

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



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V

Subject: **POLREP #6**
Final
Ironwood Manufactured Gas Plant Site
B5ZC
Ironwood, MI
Latitude: 46.4516240 Longitude: -90.1780130

To:
From: Kathy Halbur, OSC
Date: 2/21/2014
Reporting Period: 6/18/2013-1/22/2014

1. Introduction

1.1 Background

Site Number:	B5ZC	Contract Number:	EP-S5-08-04
D.O. Number:	0051	Action Memo Date:	8/9/2012
Response Authority:	CERCLA	Response Type:	Time-Critical
Response Lead:	EPA	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	8/20/2012	Start Date:	8/22/2012
Demob Date:	9/27/2013	Completion Date:	1/22/2014
CERCLIS ID:	MIN000510500	RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:		Reimbursable Account #:	

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), polycyclic aromatic 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 POLREPS 1-4 for details. The Site was dormant over the winter. EPA remobilized to the Site in June, 2013 to continue restoration activities. See POLREP 5 for details regarding the over-winter site security measures, spring flooding, and the June, 2013 mobilization.

USEPA, START, and ERRS remobilized to the Site July 15-17, 2013 and completed the following activities:

- Collected groundwater samples from four of the on-site monitoring wells,
- Conducted a survey of the property and associated significant features,
- Completed site restoration, including additional seeding and removing temporary fencing,
- Began the design and procurement of permanent marker, and
- Met with the City of Ironwood regarding transition of the Site from the EPA to the City and the Institutional Control requirements.

EPA conducted site visits and met with City of Ironwood officials regarding Institutional Control and Operation and Maintenance (O&M) requirements (e.g., mandatory site inspections) on July 29, 2013 and August 19, 2013. MDEQ joined EPA on August 19, 2013. EPA also met with Coleman Engineering frequently during this period regarding the Site survey.

On September 23, 2013, a Declaration of Restrictive Covenant and Grant of Environmental Protection Easement for the property was recorded under Liber 561, Pages 80-94, Gogebic County, MI. A copy of the Covenant is available in the Documents section of the website (www.epaosc.org/IronwoodMGP).

On September 27, 2013, a permanent marker was installed at the entrance to the Site (i.e., the corner of Ayer and Hemlock Streets). The permanent marker provides a brief description of the history of the Site, the removal action, and the future use restrictions. ERRS oversaw the installation of the marker.

EPA and MDEQ conducted a site visit and met with City of Ironwood officials on November 4, 2013. The O&M Agreement (the document that specifies the City of Ironwood's continuing obligations for the Site and the associated reporting requirements) was finalized during the meeting.

EPA completed its review of the draft "Final Letter Report" for the removal action on January 15, 2014. The report was finalized on January 22, 2014. A copy of the Final Letter Report is posted in the Documents Section (www.epaosc.org/IronwoodMGP).

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 assisted the cleanup by contributing in-kind services.

2.1.3 Progress Metrics

See previous POLREPS for summary of waste generated during this removal action.

2.1.4 Regional Metrics

Regional Metrics		
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	Number of contaminated residential yards cleaned up	0
	Number of workers on site	11
Contaminant(s) of Concern	Coal tar, VOCs, SVOCs, inorganic materials, PM	
Oil response Tracking		
Estimated volume	Initial amount released	NA
	Final amount collected	NA
CANAPS Info	FPN Ceiling Amount	NA
	FPN Number	NA
	Body of Water affected	Montreal River

2.2 Planning Section

2.2.1 Planned Response Activities & Next Steps

The Site has been transferred from EPA to the City of Ironwood. The City will be monitoring the Site, per the O&M Agreement.

2.2.2 Issues

One of the five groundwater monitoring wells was not sampled during the July, 2013 mobilization due to the suspected presence of coal tar in the well (from contaminated groundwater).

2.3 Logistics Section

Nothing to report.

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
Michigan Department of Environmental Quality
Wisconsin Department of Natural Resources

4. Personnel On Site

During this reporting period:

USEPA: 1 (Halbur)
MDEQ: 1 (Harrington)
START (Weston): 1
ERRS (LATA-Kemron): 1

5. Definition of Terms

Not applicable.

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

6.2 Reporting Schedule

This is the Final POLREP. Removal action is complete.

7. Situational Reference Materials

No information available at this time.