |                     |                     |                     |               |
|-------------------------|---------------------|---------------------|---------------------|---------------|
| USEPA - InDirect        | \$2,000.00          | \$500.00            | \$1,500.00          | 75.00%        |
|                         |                     |                     |                     |               |
| <b>Total Site Costs</b> | <b>\$892,000.00</b> | <b>\$117,500.00</b> | <b>\$774,500.00</b> | <b>86.83%</b> |

\* 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**

N/A

### **2.5.2 Liaison Officer**

N/A

### **2.5.3 Information Officer**

The Information Officer for this site is Diane Russell, U.S. EPA Community Involvement Coordinator. For more information regarding the Remedial Project: <http://www.epa.gov/region5/cleanup/velsicol/index.htm>

## **3. Participating Entities**

### **3.1 Unified Command**

N/A

### **3.2 Cooperating Agencies**

U.S. EPA-Remedial Team  
MDEQ

## **4. Personnel On Site**

EPA - 2  
START - 1  
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**

<http://www.epa.gov/region5/cleanup/velsicol/index.htm>

### **6.2 Reporting Schedule**

N/A

## **7. Situational Reference Materials**

N/A