U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Former Carter White Lead Facility/Area - Removal Polrep
Final Removal Polrep

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

**Subject:** **POLREP #4**
**Final POLREP**
**Former Carter White Lead Facility/Area**
**NEN000704909**
**Omaha, NE**
**Latitude: 41.2841000 Longitude: -95.9032000**

**To:**
**From:** Michael Davis, OSC
**Date:** 12/7/2012
**Reporting Period:**

## 1. Introduction

### 1.1 Background

| | | | |
|---|---|---|---|
| **Site Number:** | NEN000704909 | **Contract Number:** | |
| **D.O. Number:** | | **Action Memo Date:** | 6/5/2012 |
| **Response Authority:** | CERCLA | **Response Type:** | Time-Critical |
| **Response Lead:** | PRP | **Incident Category:** | Removal Action |
| **NPL Status:** | Non NPL | **Operable Unit:** | 00 |
| **Mobilization Date:** | 8/21/2012 | **Start Date:** | 8/21/2012 |
| **Demob Date:** | 10/5/2012 | **Completion Date:** | 12/7/2012 |
| **CERCLIS ID:** | NEN000704909 | **RCRIS ID:** | |
| **ERNS No.:** | | **State Notification:** | |
| **FPN#:** | | **Reimbursable Account #:** | |

#### 1.1.1 Incident Category

This was a potentially responsible party-lead (PRP), time-critical removal action at the Former Carter White Lead Site (Site). The Site is a former lead-based white pigment manufacturing facility which occupies a city block in east Omaha, Douglas County, Nebraska. Investigations conducted by the U.S. Environmental Protection Agency (EPA) determined that lead-contaminated soil is present at the Site, which was the subject of this removal action. As detailed below, the objective of this removal action was to protect public health and the environment by responding to the release of hazardous substances into the environment as presented by soils contaminated with lead.

#### 1.1.2 Site Description

The former Carter White Lead facility manufactured lead-based white paint pigments from 1881 to 1926, when the company ceased operations. In the early 20th century, the daily output of the facility was about 32,000 pounds of white lead. No portion of the site is currently or has ever been owned by any federal agency. No state or local government body has been an owner or operator of any facility or operation which contributed to contamination at the Site. There have been no previous removal actions taken at the Site.

Businesses currently on the Site include the Carter Lake Outreach Center building and a FleetPride truck service center. The Carter Lake Outreach Center building is located on the north central portion of the Site along East Locust Avenue between 21st and 22nd Streets, and is owned by Open Door Mission. The Carter Lake Outreach Center building is a thrift store used for distributing clothing and household items. FleetPride is located on the southeast portion of the Site. FleetPride leases the property for use as a heavy-duty truck repair and maintenance facility. The southwest portion of the Site is an unmaintained gravel parking lot. The two parcels comprising the south portion of the site are owned by Morgan Wheel and Engine Company (Moweco), Inc. A development plan proposed by Open Door Mission includes the purchase and redevelopment of the south portion of this Site into a vocational and educational training center, along with a grassy yard and a paved parking area.

##### 1.1.2.1 Location

The Site is located in the city of Omaha, Nebraska, between North 21st Street East and North 22nd Street East, and East Locust Street and Avenue J, in the southwest one-quarter of Section 12, Township 15 North, Range 13 East (U.S. Geological Survey 1994). The approximate geographic coordinates of the subject property are 41.2841 degrees north latitude and 95.9032 degrees west longitude.

Refer to POLREP #1 for additional details regarding the Site location and surrounding land use.

**1.1.2.2 Description of Threat**

Based on the results of sampling, a soil release associated with known activities at the Former Carter White Lead facility has been established. The contaminant of concern at the Site is lead. Soil contamination is widespread across the footprint of the former facility boundaries and extends to a depth of approximately 4 to 5 feet below ground.

Lead is listed as a hazardous substance pursuant to 40 CFR § 302.4, and as defined in section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9601(14).

Refer to POLREP #1 for additional details regarding threats at the Site.

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

An investigation and remedial action are ongoing to address widespread lead contamination in the Omaha, Nebraska, area (referred to as the Omaha Lead Site [OLS]). In November 2004, as part of the OLS project, the EPA screened surface soils at 2706 North 21st Street East and 2802 North 21st Street East, two properties adjacent to the Site. The lead concentrations in those soils were below the 400 milligrams per kilogram (mg/kg) lead screening level.

