

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Ironwood Manufactured Gas Plant Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region V

**Subject:** POLREP #5  
Progress  
Ironwood Manufactured Gas Plant Site  
B5ZC  
Ironwood, MI  
Latitude: 46.4516240 Longitude: -90.1780130

**To:**  
**From:** Kathy Halbur, OSC  
**Date:** 6/17/2013  
**Reporting Period:** 10/26/12-6/17/13

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	B5ZC	<b>Contract Number:</b>	EP-S5-08-04
<b>D.O. Number:</b>	0051	<b>Action Memo Date:</b>	8/9/2012
<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>	Non NPL	<b>Operable Unit:</b>	
<b>Mobilization Date:</b>	8/20/2012	<b>Start Date:</b>	8/22/2012
<b>Demob Date:</b>	6/14/2013	<b>Completion Date:</b>	
<b>CERCLIS ID:</b>	MIN000510500	<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

##### 1.1.2 Site Description

The Ironwood Manufactured Gas Plant (MGP) Site is the location of a former coal gasification plant. Reportedly, the plant was constructed in 1911 and operated using a carbureted water gas (CWG) process. A review of Sanborn maps indicates that the processes at the Site were consistent with typical CWG processes for the era. These processes generally included a first step in which coke or coal was heated in a closed vessel or retort into which steam was injected. A flammable gas mixture of methane and carbon monoxide was produced. In some cases petroleum products may have been applied to the heated mixture increasing the flammability of the resultant gas mixture. During these processes, a dense, oily liquid known as coal tar would condense out of the gas at various stages during its production, purification and distribution, and the coal tar would need to be either recycled in the process, sold, or otherwise disposed of.

The plant continued operations and distribution of manufactured gas until the late 1950's when natural gas pipelines and service became more readily available in the area. By 1956 the plant was for sale and based on accounts of the Wisconsin Public Service Commission, by 1961 had discontinued service to Hurley, including the removal of meters following abandonment.

Interviews conducted by the Michigan Department of Environmental Quality (MDEQ) with local residents indicate that the buildings at the Site were removed prior to the gasometers (gas storage tanks). Based on the historical accounts, the surface structures at the Site were demolished and removed during the 1970's and the 1980's. Following removal of the surface structures, the Site was reportedly used by the City of Ironwood for the storage of inoperable equipment and debris.

##### 1.1.2.1 Location

The Site does not have a physical address but is located on the northwest corner of Hemlock Street and West Ayer Street in Ironwood, Gogebic County, Michigan.

##### 1.1.2.2 Description of Threat

The Site contained MGP waste material, such as coal tar and other process waste, that were the source of hazardous substances that migrated into soil, groundwater, surface water, and sediments of the Montreal River. Contaminants of concern identified in soil, groundwater, surface water, and sediment include volatile

organic compounds (VOCs), semivolatile organic compounds (SVOCs), polycyclicaromatic hydrocarbons (PAHs) and inorganic contaminants.

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

During bridge construction at West Norrie Street in 2010, construction crews identified visually contaminated soils suspected to be from the former Ironwood Manufactured Gas Plant site located approximately 700' upstream. MDEQ developed a Site Inspection Work Plan in 2010 to characterize conditions in the subsurface at the Site as well as in the surface water and sediment in the adjacent Montreal River. The Site Inspection activities performed by the MDEQ were implemented with the intent of evaluating groundwater, surface water, and soil exposure pathways.

The results of the MDEQ's Site Inspection indicated the presence of uncontrolled hazardous substances at the Site. Gross tar and MGP process waste contamination was discovered in the surface and subsurface soil primarily located in the historical operating area of the Site, which contained VOC's, SVOC's, and inorganic contaminant concentrations exceeding the MDEQ Part 201 Residential Direct Contact Criteria (RDCC) and Groundwater Surface-water Interface (GSI). Based on these findings, MDEQ requested assistance from USEPA.

USEPA conducted a site reconnaissance visit on November 19, 2010 to evaluate site conditions and to gather logistical information to assist in the development of a supplement site assessment plan.

A Supplemental Site Assessment was conducted during the week of April 9, 2012. The Supplemental Site Assessment demonstrated that coal tar and other MGP waste remain buried at the Site in a visually discreet layer and that contaminants from this buried waste (volatile and semi-volatile organic compounds and inorganic compounds) are migrating into the groundwater and surface water (Montreal River).

## 2. Current Activities

### 2.1 Operations Section

#### 2.1.1 Response Actions to Date

The majority of removal activities, including excavation and disposal of the buried MGP waste, were conducted during the initial mobilization, 8/20/12-10/25/12. See previous POLREPS for details.

The Site was dormant over the winter. According to local officials and Site neighbors, Site security measures put in place prior to fall demobilization successfully kept trespassers off the Site. There was significant flooding on the Site in May as a result of a late and rapid snow melt, and spring rains. The erosion control measures (i.e., silt fence, COIR logs, straw restoration matting on the bank) were effective at minimizing soil loss and flood damage to the Site.

