

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



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: POLREP #2
Site Assessment
Chapel Street Battery Dump Site

Kannapolis, NC
Latitude: 35.5317080 Longitude: -80.6124470

To:
From: Lynnette Sholar, OSC
Date: 4/5/2010
Reporting Period:

1. Introduction

1.1 Background

Site Number:	B463	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	CERCLA	Response Type:	Time-Critical
Response Lead:	EPA	Incident Category:	Removal Assessment
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	1/11/2010	Start Date:	1/11/2010
Demob Date:		Completion Date:	
CERCLIS ID:	NCN000410518	RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

Time Critical Removal Assessment

1.1.2 Site Description

US EPA received a request from North Carolina Department of Environment and Natural Resources (NC DENR) to perform a Removal Site Evaluation (RSE) at the Chapel Street Battery Dump Site. The Site is located along Psalms Street in Kannapolis, Rowan County, North Carolina. NC DENR performed an assessment of the site. There are several residents living along Psalm Street and is a private gravel drive that contains visible battery chips in several locations. Psalm Street is a private drive and it is not clear who owns the street. According to a resident, all the property owners along the street own the private drive. Some of the residents along Psalm Street are renters. The state's analytical indicated lead concentrations present along Psalm Street at concentrations greater than 43,000 parts per million (ppm). This exceeds the Environmental Protection Agency (EPA) Removal Action Level (RAL) due to the elevated concentrations of lead present along the gravel of residential drives, the potential of inhalation exposure from dust generated by passing vehicles, proximity to homes, and the presence of children.

1.1.2.1 Location

Psalm Street, Kannapolis, Rowan County, North Carolina.

1.1.2.2 Description of Threat

Lead is present from battery chips being used as fill material along the gravel street. The street is a private drive with a potential threat of inhalation if there's exposure to dust generated from children playing and cars driving on the gravel road.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

NC DENR conducted sampling along Psalm Street and found lead present at concentrations up to 43,600 ppm. NC DENR requested EPA conduct further investigation. EPA conducted a site visit on 1/3/2010 and visually observed the presence of battery chips in various locations along Psalm Street and private driveways and determined further action was necessary.

EPA and Superfund Technical Assessment Response Team (START) revisited the site on 03/31/2010 to conduct a more thorough assessment to delineate the extent of contamination through composite and grab samples within residential yards and along the gravel road on Psalm Street. All sampling was screened with an X-Ray Fluorescence (XRF) technology to document and correlate with laboratory data. The Site is comprised of 20 parcels that include residential homes, one private business, and vacant lots. Five point composite samples, at 0 - 6 inches in depth, were taken from each parcel, including 2 duplicates, for a total of 22 samples. XRF readings within the parcels were below EPA's residential RAL of 400 ppm for lead that ranged from 32 ppm - 274 ppm. One XRF reading spiked at 4,745 ppm as the highest detection within a vacant parcel for lead. Seventeen grab samples, including one duplicate, were also taken at 0 - 6 inches in depth along the gravel road on Psalm Street at 50 foot intervals. XRF readings for the grab samples ranged from 35 ppm - 4,794 ppm. Five drinking water samples, including one duplicate, and natural attenuation parameters were taken from 5 residential homes. Numerous battery connectors and adapters were found beneath the brush in one vacant parcel.

Lead is a hazardous substance, as listed in 40 CFR 302.4, and referred to in Section 101 (14) of CERCLA, as amended. Lead contaminated soil at the Site pose a significant threat to public health. The threat comes primarily from potential human exposure to this hazardous substance. Direct contact and ingestion of this hazardous substance is the primary pathway of exposure. Continued release of this hazardous substance may cause potential chronic health effects to persons living and working nearby.

Lead present in on-site surface and subsurface soils pose the following threats to public health or welfare as listed in Section 300.415 (b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP):

Section 300.415 (b)(2)(i) Actual or potential exposure to nearby human populations, or the food chain from hazardous substances pollutants or contaminants;

NC DENR's initial investigation revealed that there is significant lead contamination present in surface soils, up to 43,600 ppm. Further sampling conducted by EPA confirmed elevated lead levels. EPA Region 4 Technical Services Section (TSS) recommends an RAL of 400 ppm lead for residential exposure scenarios. Concentrations exceeding these levels at the Site were confirmed through on-site XRF analysis. The maximum lead concentration detected in surface soils was 4,794 ppm.

The battery chips were reportedly crushed, by a local battery shop, and dispersed throughout the Site and mixed with gravel to create a road. It was observed that the neighborhood is home to several children. These children play in and around the contaminated area. Children, as well as adults, are at risk to come in contact with the contaminants via windborne dust, inadvertent ingestion of contaminated soil, and direct contact with the contaminated surface soils.

Section 300.415 (b)(2)(iv) High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate;

XRF levels reveal that elevated lead levels are present at or near the surface creating a potential for migration to off-site locations. Lead concentrations exceeding the lead RAL of 400 ppm was confirmed through on-site XRF readings.

Section 300.415 (b)(2)(v) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;

If the contamination is not addressed with a removal action, there is a potential for lead contamination to migrate offsite.

Section 300.415 (b)(2)(vii) The availability of other appropriate federal or state response mechanisms to respond to the release;

At the request of NC DENR, EPA has collected sufficient data to proceed with a removal action.

Due to the threat and/or future threat to human health from the hazardous substance, the Site achieves removal eligibility based on the removal criteria listed above.

2. Current Activities

2.1 Operations Section

No information available at this time.

2.2 Planning Section

No information available at this time.

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

No information available at this time.

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.