There have been several past investigations at the Site. Open Door Mission, the current property owner for the north portion of the Site, retained Jacobson Helgoth Consultants, Inc. (JHC), to provide professional environmental consulting services regarding one parcel of the Site. From September through December 2004, JHC conducted several soil investigations to determine the extent of lead impact. JHC collected a total of 38 soil samples from 0 to 2 feet below ground surface (bgs) under the asphalt parking lot on the referenced parcel using direct push technology and a truck-mounted drill rig. The soil samples were analyzed for total lead by EPA Method 6010. Lead was detected in all of the soil samples, with concentrations ranging from 65.7 to 9,796 mg/kg. Sixteen of the samples underwent Toxicity Characteristic Leachate Procedure (TCLP) analysis and contained concentrations of lead in leachate ranging from 0.12 to 91.7 milligrams per liter (mg/L).

In October 2005, the EPA conducted a Preliminary Assessment (PA) at the Site. Field activities included: (1) in situ analysis of surficial soils for metals using a portable X-ray fluorescence (XRF) analyzer, and (2) collection of soil samples for laboratory confirmation analysis. The PA focused on the unpaved areas of the Site. A total of 111 samples collected across the Site identified ubiquitous lead contamination in surficial soil. The maximum detected concentration was 17,800 mg/kg and the average concentration of all samples was 1,700 mg/kg.

In July 2009, the EPA conducted a Removal Site Evaluation (RSE) at the Site. The main objective of the RSE was to delineate the extent of lead-contaminated soil. RSE sampling was conducted on July 13 and 14, 2009. Field activities included in situ XRF readings on-site and off-site, collection of surface and subsurface soil samples for field screening and laboratory analysis for metals, and collection of soil samples for lead speciation. First, in situ samples were analyzed using XRF to demonstrate conformance with data from the October 2005 PA. After data conformance was demonstrated, in situ samples were analyzed using XRF from systematically selected locations on adjacent properties to delineate the lateral extent of lead contamination in surficial soil. In total, 45 in situ XRF readings were taken. The EPA also collected six surface soil samples (including one background sample) for lab analysis to demonstrate statistical correlation with in situ XRF analysis. Surface soil concentrations of lead ranged from 18 mg/kg in an off-site delineation sample to 5,063 mg/kg in a central location within the Site.

Six subsurface soil borings were also sampled from depths ranging from 0 to 8 feet bgs to approximate the vertical extent of lead contamination in soil across the Site. The highest levels of lead contamination at the Site were detected between 2 to 4 feet bgs, with maximum concentrations around 22,000 mg/kg. Lead concentrations decreased significantly at depths below 4 feet bgs. Correspondingly, soil borings indicated a transition from fill material and debris to predominately native silty clays at 4 to 5 feet bgs across the Site.

Sampling from adjacent properties and at background locations indicates that the area of soil contamination does not extend appreciably beyond the footprint of the Former Carter White Lead facility. Three samples from a drainage swale in the right-of-way on the north and east sides of the Omaha Box Company, south of the Site across Avenue J, identified surficial lead concentrations ranging from 485 mg/kg to 731 mg/kg, which is statistically elevated relative to background, but does not exceed the Regional Screening Level for industrial properties of 800 mg/kg. One surficial sample from the roadside right-of-way along North 21st Street immediately west of the Site identified lead at 1,740 mg/kg.

Lead speciation analysis was conducted on three samples to identify and quantify the forms of lead present at the Site. Lead speciation was conducted by the University of Colorado’s Laboratory of Environmental and Geological Studies. The most common form of lead in soil (74 to 84 percent by mass) was cerussite, also known as white lead ore, which is a mineral consisting of lead carbonate that was formerly used as an ingredient for the manufacturing of white lead paint.

Findings from the PA and RSE are summarized as follows:

• Soil contamination: Surface and subsurface soil sampling identified widespread lead contamination on the parcels comprising the Site. Soil concentrations ranged from around 100 mg/kg to around 22,000 mg/kg total lead. Detected levels of lead in surface soil exceed the risk-based screening levels for recreational and residential receptors. More importantly, the average concentration of lead at the Site, which likely represents typical exposure conditions, exceeds all screening levels except for the one day/week recreational visitor. Contamination extends to a depth of 4 to 5 feet bgs, where soil borings indicate a

transition from fill and construction debris to native geologic materials.

