

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Royster Guano - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region IV

**Subject:** POLREP #5  
Progress  
Royster Guano  
B4W2  
Columbia, SC  
Latitude: 33.9782104 Longitude: -81.0094103

**To:**  
**From:** Richard Jardine, OSC  
**Date:** 12/4/2012  
**Reporting Period:** 21NOV12 to 04DEC12

## 1. Introduction

### 1.1 Background

|                            |            |                                |                |
|----------------------------|------------|--------------------------------|----------------|
| <b>Site Number:</b>        | B4W2       | <b>Contract Number:</b>        | EP-S4-07-03    |
| <b>D.O. Number:</b>        | 0131       | <b>Action Memo Date:</b>       | 9/25/2012      |
| <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>  | 10/23/2012 | <b>Start Date:</b>             | 10/24/2012     |
| <b>Demob Date:</b>         |            | <b>Completion Date:</b>        |                |
| <b>CERCLIS ID:</b>         |            | <b>RCRIS ID:</b>               |                |
| <b>ERNS No.:</b>           |            | <b>State Notification:</b>     |                |
| <b>FPN#:</b>               |            | <b>Reimbursable Account #:</b> |                |

#### 1.1.1 Incident Category - Time-Critical Removal Action

**1.1.2 Site Description** - residential detached single family units in metropolitan setting. Prior to development into a residential community, the land was occupied by what appears to be a pond, as identified by old aerial photography. Across Commerce Drive to the south was the former Royster-Guano phosphate facility which processed ore into super phosphate for agricultural use. The facility operated from approximately 1910 to 1935. The process involved heating and reducing the ore using nitric then sulfuric acid. The arsenic is a process by-product/waste from the ore itself. The lead is from the lead-lined vault into which the sulfuric was introduced. Upon removing the process material from the sulfuric bath, arsenic and lead leached from the processed material. The residential community was developed about 10 years after the plant ceased operation.

**1.1.2.1 Location** - the former Royster Guano facility was located at 2095 Commerce Drive, Columbia, SC, but this action only involves certain residential properties on Easy Street and Howe Street and adjacent property currently owned/managed by TVK properties.

**1.1.2.2 Description of Threat** - potential chronic toxicity via inhalation and/or ingestion from lead and arsenic-contaminated soil

**1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results** - The levels of lead and arsenic detected in the shallow surface soil by the early DHEC screening varied from background to well above 27,000 ppm for lead and 11,000 ppm for arsenic, depending upon sample location. The highest values were not on the residential properties but rather close to the former phosphate operation. EPA screening values on the residential properties yielded results that were highly variable from approximately background to 3,000 ppm for lead. Of the 51 parcels in this development, all but 3 were screened or sampled. Most properties had no lead or arsenic above the Region 4 Removal Management Levels. Approximately 11 properties had significant lead and/or arsenic contamination from surface to a depth of 2 feet or below. Two properties had no surface contamination but did exhibit lead and arsenic at 24 inches deep; however, this removal action only addresses that contamination occurring in the top 12 inches.

## 2. Current Activities

### 2.1 Operations Section

**2.1.1 Narrative** - A combined EPA/DHEC sampling expedition collected field information in early August 2012. Lab analyses were received in late August. Several individual face-to-face and public meetings were convened to advise community members as information was gleaned. Media involvement has been strong

but is decreasing.

**2.1.2 Response Actions to Date** - During this reporting period, EPA mobilized on site after a Thanksgiving break, granted media interviews, shipped debris and vegetative waste for disposal for the general site. Specific removal activity per individual properties is listed below.

78 Easy - excavated a portion of the backyard. Only an estimated 100 sq yds of material exceeded EPA R4 health criteria. This contamination wasn't identified by composite sampling during the initial site evaluation but rather by identifying extent of contamination during soil removal at neighboring 79 Easy Street.

79 Easy - Excavated and rough backfilled backyard (staging topsoil there for multiple properties).

80 Easy - Excavated and rough backfilled backyard.

81 Easy - Excavated backyard.

82 Easy - poured concrete entrance walkway; placed and compacted gravel for driveway, excavated backyard.

83 Easy - moved personal property from driveway, removed driveway, excavated contaminated soil from beneath driveway footprint and poured new driveway with reinforcing steel mesh fabric. Poured concrete entrance walkway. Excavated backyard.

84 Easy - completed excavation and backfill of left hand portion front and side yards. Poured concrete entrance walkway.

85 Easy - excavated front right side of house, removed entrance walkway.

**2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)** - this search is on-going

#### 2.1.4 Progress Metrics

| <i>Waste Stream</i> | <i>Medium</i> | <i>Quantity</i> | <i>Manifest #</i> | <i>Treatment</i> | <i>Disposal</i>    |
|---------------------|---------------|-----------------|-------------------|------------------|--------------------|
| non-haz debris      | debris        | 90 cyd roll-off |                   |                  | Richland County LF |
| non-haz soil        | soil          | 432 tons        |                   |                  | Richland County LF |
|                     |               |                 |                   |                  |                    |

## 2.2 Planning Section

**2.2.1 Anticipated Activities** - EPA intends to spend a day with load-out of contaminated soil, receive and stockpile topsoil, and fine grade and prepare properties for fencing and landscaping subcontractors, then continue with excavation of properties along Easy Street.

**2.2.1.1 Planned Response Activities** - After completion of Easy Street, EPA will complete loadout of material from 1045 Howe Street, then excavate the contaminatin from that property.

**2.2.1.2 Next Steps** - as backfill and final grading of each lot is accomplished, fencing and lanscape subcontractos mobilize to complete activity returning properties to original condition.

**2.2.2 Issues** - the current owner of property adjacent to the residential properties along Easy Street has expressed awillingness to conduct a removal action of contaminated soil on his property despite the fact that he had no contribution to the contamination. EPA, DHEC, and the land owner are exploring the most appropriate way to conduct that removal action.

## 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 City of Columbia and SC DHEC remain engaged in this removal action.

## 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.