U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Wando VCC Site - Removal Polrep
Final Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject:	**POLREP #2** **Final Polrep** **Wando VCC Site** **A4WH** **North Charleston, SC** **Latitude: 32.8371000 Longitude: -79.9700000**
To:	
From:	Terry Tanner, On Scene Coordinator
Date:	7/2/2012
Reporting Period:	03/15/2012 through 07/03/2012

1. Introduction

1.1 Background

Site Number:		**Contract Number:**	
D.O. Number:		**Action Memo Date:**	6/30/2011
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	PRP	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	11/4/2011	**Start Date:**	11/4/2011
Demob Date:	4/21/2012	**Completion Date:**	7/3/2012
CERCLIS ID:	SCN000410243	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	A4WH

1.1.1 Incident Category

1.1.2 Site Description

In 1884 the Wando VCC Site began operating as a fertilizer manufacturing plant. This plant operated until 1924 when the Virginia-Carolina Chemical Company declared bankruptcy. Previous Site structures associated with the former VCC plant operations included an acid chamber and furnace, process buildings designed to house crushing, grinding, bagging and shipping operations, a rail siding, and an artesian well. The plant structures were removed when the Daniel Jenkins war housing project was constructed in 1945. Between 1961 and 1963, portions of the housing project were removed to provide a staging area for construction of I-26. Portions of the Site were also used as a borrow source for fill materials for I-26. The borrow pits were later used by Charleston County as a landfill.

1.1.2.1 Location

The current street address that most closely matches the location of the former fertilizer plant is 2390 Baker Hospital Boulevard, North Charleston, Charleston County, South Carolina. The lat/long is 32.8371 degrees east and 79.9700 degrees west. The former fertilizer plant was located on approximately 11 acres along the Ashley River (riverfront). The site is currently bounded to the west by the Ashley River, to the north by the Charleston Metro Chamber of Commerce and the former Baker Medical Center, to the east by commercial development and King Street, and to the south by the Rhodia site (formerly Albright and Wilson VCC).

1.1.2.2 Description of Threat

The Wando VCC Site was a former fertilizer manufacturing plant. This plant utilized a lead-lined acid chamber to produce super phosphate. The waste products associated with this process included spent phosphate slag containing elevated levels of arsenic and lead, in addition to acid wash water from the acid chamber. The spent slag is typically identified by its bright magenta color.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Several investigations have been performed at the Site by ARCADIS (on behalf of Exxon Mobile) and other property owners. However in 2008 ARCADIS, on behalf of Exxon Mobile, collected samples to support a Removal Site Evaluation. Information obtained during the RSE prompted an interim removal action to address soils in the vicinity of a playground at the Osprey Place Apartments. A summary of the interim removal action is presented in the following section. ARDACIS returned to the Site in 2009 to perform a more comprehensive investigation of soils and sediments on the Ashley Properties (both undeveloped and developed properties) and presented this information along with the information associated in the RSE in the Site Investigation Report (ARCADIS, 2010).

The samples collected during the RSE and Site Investigation Report indicated that lead and arsenic, two common contaminants of concern associated with fertilizer production, were present in soil and sediment. The concentrations of lead and arsenic in soil and sediment exceeded the Site Specific Action Levels (27 ppm arsenic and 400 ppm lead) proposed by Exxon Mobile for the VCC sites. These Site Specific Action Levels are similar to EPA's Removal Action Levels (39 ppm arsenic and 400 ppm lead) for these contaminants.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

The removal action was initiated on November 2011. The initial work began with clearing and grubbing activities and utility clearance work. Site trailers, equipment storage boxes, fuel storage tank, and all other equipment were brought on site and staged adjacent to the excavation areas. The Removal Action Delineation Report/Removal Action Work Plan, April 2011, outlined the general limits of the soil and sediment areas to be excavated. The actual limits of the excavation area can be seen in Figure 2-1 of the Removal Action Completion Report, June 2012.

Following the excavation of the soil and sediment, stabilization was performed as needed to facilitate the disposal of excavated materials in a RCRA Subtitle D landfill. The purpose of the stabilization activity was to reduce the leachable concentrations of arsenic and/or lead to less than 5 mg/l. Excavated material was generally managed in batch sizes of approximately 500 tons. Stabilization activities were accomplished by adding Environblend to stockpiled soil/sediment.

Air monitoring activities during the removal action included real time monitoring for total particulates at the perimeter of the work zone in addition to air sampling collected within the work zone which were analyzed for particulates, arsenic, and lead. The results were compared to OSHA standards for particulates (2.5 mg per cubic meter) and the site specific action levels for arsenic (0.005 mg per cubic meter) and lead (0.03 mg per cubic meter). The air sampling results for both the perimeter air monitoring and air sampling within the work zone did not exceed the OSHA standards or the site specific action levels.

As the soil removal activities progressed, an XRF was used to evaluate arsenic and lead concentrations at the base of the excavations. When the XRF reading indicated that impacted soil had been removed, conformational samples were collected from areas no larger than 10,000 square feet. The analytical results are summarized in Table 2-2 of the Removal Action Completion Report.

At total of 83,972 tons of soil and sediment were excavated and disposed of off site at the Waste Management Inc. Oakridge Landfill, 2183 Highway 78, Dorchester, SC. This facility is a Resource Conservation and Recovery Act (RCRA) Subtitle D disposal facility and was found to be in compliance at the time of the removal action. Transportation services were provided by T&T Trucking, 118 Durr Lane, Summerville, SC.

Demobilization activities were completed on April 21, 2012. Site trailers, equipment storage boxes, fuel storage tank, and all other equipment and personnel were removed from the site. Exxon Mobile is working on developing a Post-Removal Site Control Plan to address properties were impacted materials were left in place.

2.1.2 Response Actions to Date

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

The removal action was performed by the responsible party, Exxon Mobile, under an Administrative Order on Consent.

2.1.4 Progress Metrics

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*
Lead/arsenic	Soil/sediment	83,972 ton	770271 - 769205	Enviroblend	Oakridge Landfill

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

2.2.1.2 Next Steps

2.2.2 Issues

During the site clearing activities a number of discarded batteries were discovered in a wooded area adjacent to the Osprey Point Apartment property. These batteries manufactured by the McGraw-Edison Company in Bloomfield, New Jersey, may have been used in Aid To Navigation (AToN) devices such as channel marker or bouys. OSC Tanner and ARCADIS worked with the United States Coast Guard Sector Charleston to discuss the removal and disposal of these batteries. Under the direction of Mr. David Isenbarger (USCG) these batteries were collected and disposed of by Tri-State Government Services, Inc. A copy of the bill-of-lading is included in Appendix E of the Removal Action Completion Report.

During the excavation of soil at the Osprey Place Apartments, suspected asbestos containing material (ACM) was encountered at the base of the excavation. The material appeared to be in a bag labeled "Caution – contains asbestos dust" and was embedded within debris associated with the former landfill. After discussion with EPA and SC DHEC the material was left in place, a demarcation liner placed over the area, and the limits of the suspected ACM were surveyed for documentation in the deed restrictions.

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.