

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Hard Chrome Plating Site - Removal Polrep
Initial Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V

Subject: POLREP #1
Initial
Hard Chrome Plating Site
C57Z
Grand Rapids, MI
Latitude: 42.9356380 Longitude: -85.6435440

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From: Elizabeth Nightingale, OSC

Date: 12/2/2015

Reporting Period: 12/1/15-12/4/15

1. Introduction

1.1 Background

Site Number:	C57Z	Contract Number:	
D.O. Number:		Action Memo Date:	10/5/2015
Response Authority:	CERCLA	Response Type:	Time-Critical
Response Lead:	EPA	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	11/30/2015	Start Date:	11/30/2015
Demob Date:		Completion Date:	
CERCLIS ID:	MIN000505853	RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

Time Critical Removal Action

1.1.2 Site Description

The site is a former chemical plating facility, currently owned by the Kent County Land Bank. When the property tax reverted, historically accumulated plating wastes were abandoned in the building, and discovered by the Land Bank.

1.1.2.1 Location

The site is located at 1516 Blaine Avenue SE, Grand Rapids, Kent County, Michigan 49507. The site totals approximately 1/4 acre, and contains a one story industrial building and an open lot. The site was recently occupied by the Hard Chrome Plating and HCP Finishing LLC companies, and tax reverted to the Kent County Land Bank in 2014.

1.1.2.2 Description of Threat

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.

The site is located in a mixed industrial/residential area. River Scholars School is located directly across the street, and 23,500 people live within 1 mile of the site. Approximately 160 drums, 14 tanks of hazardous waste and numerous small containers and lab chemicals are abandoned at the site. With limited building security, exposure could result from trespass, an accidental or intentional release, and/or fire.

Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.

None of these containers identified at the site had secondary containment. Minor to moderate spillage/leaking was observed inside and outside of the building. The building shows signs of severe disrepair, with a leaking roof and broken windows.

Weather conditions that may cause hazardous substances, pollutants, or contaminants to migrate or be released.

Grand Rapids averages 32 inches of annual precipitation per year, and winter temperatures are normally well below freezing. Weather conditions will continue to contribute to the deterioration of the building, and precipitation will continue to cause damage to drums and containers. The freezing of waste can lead to bulging and rupture of drums.

Threat of fire or explosion.

Because the building is abandoned, there is a high threat of fire at the site. Several containers are marked as flammable and oxidizers, and an EPA sample was found to be half the 140 °F flash point characteristic of ignitable hazardous waste. If a fire were to occur, it would have the potential to produce toxic gases, irritants, acidic-smoke, and contaminated fire-water runoff. The presence of approximately 160 drums likely containing characteristically toxic waste, combined with other debris increases the threat of fire.

The availability of other appropriate federal or state response mechanisms to respond to the release.

No other federal or state response mechanism is available to respond in a timely manner given the exigencies of the situation.

Given the conditions at the site, the nature of the known and suspected hazardous substances at the site, and the potential exposure pathways described above, actual or threatened releases of hazardous substances from this site, if not addressed by implementing the planned removal action, may present an imminent and substantial endangerment to public health or welfare, or to the environment.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

On August 3, 2015, EPA conducted a site assessment that confirmed approximately 160 drums, 14 vats, and a large number of small containers and lab chemicals at the site. Some of the drums show signs of deterioration, damage, and possible leaking. Labels on some containers indicated the potential presence of ammonium hydroxide, muriatic acid, sulfuric acid, nickel compounds, hydrochloric acid, sodium hydroxide, trioxochromium, chromium (IV) trioxide, copper sulfate, and other chemicals.

EPA collected 8 samples during the site assessment. Analytical results were compared to the criteria set forth in 40 CFR Part 261 to determine whether the wastes stored at the site are considered hazardous. The analytical results for all 8 samples, which are summarized below, indicated the presence of characteristically hazardous wastes at the site:

- Arsenic, chromium, lead, and mercury levels as high as 140 milligrams/liter (mg/L), 120,000 mg/L, 1,100 mg/L, and 0.35 mg/L, respectively. These results are above the hazardous waste levels for arsenic, chromium, lead, and mercury of 5.0 mg/L, 5.0 mg/L, 5.0 mg/L, and 0.2 mg/L, respectively.
- The pH of one container sample and four tank samples were below 1, while the pH of one drum sample was 14. A waste is considered hazardous, for corrosivity, if it has a pH less than or equal to 2 or greater than or equal to 12.5.
- The flashpoint of one bucket sample was 71°F. A waste is considered hazardous, for ignitibility, if it has a flashpoint below 140°F.