• Potential groundwater contamination: No groundwater sampling was conducted at this Site. During a Phase 1 Environmental Site Assessment conducted by a contractor for Open Door Mission in 2001, an attempt was made to collect groundwater samples from two shallow (below 15 feet bgs) monitoring wells located on an adjacent property east of 22nd Street, but these wells were found to be dry. The vertical extent of soil contamination was readily delineated and did not extend to the water table. Due to the predominantly insoluble nature of the primary contaminant, and considering that soil sampling indicates that the extent of contamination does not extend to the water table, a significant release to groundwater is not expected to have occurred.

• Unrestricted access: Currently there is no fencing around the Site to inhibit access. The Site is regularly accessed by patrons of immediately surrounding properties operated by Open Door Mission. Pedestrian traffic is frequent and recurrent. A portion of the Site is used for parking by the surrounding Open Door Mission organizations. Routine vehicle traffic across the Site generates considerable airborne dust as witnessed during the July 2009 sampling event, further contributing to human exposure.

## 2. Current Activities

### 2.1 Operations Section

#### 2.1.1 Narrative

The EPA entered into an Administrative Settlement Agreement and Order on Consent ("AOC"), CERCLA-07-2012-0053, with NL Industries, Inc. (NL), and approved a Time Critical Removal Action Work Plan ("Work Plan"), dated June 20, 2012, incorporated into the AOC by reference. The Work Plan outlined the actions to meet the removal objectives stipulated in the June 5, 2012 Action Memorandum issued by the EPA. The cleanup crew was mobilized on August 21, 2012. On-site cleanup activities were completed on October 5, 2012. The final Removal Action Report was submitted by the PRPs on November 15, 2012, and approved by the EPA on December 7, 2012. The Work Plan, the Action Memorandum, the final Removal Report, and related documentation pertinent to the administrative record for this Site may be viewed on the project website at http://www.epaosc.org/formercarterwhite. Refer to POLREP #1 for additional details regarding the response actions that were implemented at the Site.

#### 2.1.2 Response Actions to Date

NL Industries, Inc. (NL), selected ENTACT Environmental Services, LLC (ENTACT), as the principal contractor to conduct the removal action. The EPA completed a pre-mobilization walkthrough with the property owners and their legal representatives, NL and ENTACT personnel, on August 21, 2012. During the walkthrough, the scope and logistics of the removal action were discussed in detail. Parties playing a major role during the implementation of the time-critical removal action were introduced. The following were present:
• Greg Dambold, ENTACT Project Coordinator
• Josh Carroll, ENTACT Field Project Manager
• Jenny Self, ENTACT Regulatory/Technical Specialist
• Kevin Lombardozzi, NL Industries Project Coordinator
• Richard DenHerder, Open Door Mission (ODM)
• Brad Stenslokken, ODM Maintenance Supervisor
• Morgan Holmes, Moweco, Inc.

On August 23, 2012, ENTACT mobilized equipment to the Site. Pre-construction video and photographs were taken to document pre-existing Site conditions. The haul route was established to the designated off-site disposal facility. Air monitoring locations were selected and approved by the EPA for time-integrated and real-time air monitoring stations. Personnel, equipment and temporary facilities were mobilized to the Site. Erosion, sedimentation and stormwater control measures were installed. Work zones, equipment decontamination areas, material staging areas, and Site haul roads were delineated. Utility locates were completed for identification of utility lines, including gas, electric, telephone fiber and wire, storm and sanitary sewers, water, and cable.

Prior to the start of Removal activities, the limits of the Site were verified and established by a licensed professional land surveyor. Specifically, the limits of the Site were based on the extent of impacted soil identified during previous Site investigations to the nearest intact capped area such as a street, curb, parking lot, asphalt, building foundation, or similar condition.

A coordinate grid system was established at the Site for excavation purposes. The Site was staked with baselines and grids were established using a 50-foot by 50-foot or 25-foot by 25-foot grid length and width. The elevation of the center of each grid was determined prior to the start of any soil excavation to serve as the basis for the depth of soil excavation and backfill work. A map depicting the grid line locations, elevation data and pre-excavation topography of the Site is presented in the final Removal Report.

