

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Riddle Drum - Removal Polrep

**CON 12-15**  
**Doc #24500**



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**Region VII**

**Subject:** POLREP #2  
Removal Action Final Polrep  
Riddle Drum  
A7S2  
Monticello, IA  
Latitude: 42.2356383 Longitude: -91.1834273

**To:**  
**From:** Susan Fisher, OSC  
**Date:** 8/17/2010  
**Reporting Period:** July 12, 2010

**1. Introduction**

**1.1 Background**

<b>Site Number:</b>	A7S2	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	5/24/2010
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Time-Critical
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Assessment
<b>NPL Status:</b>	Non NPL	<b>Operable Unit:</b>	00
<b>Mobilization Date:</b>	7/12/2010	<b>Start Date:</b>	7/13/2010
<b>Demob Date:</b>		<b>Completion Date:</b>	10/21/2010
<b>CERCLIS ID:</b>	IAN000706068	<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	Mel Pins
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

**1.1.1 Incident Category**

*CERCLA incident category: Inactive Circuit Board Printing Facility*

**1.1.2 Site Description**

**1.1.2.1 Location**

The Riddle Inc Company was located at 615 E Washington, Monticello, Iowa in Jones County (Site). (42.2356383 latitude, -91.1834273 longitude). Riddle Inc operated as a circuit board printing company. Operations began around 1985 and ceased in 1991. The site consist of an approximate 21,870 square foot building.

The Site is bordered to the north by a vacant wooded area, to the east by Kitty Creek, to the south by industrial properties, and to the west by residential properties. The residential community of Monticello, Iowa surrounds the Site. The population of Monticello is approximately 3,600 people.

**1.1.2.2 Description of Threat**

IDNR and EPA investigations documented more than 200 drums and containers filled to varying levels with a variety of known and unknown chemical waste. Also documented were several piles of waste on the floor of the main building and a lined pit containing hazardous substances in the dirt floor at the back of the building. When present, labels identified some of the chemicals in the drums and containers as nitric acid, sulfuric acid, sodium hydroxide, calcium hydroxide, formaldehyde, and thiourea. Also, the owner stated that there was potassium cyanide on-site. These wastes are hazardous substances as defined by section 101(14) of CERCLA and are listed at 40 CFR § 302.4.

Additionally, the building has flooded several times, most recently in August 2009. Water reached approximately three feet inside the building and moved drums and containers from their original resting place.

### **1.1.3 Preliminary Removal Assessment/Removal**

The Iowa Department of Natural Resources (IDNR) became aware of the site when the City of Monticello contacted IDNR's Brownfield Redevelopment Program. The City of Monticello requested assistance in conducting an environmental due diligence process on the city's behalf, as the city planned to take title to the site, demolish the building, and redevelop the site as a greenbelt park and natural habitat restoration project. The city was greatly concerned with a reported large collection of waste drums and materials in the building at the site and recurring flooding of the building from nearby Kitty Creek.

Both IDNR brownfield and environmental services staff visited the site and observed and documented more than 200 drums and containers containing suspected hazardous materials and wastes. Based on the large number and variety of potentially hazardous waste materials within the building, IDNR did not have the resources to perform a removal action. On October 7, 2009, IDNR referred the site to EPA and recommended that a time-critical removal action be performed to identify and removed on-site.

EPA performed an initial walk through of the site, and noted the following:

- The building is approximately 21,870 square feet.
- Operations ceased in 1991 and no process waste had been removed from building.
- The building is in poor shape, several holes exist in the roof allowing water to flow freely into the building.
- Kitty Creek is located adjacent to the site, and has flooded the building on several occasions since 1991, with the last flooding event in August 2009.
- Over 200 drums containing corrosives, acids, oxidizers as well as unknown materials are scattered throughout the building.

EPA performed a Removal Assessment (RA) at the site the week of November 30, 2009. During the RA:

- Over 200 waste samples were collected and field screened.
- 17 waste samples, 2 water samples and a soil sample were sent in for laboratory analysis.