USEPA, START, and ERRS remobilized to the Site on June 10, 2013 and completed the following activities over course of the week:

- Installed and developed four on-Site groundwater monitoring wells
- Recovered COIR logs misplaced by flood
- Added boulders and additional riprap to bank of Montreal River
- Completed final grading of the Site, including two drainage swales
- Received and spread topsoil to cover Site
- Seeded Site with fescue blend (per City's requested Restoration Plan) and covered with straw
- Installed restoration matting along bank and drainage swales
- Replaced silt fence
- Planted native trees donated by US Forest Service
- Repaired temporary perimeter fencing
- Conducted perimeter air monitoring and implemented dust control measures
- Conducted part-time overnight security
- Demobilized equipment and personnel from Site

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

The City of Ironwood is the former owner and operator of the Ironwood Gas Works and is the only PRP for this Site. The City does not have the ability to conduct the clean-up, but is assisting by contributing in-kind services.

#### 2.1.3 Progress Metrics

See previous POLREPS for summary of waste generated during initial mobilization. During this mobilization, only a small amount of IDW (soil and water) was generated during installation of the groundwater monitoring wells. Two drums of coal tar impacted soil was transported to K&W Landfill in Ontonagon, MI for disposal. The water was accepted by the Ironwood POTW.

### 2.2 Planning Section

#### 2.2.1 Planned Response Activities & Next Steps

USEPA, START, and ERRS plan to remobilize to the Site in mid-July to assist MDEQ with groundwater sampling and complete Site restoration. If a grassy cover is in place across the Site, the July mobilization will complete the removal action.

#### 2.2.2 Issues

The Site experienced significant flooding during this reporting period, as described earlier in this POLREP. There was an attempted break-in of the equipment the first night of the mobilization. The City responded with additional police patrols and EPA initiated part-time overnight security.

### **2.3 Logistics Section**

The following equipment was used during the reporting period:

- 2 - pickup trucks
- 1 - bull dozer
- 1 - skid steer
- 1 - water tank (dust control)
- 1 - drill rig
- 3 - DataRams with Viper

CMC driver and delivery equipment stayed on Site due to short mobilization time.

### **2.4 Finance Section**

No information available at this time.

### **2.5 Other Command Staff**

#### **2.5.1 Safety Officer**

Kathy Halbur, OSC

## **3. Participating Entities**

### **3.2 Cooperating Agencies**

City of Ironwood  
Gogebic County Soil and Erosion Control District  
Gogebic-Iron Wastewater Plant  
Michigan Department of Community Health  
Michigan Department of Environmental Quality  
Western Upper Peninsula Health Department  
Wisconsin Department of Health Services  
Wisconsin Department of Natural Resources

## **4. Personnel On Site**

During this reporting period:

USEPA: 1 (Halbur)  
START (Weston): 1  
ERRS (LATA-Kemron & CMC): 5

## **5. Definition of Terms**

ATV - All terrain vehicle  
BGS - Below Ground Surface  
CWG - carburated water gas  
ERRS - Emergency and Rapid Response Services  
IDW - Investigation Derived Waste  
GSI - groundwater surface-water interface  
MDEQ - Michigan Department of Environmental Quality  
MDNR - Michigan Department of Natural Resources  
MGP - Manufactured Gas Plant  
OSC - On Scene Coordinator  
PAH - polyaromatic hydrocarbons  
POTW - publicly owned wastewater treatment works (local wastewater treatment plant)  
PRP - Potentially Responsible Party  
RDCC - Residential Direct Contact Criteria  
RM - Response Manager  
START - Superfund Technical Assessment and Response Team  
SVOC - semivolatile organic compounds  
USCG - United States Coast Guard  
USEPA - United States Environmental Protection Agency  
VOC - volatile organic compounds  
WDNR - Wisconsin Department of Natural Resources  
WUPHD - Western Upper Peninsula Health Department

## **6. Additional sources of information**

### **6.1 Internet location of additional information/report**

Please see the following websites for project updates:

[www.epa.gov/region5/cleanup/ironwood](http://www.epa.gov/region5/cleanup/ironwood)  
[www.epaossc.org/ironwoodmcp](http://www.epaossc.org/ironwoodmcp)

### **6.2 Reporting Schedule**

Please see the following websites for project updates:

[www.epa.gov/region5/cleanup/ironwood](http://www.epa.gov/region5/cleanup/ironwood)

[www.epaossc.org/ironwoodmcp](http://www.epaossc.org/ironwoodmcp)

Progress Polreps will be issued as significant activities occur.

## 7. Situational Reference Materials

R5 Priorities Summary		
This is an Integrated River Assessment. The numbers should overlap.	Miles of river systems cleaned and/or restored	<1
	Cubic yards of contaminated sediments removed and/or capped	150
	Gallons of oil/water recovered	0
	Acres of soil/sediment cleaned up in floodplains and riverbanks	2
Stand Alone Assessment	Acres Protected	4
	Number of contaminated residential yards cleaned up	0
	Human Health Exposures Avoided	100
	Number of workers on site	11
Contaminant(s) of Concern		
Contaminant(s) of Concern	Coal tar, VOCs, SVOCs, inorganic materials, PM	