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

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V

Subject: **POLREP #2**
Progress
Ironwood Manufactured Gas Plant Site
B5ZC
Ironwood, MI
Latitude: 46.4516240 Longitude: -90.1780130

To:
From: Kathy Halbur & Jacob Hassan, OSC
Date: 9/8/2012
Reporting Period: 8/28/12 to 9/7/12

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:		**Completion Date:**	
CERCLIS ID:	MIN000510500	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

Time-Critical

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 contains MGP waste material, such as coal tar and other process waste, that are the source of hazardous substances that have migrated and are migrating 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), polyaromatic 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

See Initial Polrep for details regarding activities during previous reporting periods.

Significant Site Activities for this reporting period:

- On August 30th, 2012, EPA and START began field screening suspected contaminated soil generated from the City of Ironwood's road construction project immediately adjacent to the site. The soil piles had a slight odor to them, however, they had no visual contamination and the average PID head space samples were below the threshold established in the Soil Screening and Post Excavation plan for the site. This material will be used on site as backfill or a solidifying agent for the disposal of coal tar material found during the excavation.
- On September 4th, 2012, Excavation activities began on the northwest corner of the site near the Montreal River. Absorbent boom was deployed along the shoreline of the excavation area and downstream as a protective measure in the event of an accidrental release of waste material to the river. Excavation activities focused on removing the visual coal tar material found at the surface and removing any underlying coal tar material and distribution/drainage pipes found in the area. In the excavation area, two 6" clay pipes were uncovered that contained a significant amount coal tar material. In total, the coal tar was found at depths ranging from 5 to 10'.
- On September 5th, 2012, excavation activities continued in the northwest corner of the site. The contaminated coal tar soil is about 5 feet below ground surface (bgs) and extends to about 10 feet bgs. EPA attended the City of Ironwood's planning commission meeting to discuss potential restoration plans. The City will provide EPA with comments on the post-removal surface restoration plan by September 21.
- On September 6th, 2012, trucking and disposal operations commenced. An estimated 100 tons of contaminated coal tar soil was transported to the K&W landfill in Ontonagan, MI for disposal. Excavation activities moved to the northeast corner of the site near the location of the MGP processing building. Crews were able to identify the foundation of the building and determined that there is little soil contamination north of the MGP processing building foundation. While removing the building's foundation, crews uncovered a 2,000 gallon vat of coal tar residuals underneath the building. Samples of the coal tar material were taken and sent to a laboratory for analysis.

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

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*
Coal Tar Soil	Soil	300 tons	T75386 T75387 T75388 T75389 T75390 T75391	Landfill	K&W Landfill, Ontonagon, MI

2.2 Planning Section

2.2.1 Anticipated Activities

USEPA will hold community office hours every Thursday evening from 5pm to 6 pm in the Engineering Room on the second floor of the City of Ironwood's Memorial Building, 213 S. Marquette Street

2.2.1.1 Planned Response Activities & Next Steps

The following activities are planned for the next reporting period:
- Continue air monitoring efforts and dust control measures
- Continue vegetation removal efforts
- Continue community office hours
- Continue to evaluate discovered coal tar vat
- Continue excavation activities and finalize Site excavation plan
- Continue to haul contaminated material to the landfill
- Collect and temporarily store wasted/groundwater generated from the excavation activities
- Finalize final grading and restoration plan

2.2.2 Issues

The future use of the Site and the adjacent property is still under discussion by the respective property owners, MDEQ, and EPA. Uncertainty related to future use has resulted in access restrictions on the neighboring property (340 W. Ayer Street) and delays in restoration planning. EPA and MDEQ met with impacted property owners and attended the City's Planning Commission meeting this reporting period to facilitate resolution of this issue.

The City streets adjacent to the Site (Hemlock & Ayer Streets) are still under construction as part of the City's sewer and water line replacement project. The condition of these roads and the material used for the on-site haul road (local mine rock provided by the City) resulted in a tracking problem on neighborhood streets. Attempts made by the EPA and City to address the tracking problem resulted in an unanticipated sediment release to the Montreal River. The on-site haul roads are being re-engineered and the City streets are scheduled to be paved during the next reporting period to address the tracking issue.

2.3 Logistics Section

The following equipment was used during the reporting period:

1 - 1/2 ton pickup truck
3 - 3/4 ton pickup trucks
2 - excavators
1 - front end loader
1 - bull dozer
1 - wood chipper
1 - water truck (dust control)
1 - 21,000 gallon frac tank
1 - 12' x 60' office trailer
1 - 10' cargo trailer
1 - portable satellite unit
4 - DataRams with Viper
1 - Multi-Rae
1 - Summa Canister
1 - Gillian Pump

No additional equipment is anticipated at this time.

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

2.5.1 Safety Officer

Kathy Halbur, OSC
Jacob Hassan, OSC

3. Participating Entities

3.2 Cooperating Agencies

City of Ironwood
Gogebic County Soil and Erosion Control District
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:

U.S. EPA: 2 (Halbur, Hassan)
START (Weston): 2
ERRS (LATA-Kemron & CMC): 8

5. Definition of Terms

ATV - All terrain vehicle
BGS - Below Ground Surface
CWG - carburated water gas
ERRS - Emergency and Rapid Response Services
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
PRP - Potentially Responsible Party
RDCC - Residential Direct Contact Criteria
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
www.epaosc.org/ironwoodmgp

6.2 Reporting Schedule

Please see the following websites for project updates:
www.epa.gov/region5/cleanup/ironwood
www.epaosc.org/ironwoodmgp

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	TBD
	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	