

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
E12504 - Fenner's Bayou (ditch) - Removal Polrep
Initial Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V

Subject: **POLREP #1**
Investigation - initial
E12504 - Fenner's Bayou (ditch)
Z5L4
Muskegon, MI
Latitude: 43.2666684 Longitude: -86.2773998

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From: Jeffrey Kimble, OSC

Date: 6/25/2012

Reporting Period:

1. Introduction

1.1 Background

Site Number:	Z5L4	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	OPA	Response Type:	Time-Critical
Response Lead:	EPA	Incident Category:	Removal Assessment
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	6/18/2012	Start Date:	6/18/2012
Demob Date:		Completion Date:	
CERCLIS ID:		RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:	E12504	Reimbursable Account #:	Z5L4

1.1.1 Incident Category

OPA90 assessment.

1.1.2 Site Description

The site is a suspected leaking well in a residential area in Muskegon, Michigan. The current owners of the property were unaware a well was located there until it began leaking after they purchased the home.

The leak location is adjacent to Fenner's Ditch in the backyard of a residence on Wedgewood Street. The backyards are extremely sloped so that the ditch sits well below the houses making access limited. The

ditch empties into Bear Lake several hundred yards downstream from where the leak is at.

1.1.2.1 Location

The site is in the backyard of 681 West Wedgewood Drive in Muskegon, MI.

1.1.2.2 Description of Threat

Oil, suspected to be crude, is slowly but continuously leaking from a suspected former investigation well adjacent to a creek. At times when the groundwater table increases, the leak also has a pronounced increase of volume. The spot of the leak may at one time have been under water as the ditch was widened and channeled from its natural state when the area was developed. However, the current conditions show the majority of the leak several feet from the waters edge.

The Michigan Department of Environmental Quality (MDEQ) has been applying and maintaining sorbent material to manage the release, but some oil/sheen still escapes to the ditch and Bear Lake.

The investigation well was abandoned in or around 1929 by dropping a steel ball down the hole and removing the top several hundred feet of well casing. It is suspected the oil is traveling up throughout the old borehole in the clay and then filtering up through the upper sand layer (40 to 70 feet thick).

The lack of casing has made the task of properly closing/abandoning the well difficult. MDEQ asked EPA for assistance in the hopes EPA had investigation tools that MDEQ did not have access to that may help pinpoint the location of the old borehole and allow the capping to commence.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

The results will be discussed in the Operations section since this SITREP is being created to explain the assessment.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

EPA mobilized from June 18th through June 22nd and conducted assessment activities at the site.

2.1.2 Response Actions to Date

EPA conducted a geophysical assessment of the area of the Fenner's Bayou site from June 18th through June 22nd, 2012. Several technologies were deployed in an attempt to locate or identify the former well, a brine plume, indications of unnatural fill patterns, and the general lithology of the area.

The EPA FOSC for the site solicited the assistance of EPA ERT staff and their contractors to conduct the geophysical survey and assessment at the site. EPA ERT mobilized four types of survey equipment to the site and conducted the field portion of the activities from June 18th through June 22nd, 2012.

The following was conducted:

EM-31

The electromagnetic technique was used to survey terrain conductivity for potential preferential pathways and as a metal detection survey instrument. The instrument would also detect an associated brine plume.

Magnetometer

This technique was utilized to detect ferrous metal that would be associated with a well casing or potential debris disposed of in the borehole.

Resistivity

The resistance technique was employed to develop a geologic cross sectional profile to attempt to locate preferential flow paths.

Transient Electromagnetics (TEM)

TEM was used to develop a depth profile to attempt to define the top of the clay layer or an anomaly that might reflect the borehole.

The data that was collected from the four units was downloaded to a computer and will need to be analyzed and interpreted. That work should tentatively be completed the week of June 25th, 2012.

Once the data is ready to be presented, EPA will organize a call with the geophysicist, ERT and MDEQ to review the findings. The group can then discuss next steps and if the information collected will be of any use in supporting a well closure.

EPA also collected two samples of the leaking oil and a background water sample. MDEQ provided EPA with a sample of crude from a production well in the same formation as this suspected leaking well. The samples were sent to USCG MSL for a match/no match comparison. The purpose of these samples is to attempt to confirm that the oil leaking to the ditch is similar to the crude being produced in the area. This will give more confidence that the leak is in fact from the old investigation well.

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

The current owners of the property were not born yet when the well was drilled and abandoned and had no knowledge of the issue when they purchased the property. Therefore, the FOSC did not feel it appropriate to issue them a NOFI. The FOSC is reviewing background records to determine if there are any companies still in existence that may be tied back to the exploration well.

2.2 Planning Section

2.2.1 Anticipated Activities

Discuss next steps with MDEQ.

2.2.1.1 Planned Response Activities

Completed.

2.2.1.2 Next Steps

Discuss results with MDEQ then determine next steps.

2.2.2 Issues

This site has many potential difficulties technically. The well may be too hard to find to properly cap. In that case, alternative measures, including long term O&M will need to be discussed.

2.3 Logistics Section

ERT provided the equipment through their technical contractor.

2.4 Finance Section

2.4.1 Narrative

The FPN ceiling for this site is \$40,000. This funding is for the investigation to determine how best to stop this leak as this site is not a straightforward well capping. The FOSC did not want to attempt to cap the well with so many unknown variables and with an unclear potential end result.

If the survey allows for a high degree of confidence that the well in fact can be capped properly, then the FOSC will discuss with MDEQ their capability to fund the work and/or will write a OPA90 Project Plan detailing the site needs to request funding for EPA to conduct the work.

2.5 Other Command Staff

2.5.1 Safety Officer

ERT's contractor provided the safety plan for this investigation.

2.5.2 Liaison Officer

The FOSC.

2.5.3 Information Officer

The FOSC.

3. Participating Entities

3.1 Unified Command

Although not conducted in ICS since this was an assessment, the following were the main groups involved.

MDEQ
EPA
EPA ERT

3.2 Cooperating Agencies

Muskegon County Health Dept.
Muskegon Twp.

4. Personnel On Site

EPA FOSC - Jeff Kimble

ERT - Don Bussey, Greg Powell
- plus 2 contractors

5. Definition of Terms

MDEQ = Michigan Department of Environmental Quality

ERT = Environmental Response Team
USCG MSL = United States Coast Guard Marine Safety Laboratory

6. Additional sources of information

6.1 Internet location of additional information/report

http://www.mlive.com/news/muskegon/index.ssf/2012/06/federal_government_looks_for_c.html

6.2 Reporting Schedule

7. Situational Reference Materials

No information available at this time.

POLREP #1 Last Updated 6/25/2012