We are considering all containers to have unknown contents until further characterization is completed.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

2.1.2 Response Actions to Date

2.1.2.1 Actions During Reporting Period

Over the week beginning the December 1, 2015 work focused primarily on the following activities:

- Project planning, setup, orientation and coordination
- Drafting and revising the site health and safety plan
- Drafting the site air monitoring plan, implementing air monitoring and setting up VIPER to report out results over the internet
- Finalizing and distributing the site emergency contingency plan to the local fire and police departments; the County Emergency Management Agency, Health Department and Land Bank; the hospital
- Finalizing and distributing a post card about the removal action to the neighborhood surrounding the site.
- Clearing perimeter debris from the site and non-hazardous debris within the building
- Implementing site security measures including fencing and signage
- Establishing the exclusion and contamination reduction zones
- Establishing a staging area for containers
- Reconnecting electricity to office area within building-Trial run depressurizing bulging drum and sampling in level B PPE

2.1.2.2 Air Monitoring

Every day that cleanup activity work will be ongoing, air monitoring will be conducted to ensure public and worker safety. Chemical hazards due to fugitive emissions from removal activities are anticipated to be low since the crew will employ administrative and engineering controls to minimize fugitive emissions and particulates that migrate off-site.

Meteorological data will be obtained daily from the NWS website that provides current weather conditions and documented in the site logbook.

A website has been established to view the current and past perimeter air monitoring data for the site. To view the data go to the web address: vipер.ert.org. You have to create a login on your first visit to the site. Once logged in, go to the R05 Hard Chrome Metals Deployment to view site data.

Particulate Air Monitoring:

Datarams (DR4) are deployed daily at three fixed locations in each direction along the site perimeter boundaries where off-site receptors are most at risk to exposure from fugitive emissions, and at one location within the building in the work zone. Real-time PM-10 particulate data is transmitted back to the site command post where it is monitored continuously.

The perimeter action level for PM-10 particulates has been set at 150 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), averaged over the work day. The work zone action level is 2.5 milligrams per cubic meter (mg/m^3) averaged over the work day. Should a DR4 unit detect sustained particulate concentrations above the action levels, the source of emissions will be investigated, and administrative and/or engineering controls will be initiated to reduce the particulate emissions.

During the week of December 1, 2015, no exceedances of the perimeter or work zone action levels (calculated as work day averages) for particulates were detected.

MultiGas Air Monitoring:

RAE Systems, Inc. AreaRAE multi-gas monitors are being deployed in the work zone in the building and at 3 perimeter locations during any chemical handling. The AreaRAE multi-gas monitors will be used to monitor oxygen (O_2) in percent, hydrogen sulfide (H_2S) in ppm, hydrogen cyanide (HCN) in ppm, VOCs (ppm), and percent lower explosive limit (LEL). Real-time multigas data are transmitted back to the site command post where they are monitored continuously.

The perimeter action levels are as follows:

$\text{H}_2\text{S} = 0.5 \text{ ppm}$

$\% \text{LEL} = >5\%$

$\text{VOCs} \geq 5 \text{ ppm for 5 minutes}$

$\text{HCN} = 2.0 \text{ ppm}$

$\% \text{O}_2 - \text{Less than } 19.5\% \text{ or greater than } 23.5\%$

Work zone action levels are available in the Air Monitoring Plan (see documents section of epaos.org/hardchromeplating).

A MultiRAE Plus 5-gas monitor (loaded with sensors for detection of oxygen, carbon monoxide, hydrogen sulfide, LEL, and VOCs) will be used to monitor for carbon monoxide (CO) in ppm, and periodically spot check AreaRAE data. Ammonia (NH_3) and HCN GasAlert monitors will also be used continuously in the work zone during chemical handling.

