U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Southside Chattanooga Lead - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: **POLREP #15**
Residential Soil Removal Continues
Southside Chattanooga Lead

Chattanooga, TN
Latitude: 35.0333793 Longitude: -85.3057271

To:
From: Perry Gaughan, On Scene Coordinator
Date: 5/10/2013
Reporting Period: April 22nd through May 4th 2013

1. Introduction

1.1 Background

Site Number:	B4J4	**Contract Number:**	
D.O. Number:		**Action Memo Date:**	8/19/2012
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	9/17/2012	**Start Date:**	9/24/2012
Demob Date:		**Completion Date:**	
CERCLIS ID:		**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

Lead contaminated soil on 52 properties being removed as a time critical removal under CERCLA.

1.1.2 Site Description

The Tennessee Department of Environmental Conservation (TDEC) requested the EPA Region 4 Emergency Response and Removal Branch's (ERRB's) assistance after discovering that the lawns of one residence and potentially several more were contaminated with lead along Read Avenue near downtown Chattanooga. Initially, one resident along Read Avenue presented to the emergency room with severe fatigue and abdominal pain. Emergency room blood work indicated lead levels approaching 20 micrograms per deciliter (ug/dl) which alerted TDEC to conduct follow up assessments. TDEC requested assistance from ERRB to characterize the soil around the home and an initial assessment was conducted with SESD (Science and Ecosystem Support Division) Athens in which three homes were assessed as well as a public park and playground area at 1700 Mitchell Avenue. Ten samples were collected and two samples showed elevated lead levels exceeding 400 ppm.

1.1.2.1 Location

The Southside Chattanooga Lead Site is located along Read, Mitchell and Carr Avenues south of Main Street in Chattanooga, Hamilton County, Tennessee (Latitude: 35.0456, Longitude: -85.3097). The area is a blend of young, middle income couples who are renovating older constructed homes and low to middle income retired couples who have resided in the area for 20 plus years. The vast majority of homes were built in the early 1900's.

The Southside Chattanooga area is immediately adjacent to downtown Chattanooga and was prone to flooding during the early 1900's and prior to the development of damming and flood control measures by the Tennessee Valley Authority (TVA). Several of the homes along Read and Mitchell Avenues appear to have been built on 4-5 feet of clay fill.

1.1.2.2 Description of Threat

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

In response to a request from TDEC, the EPA Region 4 ERRB with assistance from SESD Athens, conducted two follow up assessments of the Read and Mitchell Avenue area in January and April 2012. Of the 81 homes (162 front and back yards) assessed near downtown Chattanooga, 68 lawns (42 %) have lead

levels exceeding 400 ppm. Lead levels range from 400 – 4000 ppm. The 4000 ppm sample was collected from a lawn along the 1600 block of Read Ave and the sample contained very dark fine material, most likely a high concentration of bag-house dust.

In addition, the Battle Academy Elementary School which neighbors the site was sampled in mid June 2012. A 20' by 20' grid was laid over the school property and 140 grids were screened using X-ray fluorescence spectroscopy (XRF). No significant lead contamination was found and all lead levels were below 55 ppm.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

April 22nd through April 26th, 2013

On Monday, April 22nd, the ERRs crew removed contaminated soil from the left side and remaining front yard of 1700 Read Avenue. Once the contaminated soil was removed down to clay, START collected soil samples to be delivered to the lab at a later date for lead and arsenic analysis. The crew then placed a layer of clay, a layer of top soil and then covered the front yard with remaining sod. Straw was placed over the remaining bare areas at the side yard.

On Tuesday, April 23rd, the ERRs crew began removal efforts at 1616 Read Avenue back yard. This property had intermittent amounts of clay at the surface, however there are some areas within the back yard where the clay cap is very shallow and too close to the surface to be safe for the residents. The crew removed material from the south side of the back yard first, for logistic purposes. Four blueberry bushes were removed, as these plants were growing within soil where lead was present in some locations. The soil profile along the left side of the house was very unique, unlike the typical profile that has been observed at previous properties in the neighborhood. The soil was very dry and had mixtures of orange and yellow clay with black to brown veins of lead contaminated material.

