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

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: **POLREP #4**
Progress
Royster Guano
B4W2
Columbia, SC
Latitude: 33.9782104 Longitude: -81.0094103

To:
From: Richard Jardine, OSC
Date: 11/20/2012
Reporting Period: 15NOV12 to 20NOV12

1. Introduction

1.1 Background

Site Number:	B4W2	**Contract Number:**	EP-S4-07-03
D.O. Number:	0131	**Action Memo Date:**	9/25/2012
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	10/23/2012	**Start Date:**	10/24/2012
Demob Date:		**Completion Date:**	
CERCLIS ID:		**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

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 completed all preparatory activities including removing fences, trees, vegetation, personal items and outbuildings. EPA also conducted loadout and disposal of approximately 272 tons of contaminated soil. Additionally, EPA conducted a more comprehensive assessment of 2227 Corning Road as specifically requested by the owner. The owner remembered the 'red rocks' in her yard as a child and expressed concern that they were related to the phosphate spoils. One such rock was discovered recently and was tested as part of the assessment. The rock appears to be iron. The property exhibited arsenic and lead in single and double digits, essentially background concentrations.

The activity accomplished per each property is listed below:
1049 Howe - completed topsoil backfill. On Wednesday night and Thursday morning (14 and 15 NOV) an estimated 1 1/4 inch rain event eroded a significant portion of the newly installed topsoil at this property. The runoff from upgradient flows southerly along Commerce Drive and turns into Howe Street. The curbing along 1049 Howe was impared by years of traffic over runs and was not substantial enough to divert flow around 1049 Howe. Instead, water flowing down Commerce entered the side and backyard of 1049 and washed out much of the newly installed topsoil. The City of Columbia Engineering Department sized up the deficiency and installed approximately 80 feet of new valley curb to remedy the deficiency. EPA reinstalled fresh topsoil.
66 Easy - completed installation of topsoil;
67 and 68 Easy - removed two large dying trees. This was accomplished to prevent a future exposure at these properties. The trees were in poor health and should they have become uprooted during a high wind event, they could have toppled, potentially bringing known arsenic and lead-contaminated soil from 24 inches deep to the surface. EPA intends to do no further activity at these properties as their soil tested clean at the top 12 inches.
82 Easy - completed excavation and backfill of front and side yards.
83 Easy - completed excavation and backfill of front and side yards.
84 Easy - completed excavation and backfill of right hand portion front and side yards.
In preparation for a long Holiday weekend, EPA stabilized the site as all personnel will demobe until Monday. Close down activity included covering all soil piles, completing backfill of all excavated areas, erecting orange 'tree save' fencing around all work areas, and returning all equipment to the office compound. The large excavator (used for loadout) was deconned and removed from the site. Security guards are in place and will maintain watch until EPA returns Tuesday morning.

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

2.1.4 Progress Metrics

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*
non-haz debris	debris	60 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 will demobe until Tuesday 27NOV12.

2.2.1.1 Planned Response Activities - upon return, EPA expects to continue with excavation and backfill of the front and side yards along Easy Street.

2.2.1.2 Next Steps - after completing all front and side yard excavation, EPA should begin the final excavation effort along the seven backyards on Easy Street, then the lot on Howe where contaminated soil has been staged.

2.2.2 Issues - none.

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.