Multigas monitoring was only conducted on December 4, 2015, as that was the only day that chemicals were handled. We are troubleshooting HCN and H_2S problems on a couple AreaRAEs - they are indicating low levels of gas in the atmosphere. However, we double checked these readings with the MultiRAE and Gas Alert monitors and are not seeing any detections. We are working to correct the issue.

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

General notice letters were issued to current and former owners of the property. Investigation is ongoing.

2.1.4 Progress Metrics

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>
Solid	Non-Hazardous Debris	8 Tons	n/a		x

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

The following actions were planned in the action memorandum approved for the Hard Chrome removal action:

- a) Develop and implement a site health and safety plan;
- b) Develop and implement an air monitoring plan;
- c) Develop a contingency plan for site work and distribute to local responders;
- d) Develop and implement a work plan; and
- e) Secure, characterize, remove, and properly dispose of the drums, containerized wastes, spilled waste materials, and hazardous debris located at the site.

All hazardous substances, pollutants or contaminants removed off-site pursuant to this removal action for treatment, storage, and disposal shall be treated, stored, or disposed of at a facility in compliance with the EPA Off-Site Rule, 40 C.F.R. § 300.440, as determined by EPA.

The removal action will be conducted in a manner not inconsistent with the NCP. Elimination of threats presented by containerized and spilled hazardous substances is expected to eliminate the need for post-removal site actions.

2.2.1.2 Next Steps

Over the next week, we will begin work to stage containers, sample containers and categorize wastes.

2.2.2 Issues

None at this time.

2.3 Logistics Section

ERRS is managing site logistics.

2.4 Finance Section

2.4.1 Narrative

An ERRS cost estimate to date will be available next week. START costs are estimated through November 27, 2015.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	\$200,000.00	\$0.00	\$200,000.00	100.00%
TAT/START	\$30,000.00	\$5,837.00	\$24,163.00	80.54%
Intramural Costs				
Total Site Costs	\$230,000.00	\$5,837.00	\$224,163.00	97.46%

* 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
OSC is serving in this role.

2.5.2 Liaison Officer
OSC is serving in this role.

2.5.3 Information Officer
OSC is serving in this role.

3. Participating Entities

3.1 Unified Command

3.2 Cooperating Agencies

Kent County Land Bank
MDEQ

4. Personnel On Site

12/1/15
EPA: 3
START: 1
ERRS: 1
Grand Rapids Fire Department: 8
Kent County Land Bank: 2

12/2/15
EPA: 1
START: 1
ERRS: 6
Kent County Land Bank: 1

12/3/15
EPA: 1
START: 1
ERRS: 6

12/4/15
EPA: 1
START: 1
ERRS: 6

5. Definition of Terms

ATSDR Agency for Toxic Substances and Disease Registry
BZ Breathing Zone
CERCLA Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS Comprehensive Environmental Response, Compensation, and Liability Information System
DNR Department of Natural Resources
EPA Environmental Protection Agency
ERNS Emergency Response Notification System
ERRS Emergency and Rapid Response Service
MDEQ Michigan Department of Environmental Quality
NCP National Oil and Hazardous Substance Pollution Contingency Plan
mg/m³ milligrams per cubic meter
NOAA National Oceanic and Atmospheric Administration
NPL National Priorities List
NRC National Response Center
OSC On Scene Coordinator
PPE Personal Protective Equipment
PPM Parts per million
RCRIS Resource Conservation and Recovery Act Information System
RP Responsible Party
RRT Regional Response Team
START Superfund Technical Assessment and Response Team
ug/m³ micrograms per cubic meter
US FWS United States Fish and Wildlife Service
USCG United States Coast Guard
VOC Volatile Organic Compound

6. Additional sources of information

6.1 Internet location of additional information/report

www.epaosc.net/hardchromeplating

and

viper.ert.org. Once logged in, go to the R05 Hard Chrome deployment to view site data.

6.2 Reporting Schedule

POLREPs will typically be issued weekly over the course of the removal action.

7. Situational Reference Materials

No information available at this time.

POLREP #1 Last Updated 5/22/2016