### **Site Inspection Results**

Analytical results showed hazardous waste is present at the site. EPA has determined that there is a threat to public health or welfare of the environment and a removal action is warranted at the site.

## **2. Current Activities**

### **2.1 Operations Section**

#### **2.1.1 Narrative**

On July 12, 2010, On Scene Coordinator (OSC) Fisher, START, and ERRS contractors mobbed to Monticello, Iowa to begin removal activities at the Riddle Drum site. OSC Fisher met with the owner of the building to get the keys. Owner stated that he had removed his personal items from the building.

Removal activities began on July 13, 2010. The removal began by clearing ingress and egress pathways throughout the building. Fluorescent light bulbs and ballast were removed for proper disposal. The main room of the building was cleared of debris to be used as a working area for staging containers by hazard class, and bulking operations. OSC Fisher and Dave Kinroth (START) began labeling all drums and containers that had

previously been sampled and field screened during removal assessment activities with their hazard category. Evan Wortman, ERRS Project Manager and crew staged drums and containers by hazard class. Some open top containers could not be moved because of potential spill hazards. Fisher and Kinroth field screened drums and containers that had not been field screened during the removal assessment do to being located behind and under debris. Once drums and containers that could be moved were staged, bulking operations began. Containers that could not be moved were bulked at their location. Materials from the lab were segregated by hazard class and lab packed for shipment. Sludge material was identified and bulked in the back room. Ground corn cob was used to solidify the sludge material so it can be hauled off to a CERCLIS approved landfill. Once sludge material was solidified, it was moved outside on the east side of the building onto a plastic liner and covered with a tarp. A sample of the material was collected and sent for laboratory analysis. Upon receiving analytical results, the results were sent to the CERCLIS approved Prairie Hills RDF landfill, Morrison, Illinois. Once the poly drums were emptied they were cut up and put into a trailer provided by BES Recycling, Cedar Rapids, Iowa. BES will shred the poly drums, and the material will be used for various post consumer products. Poly drums that were not able to be recycled were deposited in a roll off, and hauled to Prairie Hill Landfill, Morrison, Illinois. There were several pieces of metal material in the building, including lead, copper, iron and steel. There were also several large pieces of machinery including an old motorcycle, snowmobile, fork lift and machines that were used for the circuit board printing process. Because the building had been flooded several times, the machinery was rusted and in non-working condition. OSC Fisher talked to owner of the building about recycling the machines along with the various metals found inside the building. The owner stated that he did not want anything, and it was ok to go ahead and recycle it. All metal materials, including the old machinery was picked up by Dittmer Recycling, Inc., Cedar Rapids, Iowa. All proceeds from recycling will be credited back to the project. Several lead batteries were collected and taken to The Battery Center, Dubuque, Iowa for recycling.

On July 13, 2010, a reporter with the Monticello Express stopped by, she had a copy of the fact sheet, and took pictures of work being done inside the building.

On July 15, 2010, Mel Pins and Joe Sanfilippo with Iowa Department of Natural Resources, and Doug Herman, City Manager of Monticello, IA walked through the building. Mr. Riddle is planning on donating the building to the city once removal is complete.

On Saturday, July 24, 2010, the Delhi Lake Dam failed, draining the lake into the Maquoketa River. Delhi Lake is north and upstream of Monticello, Iowa. Kitty creek, which is adjacent to the Riddle Drum site, flows into the Maquoketa River. Monticello received notification around 10:00 a.m. on Saturday that the Delhi Dam was going to fail. Once failure occurred it was anticipated that water overflow from the Maquoketa River would backflow into Kitty creek. All removal equipment belonging to EPA, ERRS, and START was removed from the building. Bungs were tightened down on all containers, and smaller containers were placed on high shelves located in one of the storage rooms. Sludge material was staged in the back room along the south wall and outside on a plastic liner. The pile of sludge material located outside the building was covered with a tarp and clean soil was placed around the base of the tarp on all sides to hold it in place. Saturday afternoon Kitty Creek began flooding; the building was flooded with about three feet of water. The water began receding Sunday, July 25, 2010. On Monday morning, July 26, 2010, water was out of the building. The totes and various containers were not damaged. Water reached the bottom three feet of the sludge material pile, and a small amount of staining of the soil was observed around the outside sludge pile. No sludge material appeared to be transferred off-site.