On Wednesday, April 24th, the crew continued to remove contaminated material from the back yard of 1616 Read. START collected a composite soil sample to be delivered to the lab at a later date. Once material was removed to a clean clay layer, the crew backfilled the left side yard and small back yard area with clay. Due to heavy rainfall, which began at approximately 1230 hours, work ceased for the day.

On Thursday, April 25th, the crew began removal of contaminated soil from the north back yard of 1616 Read. Soil excavated on this side of the yard was also very unique (mottled). Once this material was removed down to the clay layer, clay backfill was placed and compacted. Due to the intermittent clay cover observed at this property, START and ERRS did another assessment within the front yard. A clay cap was also observed in the front yard; however the cap here has more depth until contaminated material is observed. A decision was made to leave the front yard as is, due to the depth of clay cover. While looking at the 1616 Read front yard, START and ERRS also did another assessment at 1618 Read. There is a very deep cap at the front yard of this property, as the crew dug holes well over a foot and no contamination was observed.

On Friday, April 26th, the crew placed topsoil and sod at the back yard of 1616 Read Avenue. ERRS also placed sod at the north side yard of 1700 Read Avenue. The crew pressure washed the sidewalk and driveway at 1616 Read.

April 29th through May 3rd, 2013

Following an extended weekend break, site work was to begin on Tuesday, April 30th but rain cancelled removal operations.

On Wednesday, May 1st, the ERRs crew began removing contaminated material from the shared small strip of the back yard and alley way of 1616 Read and 1618 Read. These areas were backfilled with clay and topsoil. The crew also prepared the garden area of 1705 Read to its pre-removal state. The property owner has made additional requests to the OSC, some of which were legitimate to return the property to its pre-removal state. Some additional plants were purchased and placed accordingly to the properties pre-removal state.

On Thursday, May 2nd, the ERRs crew began removal work in the back yard of 1618 Read Avenue. Flowers/shrubs were removed at the discretion of the home owner. A large quantity of contaminated soil (approx. 200 cu yds) was removed down to the native clay layer.

On Friday, May 3rd, the back yard of 1618 Read was backfilled with clay, a thin topsoil layer and then the area was sodded. The crew re-planted all flowers and shrubs at the owners direction. The crew also re-planted blueberry shrubs at 1616 Read.

On Saturday, May 4th, the crew continued to remove contaminated soil from the back yard of 1616 Read. START collected a composite soil sample to be delivered to the lab at a later date. Once material was removed to a clean clay layer, the crew backfilled the north side yard and small back yard area with clay. Due to heavy rainfall, which began at approximately 1230 hours, work ceased for the day.

START contractors continue to assist with technical support, daily operations, post-excavation confirmation sampling using X-ray fluorescence spectroscopy (Xrf) and air sampling during excavation and staging of contaminated soils.

The OSC continues to coordinate clean up efforts and assessments with Tenn Dept of Environmental

Conservation (TDEC) and Tenn Dept of Health as well as Hamilton County health officials. TDEC and the OSC plan to update Chattanooga City Council during February 2013. A specific date has not been set by City Council.

The OSC, Tenn Dept of Health and Tenn Dept of Environmental Conservation (TDEC) are currently preparing an assessment strategy for Chattanooga City Council addressing future lead assessments in the downtown area.

2.1.2 Response Actions to Date

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

2.1.4 Progress Metrics

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*

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

3.1 Unified Command

3.2 Cooperating Agencies

The OSC continues to coordinate clean up efforts and assessments with Tenn Dept of Environmental Conservation (TDEC) and Tenn Dept of Health as well as Hamilton County health officials. TDEC and the OSC plan to update Chattanooga City Council during February 2013. A specific date has not been set by City Council.

The OSC, Tenn Dept of Health and Tenn Dept of Environmental Conservation (TDEC) are currently preparing an assessment strategy for Chattanooga City Council addressing future lead assessments in the downtown area.

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.