Excavation was initiated at the Site on August 27, 2012. The major components of the Removal included the following:
• Excavation of exposed surface soils to a depth of 1 foot bgs in all areas that were not capped by intact asphalt or concrete or covered by a current or historic building foundation or pad;
• Excavation of exposed surface soils to a depth of 2 feet bgs in a designated area of 14,000 square feet to facilitate future use for gardening by the property owners;
• Stabilization of excavated soils to render the soil non-hazardous and meet the required land disposal restriction (LDR) treatment standards;
• Off-site transportation and disposal of stabilized soils in a permitted Subtitle D landfill; and
• Restoration of the excavated areas with either rock base, topsoil and/or asphalt.

Lead-impacted surface soils were excavated from the Site using a hydraulic excavator to a depth of 1 foot bgs in unpaved areas and a depth of 2 feet bgs from a 14,000 square foot area located in the center of the vacant lot. The location of this 14,000 square foot area was adjusted in the field based on requests from ODM and Moweco and was subsequently approved by the EPA. Excavated soil was gathered into 13 approximately 250 cubic yard stockpiles within the area of contamination (AOC) for treatment pending the results of characterization sampling.

A survey of the post-excavation surface of the Site was completed by Olsson Associates to ensure the maximum depth of excavation was reached in all areas during the TCRA. The presence or absence of fill material at the bottom of each grid excavation was observed and noted by ENTACT. A copy of the post-excavation survey is included in the final Removal Report.

Excavated soil stockpiles were sampled for characterization purposes prior to treatment, with the exception of Stockpiles 12 and 13. Based on the characterization results for Stockpiles 1 through 11, Stockpiles 12 and 13 were assumed to require treatment and no characterization samples were collected. Characterization sampling consisted of the collection of one composite sample from each stockpile. The samples were submitted to TestAmerica Laboratories in Houston, Texas, for laboratory analysis of RCRA 8 metals using the toxicity characteristic leaching procedure (TCLP) instead of only TCLP lead. The results of characterization sampling indicated that lead was the only metal requiring treatment in order to render the soil non-hazardous and achieve the alternative LDR treatment standards for soil.

The soil stockpiles were treated with approximately 3% by weight of EnviroBlend 90/10, based on the results of the treatability study discussed in the Laboratory Scale Treatability Study Report dated August 13, 2012, in order to achieve a concentration of less than 5 ppm TCLP lead. Each soil stockpile was mixed for a period of approximately 2.5 hours using a hydraulic excavator. At the conclusion of mixing, 2 post-treatment verification samples, i.e., 1 grab and 1 composite, were collected from each treated soil stockpile for laboratory analysis of TCLP RCRA 8 metals. Based on discussions with the EPA, mercury was dropped from the analyte list for Stockpiles 12 and 13. Upon the receipt of laboratory results which indicated that post-treatment verification TCLP lead concentrations were below 5 ppm, the soil was prepared for transport and off-site disposal at an approved Subtitle D disposal facility. Approximately 5,556 tons of soil from the Site were disposed as non-hazardous waste at the Butler County Landfill. A summary of the waste disposal information and copies of the completed waste manifests are included in the final Removal Report.

Characterization and post-treatment verification sampling was conducted in accordance with the approved Workplan. The results of the characterization and post-treatment verification sampling are presented in the final Removal Report. No materials staged for off-site disposal were kept on-site for longer than 90 days.

At the completion of excavation, a demarcation layer, e.g., orange woven fabric, was placed at the base of the excavation to denote the presence of potential contamination at depths greater than that excavated. The excavation was then backfilled under dry conditions with 3/8 inch limestone screenings. The area west of the ODM fenceline in the vegetated swale was backfilled with topsoil. The 14,000 square foot area in the center of the vacant lot was backfilled from 1 to 2 feet bgs with 3/8 inch limestone screenings and from 0 to 1 foot bgs with topsoil, at the request of the property owners.

Approximately 25,966 square feet of asphalt was installed on ODM property, including 6 inches of new asphalt on previous gravel surfaces and 3 inches of asphalt cap on previous asphalt surfaces. In November, 2012 ODM resurfaced an additional 20,000 square feet of low integrity asphalt in accordance with terms of the environmental covenant for the property.

A final topographic survey was performed to produce as-built drawings of the Site. The final as-built survey is included in the final Removal Report.

A post-removal inspection of the Site was completed with representatives from NL, the EPA, ENTACT, ODM, and Moweco. The purpose of the final inspection was to document completion of the Removal activities. All parties in attendance at the final inspection confirmed the completion of the Removal.