By the end of the day on Thursday, July 29, 2010, all liquids were bulked. Sludge materials were transferred to the Prairie Hill landfill, Morrison, Illinois on Thursday and Friday, July 28 and 30, 2010. Totes are staged in the main room of the building until they are shipped for disposal. It is estimated that the liquids will not be shipped until the week of August 23, 2010. Orange fencing will be put up in the back of the building to block the outside openings. OSC Fisher conducted a final walk through of the building with Doug Herman, City Manager, the Monticello Police Chief and Fire Chief. Discussed the security of the building, and the types of chemicals that were staged to be shipped. We supplied a list of the waste inventory along with OSC Fisher and ERRS Project Manager, Evan Wortman, cell phone numbers in case of emergency.

August 25, 2010 - Dennis Wilson, ERRS with crew of three arrived on-site to oversee shipment of totes and drums. OSC Fisher, Joe Ricard, EPA Geoprobe Operator and START, Bryant Merriman, collected confirmation soil and groundwater samples with a geoprobe. Samples were collected to confirm no contamination from the circuit board printing operations contaminated the soil or groundwater. Analytical results showed the presence of arsenic in groundwater above the maximum contaminate level (MCL).

October 19, 2010, OSC Fisher and START Rob Monning mobbed to the site to collect groundwater and soil samples for further analysis of the arsenic contamination. Analytical results of the soil and groundwater collected were received on November 19, 2010.

Arsenic was found in the groundwater at approximately 89 ug/l. The EPA MCL for arsenic in drinking water is 10 ug/l. Several groundwater samples were taken in the area. The arsenic level in groundwater just 100 feet downgradient of the facility was found to be approximately 17.8 ug/l. To EPA's knowledge arsenic was not managed at the plating facility. Arsenic is naturally occurring in the soils and groundwater in the area. The

higher than background concentrations of arsenic in the groundwater at the facility is most likely due to a release of acidic plating wastes at the facility which would have easily mobilized the arsenic in the soil to leach into the groundwater, thereby causing/yielding higher arsenic levels in the nearby groundwater. Given the localized nature of the arsenic found in the groundwater, the fact that the facility/area will be developed into park, and the fact that the city will not allow the placement and use of water supply wells in the park, no further removal action work is warranted by EPA.

### 2.1.2 Response Actions to Date

Action memo was completed and signed May 24, 2010.

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

PRP has been identified.

### 2.1.4 Progress Metrics

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Recycled</i>	<i>Disposal</i>
Characteristic Haz Waste	Waste Water	1210 gallons	007164191JJK		EQ - Detroit
Ethylene Glycol	Liquid	85 gallons	007164199JJK		EQ - Detroit
Fluorescent Light Bulbs	Solid	75 lbs	40256628		EQ - Detroit
PCB Ballasts	Solid	50 lbs	40256628		EQ - Detroit
Mercury	Solid	25 lbs	40256628		EQ - Detroit
Hazardous Waste	Solid	300 lbs	007164199JJK		EQ - Detroit
Hydrogen Peroxide	Liquid	1500 pounds	007164199JJK		EQ - Detroit
Sodium Hydroxide	Liquid	330 gallons	007164199JJK		EQ - Detroit
Oxidizer/Corrosives	Liquid	55 gallons	007164199JJK		EQ - Detroit
Ammonia Solution	Liquid	55 gallons	007164199JJK		EQ - Detroit
Hazardous waste	Liquid	1750 gallons	007164199JJK		EQ - Detroit
Flammable Liquids	Liquid	110 gallons	007164199JJK		EQ - Detroit
Sodium Nitrate	Solid	85 pounds	007164199JJK		EQ - Detroit
Flammable liquids	Liquid	85 gallons	007164199JJK		EQ - Detroit
Flammable Aerosols	Liquid	100 lbs	007164199JJK		EQ - Detroit
Solid Lead Acid Crystals	Solid	550 pounds	007164199JJK		EQ - Detroit
Lead Acid Solution	Liquid	2,365 gallons	007164199JJK		EQ - Detroit
Sulfuric Acid	Liquid	155 gallons	007164199JJK		EQ - Detroit
Lead Fluoroborate	Liquid	35 pounds	007164192JJK		EQ - Detroit
waste, flammable	Liquid	800 pounds	007164199JJK		EQ - Detroit
Scrap steel	Solid	8.86 tons		DR	
Copper, lead and Iron	Solid	6108 pounds		DR	
Sodium Cyanide	Solid	15 pounds	007164192JJK		EQ - Detroit

