

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Patterson Ave Battery Dump Site - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region IV

**Subject:** POLREP #2  
Progress Report - Excavation  
Patterson Ave Battery Dump Site  
  
Concord, NC  
Latitude: 35.4132000 Longitude: -80.5757910

**To:**  
**From:** Alyssa Hughes, On-Scene Coordinator  
**Date:** 7/12/2013  
**Reporting Period:** 7/8/13 - 7/11/13

## 1. Introduction

### 1.1 Background

|                            |              |                                |                |
|----------------------------|--------------|--------------------------------|----------------|
| <b>Site Number:</b>        | B41B         | <b>Contract Number:</b>        | EP-S4-07-04    |
| <b>D.O. Number:</b>        | 161          | <b>Action Memo Date:</b>       | 5/30/2013      |
| <b>Response Authority:</b> | CERCLA       | <b>Response Type:</b>          | Time-Critical  |
| <b>Response Lead:</b>      | EPA          | <b>Incident Category:</b>      | Removal Action |
| <b>NPL Status:</b>         | Non NPL      | <b>Operable Unit:</b>          |                |
| <b>Mobilization Date:</b>  | 6/17/2013    | <b>Start Date:</b>             | 6/17/2013      |
| <b>Demob Date:</b>         |              | <b>Completion Date:</b>        |                |
| <b>CERCLIS ID:</b>         | NCN000410937 | <b>RCRIS ID:</b>               |                |
| <b>ERNS No.:</b>           |              | <b>State Notification:</b>     |                |
| <b>FPN#:</b>               |              | <b>Reimbursable Account #:</b> |                |

#### 1.1.1 Incident Category

#### 1.1.2 Site Description

The Patterson Avenue Battery Dump Site (the Site) RSE investigated four residential properties located on Patterson Avenue SE in Concord, Cabarrus County, North Carolina. Each property is approximately .25 acres in size. The area is located in a mixed commercial and residential area approximately 0.25 miles northeast of downtown Concord. The results of the RSE indicate that the battery casings are isolated to the rear of a single property located at 158 Patterson Ave.

##### 1.1.2.1 Location

The Patterson Avenue Battery Dump Site (the Site) is located at 158 Patterson Avenue SE, Concord, Cabarrus County, North Carolina. The geographic coordinates are 35.4132 ° N, -80.575791 ° W. The adjacent properties are residential and the surrounding land use is mixed commercial and residential. The rear of the property slopes down a bank to a small, unnamed tributary of Threemile Branch Creek. Threemile Branch Creek runs east-west, into a number of low order streams before emptying into the Yadkin River approximately 5 miles south of Lake Tillery.

##### 1.1.2.2 Description of Threat

Automotive battery casings dumped in the rear of the property caused elevated lead levels in surface soils. Lead is a hazardous substance as listed in 40 CFR 302.4, and referred to in Section 101(14) of CERCLA, as amended. Human exposure to lead contaminated soil at the Site poses a significant threat to public health. Direct contact, ingestion and inhalation are the primary pathways of exposure. Continued exposure to the soil contaminated with concentrations of lead exceeding the removal management level may pose chronic health effects to persons living nearby.

#### 1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

On January 23, 2013 EPA OSC and START met representatives from NCDENR DWM and IHSB to confirm the presence of lead contamination in surface soils and determine the extent of contamination. The investigation focused on four properties: the subject property at 158 Patterson Ave and nearby properties located at 152, 162 and 166 Patterson Ave SE. Five-point composite samples were collected from the front and rear of each property. Each aliquot was screened with the XRF instrument prior to being composited for

laboratory analysis. Samples were collected from 0-6" and 1-2'. On January 24, 2013 EPA OSC and START returned to the Site to collect two (2) grab samples from the rear of 158 Patterson along the bank that slopes down to the unnamed tributary.