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

An Administrative Settlement Agreement and Order on Consent, CERCLA-07-2012-0053, was established between NL, the EPA and Moweco, Inc., effective August 7, 2012. ODM is a property owner and provided access to complete the removal action as well as an Environmental Covenant for implementation of Post-Removal Site Controls. Moweco filed a similar environmental covenant for the parcels under its ownership.

**2.1.4 Progress Metrics**

The following waste quantities are accurate as of September 28, 2012, based on weigh tickets from the Butler County MSWLF disposal facility. To date, 184 loads of waste soil have been transported for disposal. A spreadsheet summarizing the disposal quantities is available for review in the supporting documents section of the project website: http://www.epaosc.org/formercarterwhite.

| ***Waste Stream*** | ***Medium*** | ***Quantity*** | ***Manifest #*** | ***Treatment*** | ***Disposal*** |
|---|---|---|---|---|---|
| Toxic Hazardous Soil (Treated) | Solid | 5,556 tons | multiple | stabilization | MSWLF |
| | | | | | |
| | | | | | |

### 2.2 Planning Section

#### 2.2.1 Anticipated Activities

N/A

##### 2.2.1.1 Planned Response Activities

The Removal is completed. No additional response activities are planned.

##### 2.2.1.2 Next Steps

All responsible parties and property owners will be notified that the Removal is completed in accordance with the terms of the Order. Property owners will also be notified of continuing obligation under the Environmental Covenants as they apply to the Site.

#### 2.2.2 Issues

N/A

### 2.3 Logistics Section

The scope of this response did not warrant a structured incident management team (IMT), and there was no Logistics Section Chief or separate logistics section.

### 2.4 Finance Section

No information available at this time.

### 2.5 Other Command Staff

#### 2.5.1 Safety Officer

The safety officer on site was Josh Carroll with ENTACT. No safety issues were observed by the OSC, and no significant safety incidents occurred.

#### 2.5.2 Liaison Officer

The scope of this response did not warrant a structured IMT, and there was no Liaison Officer assigned.

#### 2.5.3 Information Officer

Belinda Young was the EPA Public Information Officer (PIO) assigned to this project. A public information fact sheet was developed by the PIO and distributed as follows:

(1) E-mailed to federal and state elected officials on July 26, 2012
(a) Senators Nelson and Johanns
(b) Congressman Terry
(c) State Senators Ashford, Cook, Council, Haar, Howard, Krist, Lathrop, Lautenbaugh, McCoy, Mello, Nelson, Nordquist, and Pirsch.

(2) E-mailed to local elected officials on July 26, 2012
Omaha Mayor and City Council

(3) Mailed to nearby businesses and residents on July 27, 2012

(4) Posted on the EPA R7 website on July 27, 2012

The Administrative Record was made available for public review after it was compiled and finalized by the EPA R7 Records Center staff at the following locations:

Omaha Public Libraries
Charles B. Washington Branch
2868 Ames Avenue
Omaha, Nebraska 68111
Phone: 402-444-4849

EPA Region 7 Records Center
10221 Renner Boulevard
Lenexa, Kansas 66219
Toll Free: 1-800-223-0425

## 3. Participating Entities

### 3.1 Unified Command

The limited scope of this removal action did not warrant a Unified Command.

### 3.2 Cooperating Agencies

NDEQ and the City of Omaha assisted in the planning and implementation of this removal action.

**4. Personnel On Site**

Beyond the EPA OSC, the composition and staffing of on-site personnel to implement this removal action was determined by the PRP and the designated contractor representative, namely Josh Carroll, the ENTACT Field Project Manager, and Kevin Lombardozzi, the NL Industries Project Coordinator. In general, field personnel consisted of the Field Project Manager, one equipment operator, one analytical technician, and three laborers. No personnel remain on Site.

**5. Definition of Terms**

N/A

**6. Additional sources of information**

**6.1 Internet location of additional information/report**

http://www.epaosc.org/formercarterwhite

**6.2 Reporting Schedule**

This is a final POLREP. No additional reporting is anticipated.

**7. Situational Reference Materials**

The Work Plan, the Action Memorandum, the final Removal Report, and related reference materials pertinent to this Site may be viewed on the project website at http://www.epaosc.org/formercarterwhite.