

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
REEF Environmental - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region IV

**Subject:** POLREP #16  
Progress Report  
REEF Environmental

Sylacauga, AL  
Latitude: 33.1888040 Longitude: -86.2640480

**To:**  
**From:** Jason Booth, OSC  
**Date:** 10/23/2013  
**Reporting Period:**

## 1. Introduction

### 1.1 Background

|                            |               |                                |                |
|----------------------------|---------------|--------------------------------|----------------|
| <b>Site Number:</b>        | B4W3          | <b>Contract Number:</b>        | EP-S4-07-03    |
| <b>D.O. Number:</b>        | TO-0132 Mod 2 | <b>Action Memo Date:</b>       | 2/25/2013      |
| <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>  | 10/2/2012     | <b>Start Date:</b>             | 10/2/2012      |
| <b>Demob Date:</b>         |               | <b>Completion Date:</b>        |                |
| <b>CERCLIS ID:</b>         |               | <b>RCRIS ID:</b>               |                |
| <b>ERNS No.:</b>           | 1026286       | <b>State Notification:</b>     | ADEM           |
| <b>FPN#:</b>               |               | <b>Reimbursable Account #:</b> |                |

#### 1.1.1 Incident Category

Time-Critical Removal Action

#### 1.1.2 Site Description

The Reef Environmental Services facility in Sylacauga, Alabama was a centralized waste treatment facility. The facility was permitted to accept industrial waste water (waste water and oily contact water) for treatment and discharge to the Sylacauga public operated treatment works (POTW) waste water treatment plant. Shortly after the first waste deliveries began, reports indicate that numerous odor complaints were received by the local and state government. Within the past few years, the facility has filed for bankruptcy. The State has taken various actions and had limited success in getting the wastes at the Site to be properly disposed. On October 1, 2012, after receiving information that totes were being removed from the facility and numerous odor complaints, Alabama Department of Environmental Management (ADEM) personnel investigated the Site. ADEM personnel could not make entry into the facility but did observe an oily sheen in a stream near the facility as well as a large bulge in the tarp covering the Biological Treatment Basin at the facility. Later in the day on October 1, ADEM requested assistance from the Environmental Protection Agency to assess the Site and to assist with implementation of emergency stabilization measures. On the morning of October 2, 2012, OSCs Francendese and Harper were mobilized from Birmingham, Alabama to meet with ADEM and assess the situation. Upon initial assessment, OSC Francendese secured the Site and ceased removal of on-site totes by private party contractors. In addition, he verbally notified the PRPs of potential hazards which included the accumulation of hazardous substances (including hydrogen sulfide) under the tarps/liners covering the basins. While the PRP provided verbal access, he indicated that he was not able to perform the necessary stabilization actions required by EPA. OSC Francendese requested the dispatch of the on call responder. EPA OSC Neal was dispatched to the scene. Assessment activities continued throughout the day and evening of October 2, 2012.

##### 1.1.2.1 Location

71 Twin Street, Sylacauga, Talladega County, Alabama

##### 1.1.2.2 Description of Threat

The abandoned facility has several priority issues that will be addressed under a phased approach. The first phase involved the emergency response action that mitigated the trapped gases under the 3 million gallon biological reactor tarp/liner of Equalization Basin No. 2 (EQ 2). An additional 3-million gallons treatment basin, Equalization Basin No. 1 (EQ 1) also has a failed tarp/gas retention system that was not under high pressure, but required mitigation work. Trapped gases exist under this liner and will be addressed under the emergency phase of the response action. The trapped gases total approximately 175,000 cubic feet contained dangerous elevated levels of volatile organics and hydrogen sulfide and presented a release

and explosion risk. This facility exists within 1000 feet of a residential neighborhood.

Additional threats exist in the form of an oily sheen release to the nearby creek as well as abandoned chemicals onsite.

The first phase addressed the release threat of the trapped gases and release of EQ 2 to Shirtee Creek followed by a series of chemical treatments of EQ 1 & 2 to stop the emissions of H<sub>2</sub>S.

The second phase will involve an analytical assessment of the waste water inventory of the Site. Based on the technical review of the analytical a treatment and disposal scheme will be implemented for the estimated 14-million gallons of waste water in the three major waste water basins and two clarifiers.

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

The initial assessment identified the trapped gases under the tarp/liner as well as the oily sheen being released to the creek. The rotten egg odor was later identified to be both elevated volatile organics and hydrogen sulfide. Subsequent site walkthru identified abandoned hazardous substances at the facility both on the facility grounds proper and within the lab.