More in depth observations during the RSE indicated that the battery casings appeared to be isolated to the rear of the property located at 158 Patterson Ave. Sampling results confirmed these findings. XRF screening of the five aliquots collected from 0-6" yielded the following results in mg/kg of lead: 729, 426, 2290, 452 and 577, with a composite screening of 707. Laboratory analysis of the sample indicated a lead concentration of 934 mg/kg. Screening of the sample collected from the 1-2' interval yielded the following results: 214, 40, 1118, 143 and non detect, for a composite screening of 347 mg/kg of lead. Laboratory analysis indicated a lead concentration of 296 mg/kg. Among the other properties that were sampled, only one aliquot demonstrated a lead concentration exceeding the residential RML with a value of 582 mg/kg. The sample was collected from the 0-6" interval located in the rear of the property at 166 Patterson Ave near the gravel driveway. XRF screening of the composite sample from this property showed a lead concentration of 198 mg/kg and analysis indicated 226 mg/kg of lead present in the sample. A duplicate sample collected at this location yielded a concentration of 206 mg/kg.

Investigative techniques including observation, screening and sampling, indicate that the battery casings and associated lead contamination exceeding the RML are isolated to the rear of the property located at 158 Patterson Ave. The investigation did not determine the extent to which the contamination descends the bank into the unnamed creek.

## 2. Current Activities

### 2.1 Operations Section

#### 2.1.1 Narrative

#### 2.1.2 Response Actions to Date

Toxic characteristic leaching procedure (TCLP) results received on June 25th indicate that the material will not pass the regulatory requirements for disposal as non-hazardous waste. A treatability study conducted by Enviroblend indicates that a 3% treatment with Enviroblend CS will yield non-detect for lead following TCLP analysis. ERRS crew remobilized to the Site on July 8th to prepare for the delivery of the Enviroblend. On Tuesday, July 9th approximately 15 tons of material was delivered to the Site. The excavator was used to mix the material with the soil containing battery casings. The mixture was then moved and staged by the road in preparation for disposal. During the mixing and moving process, additional battery casings were discovered beneath the location of the stockpile. Material was excavated to a depth not exceeding 2 feet. Screening with the X-Ray Fluorescence instrument indicates that readings range from 200 mg/kg to 2,000 mg/kg of lead. A demarcation liner will be placed at the base of the excavation to indicate the extent of the removal activities since contaminated soil will be left in place. A figure depicting the extent of the excavation can be viewed in the documents section.

At this time, the total volume of contaminated soil excavated is estimated to be approximately 400 cubic yards. A five-point composite sample was collected and sent to the laboratory for TCLP testing. Results are expected no later than July 16th. Pending acceptable TCLP results, disposal will take place at a non-hazardous waste disposal facility.

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

The property owner purchased the property in 2012 and discovered the battery casings. He subsequently filed a report with Cabarrus County Emergency Management. A notice letter was delivered and signed by the property owner on May 15, 2013. The source of the battery casings is not known.

#### 2.1.4 Progress Metrics

| <i>Waste Stream</i> | <i>Medium</i> | <i>Quantity</i> | <i>Manifest #</i> | <i>Treatment</i> | <i>Disposal</i> |
|---------------------|---------------|-----------------|-------------------|------------------|-----------------|
|                     |               |                 |                   |                  |                 |
|                     |               |                 |                   |                  |                 |
|                     |               |                 |                   |                  |                 |

### 2.2 Planning Section

#### 2.2.1 Anticipated Activities

##### 2.2.1.1 Planned Response Activities

- Excavate battery casings and surface soil exceeding 400 mg/kg of lead
- Treat the material for non-hazardous waste disposal
- Dispose of the material at an approved landfill
- Restore the property

##### 2.2.1.2 Next Steps

Currently awaiting analytical results confirming acceptable TCLP results  
Arrange for disposal of the material  
Arrange for delivery of backfill

### **2.2.2 Issues**

Due to the discovery of additional soil containing battery casings, a demarcation liner will be utilized to indicate the presence of contaminated soil exceeding Removal Management Levels that will be left in place. Certified clean fill material will be used to serve as an exposure barrier eliminating any potential threat posed by the presence contaminated soil.

### **2.3 Logistics Section**

No information available at this time.

### **2.4 Finance Section**

No information available at this time.

### **2.5 Other Command Staff**

No information available at this time.

## **3. Participating Entities**

No information available at this time.

## **4. Personnel On Site**

EPA - 1  
ERRS - 3

## **5. Definition of Terms**

No information available at this time.

## **6. Additional sources of information**

No information available at this time.

## **7. Situational Reference Materials**

No information available at this time.