Gold Cyanide	Liquid	5 pounds	007164192JJK	EQ - Detroit
Aluminum Powder	Solid	25 pounds	007164192JJK	EQ - Detroit
Mecuric compounds	Solid	10 pounds	007164192JJK	EQ - Detroit
Waste, Toxic, Liquid, organic	Liquid	220 pounds	007164199JJK	EQ - Detroit
Oil/water	Liquid	110 gallons	007164199JJK	EQ - Detroit
metal powder	Solid	45 pounds	007164199JJK	EQ - Detroit
RCRA Empty Containers	Solid	6.49 tons	BES AmeriGas	PH
Poly Drums	Solid	300 drums		
LPG Cylinders	Solid	2 - 25 lb tanks		
Copper/Ferric sulfate Soil	Solid	310.94 tons		PH

\* DR - Dittmer Recycling

\* PH - Prairie Hill RDF

\*BES - BES Industrial Services (poly drum recycler)

Totals - Waste material approximately: 312 tons, 6,200 gallons, and approximately 14 tons of recycled material

## 2.2 Planning Section

### 2.2.1 Anticipated Activitie

Action Memorandum prepared and signed May 24, 2010.

#### 2.2.1.1 Planned Response Activities

Removal activities scheduled to begin July 7, 2010. Removal activities complete on October 21, 2010.

#### 2.2.1.2 Next Steps

#### 2.2.2 Issues

## 2.3 Logistics Section

## 2.4 Finance Section

### 2.4.1 Narrative

The below accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. 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.

#### Estimated Costs \*

	Budgeted	Total To Date	Remaining	% Remaining
<b>Extramural Costs</b>				
ERRS - Cleanup Contractor	\$253,905.00	\$150,000.00	\$103,905.00	40.92%

TAT/START	\$37,375.00	\$35,417.00	\$1,958.00	5.24%
<b>Intramural Costs</b>				
USEPA - Direct	\$58,256.00	\$28,744.00	\$29,512.00	50.66%
<b>Total Site Costs</b>	<b>\$349,536.00</b>	<b>\$214,161.00</b>	<b>\$135,375.00</b>	<b>38.73%</b>

\* 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 Safety Officer

Health and Safety plan complete, and approved by Roy Krueger, EPA SHEMP.

## 2.6 Liaison Officer

The City of Monticello, City Manager, Doug Herman and Iowa Brownfield Coordinator, Mel Pins have been notified of the removal start date, and removal activities.

## 2.7 Information Officer

**2.7.1 Public Information Officer** - Dianna Whitaker. A fact sheet has been completed and distributed in Monticello, IA. A administrative record site has been set up at the Monticello Public Library, Monticello, Iowa.

**2.7.2 Community Involvement Coordinator**

## 3. Participating Entities

### 3.1 Unified Command

### 3.2 Cooperating and Assisting Agencies

## 4. Personnel On Site

Name	Title
Susan Fisher	OSC
Kevin Larson	OSC
Megan Schutte	OSC
Doug Ferguson	OSC
Mike Davis	OSC
Joe Ricard	EPA
Bryant Merriman	START
Rob Monning	START
Dave Kinroth	START
Evan Wortman	ERRS (with crew)
Dennis Wilson	ERRS (with crew)

## 5. Definition of Terms

## 6. Additional sources of information

### 6.1 Internet location of additional information/reports

### 6.2 Reporting Schedule

## 7. Situational Reference Materials