## **2. Current Activities**

### **2.1 Operations Section**

#### **2.1.1 Narrative**

The facility is an abandoned former waste treatment facility that was referred to the EPA ERRB by ADEM. Subsequent assessments identified unstable conditions relating to accumulating gases (organic and hydrogen sulfide) under the containment tarp/liner covering Equalization Basins 1 & 2.. Additional assessments identified an oily sheen being released from the facility as well as abandoned hazardous chemicals both on the facility grounds and in the onsite facility lab.

#### **2.1.2 Response Actions to Date**

Week of July 29, 2013 - Emergency and Rapid Response Services (ERRS) continues to treat and discharge water into Shirtee Creek. During this reporting period the site operations have expanded into two shifts to manage waste water treatment and the remaining sediment and sludge phases of the waste water. Total volume of treated water discharged to Shirtee Creek during this reporting period is 2,212,900 gallons. Total water treated and discharged to date is 16,667,800 gallons. ERRS crews continue to hydro-blast the walls of Equalization Basin No. 2 which was the focus of the emergency response operations in October 2012 where heavy dosing of hydrated lime was implemented to chemically amend the waste water and control the release of hydrogen sulfide gas. The hydro-blast operations have been successful in driving the caked lime and sludge-sediments into a suspended solution that are easily pumped into the site treatment sequence that consists of the neighboring basins, clarifiers, and mobile treatment system. Approximately 300-cubic yards of sludge were stabilized/fixed during this reporting period using a combination of Portland cement, sand and sawdust. Production efficiencies are being evaluated to optimize sludge treatment as the volume of sludge and flocculated material are rapidly increasing over the treatable waste water phase. The Alabama Department of Environmental Management (ADEM) conducted effluent sampling for discharge parameters.

Week of Aug 5, 2013 - Emergency and Rapid Response Services (ERRS) continues to treat and discharge water into Shirtee Creek. During this reporting period the site operations have expanded into two shifts to manage waste water treatment and the remaining sediment and sludge phases of the waste water. Total volume of treated water discharged to Shirtee Creek during this reporting period is 2,212,900 gallons. Total water treated and discharged to date is 16,700,800 gallons. ERRS crews continue to hydro-blast the walls of Equalization Basin No. 2 which was the focus of the emergency response operations in October 2012 where heavy dosing of hydrated lime was implemented to chemically amend the waste water and control the release of hydrogen sulfide gas. The hydro-blast operations have been successful in driving the caked lime and sludge-sediments into a suspended solution that are easily pumped into the site treatment sequence that consists of the neighboring basins, clarifiers, and mobile treatment system. Approximately 300-cubic yards of sludge were stabilized/fixed during this reporting period using a combination of Portland cement, sand and sawdust. Production efficiencies are being evaluated to optimize sludge treatment as the volume of sludge and flocculated material are rapidly increasing over the treatable waste water phase. The Alabama Department of Environmental Management (ADEM) conducted effluent sampling for discharge parameters.

Week of Aug 12, 2013 - Emergency and Rapid Response Services (ERRS) continues treating and discharging water into Shirtee Creek. Total volume discharged to date into the creek is 16,599,300 gallons. ERRS crews continue stabilizing sludge accumulation with Portland cement, sand and sawdust in order to handle and stockpile the sludge more effectively. ERRS crews are using fire hose pumps to spray out sludge on the bottom of basin floors to clean the basins of nearly all sludge. Air monitoring and water quality sampling will continue throughout the duration of the sludge solidification process.

Week of Aug 26, 2013 - ERRS finished the removal of sludges from basin 2. ERRS crews continue to finish treatment of the remaining waste water in basin 1 before starting sludge removal of that basin. Total volume discharged to Shirtee Creek to date is 18,890,400 gallons. Crews continue to solidify sludge of accumulation from the water treatment process. Air monitoring and water quality sampling continues throughout the duration of the removal.

Week of Sep 16, 2013 - Emergency and Rapid Response Services (ERRS) continues to remove sludge from basin 1. Sludge is being transferred to the drying beds to be solidified and stockpiled. Sludge is also being transferred from basin 1 to the final clarifier to thicken before solidification. Wastewater is being treated as basin 1 recharges from ground water through cracks in the basin walls.

Week of Sep 23, 2013 - Emergency and Rapid Response Services (ERRS) continues to remove sludge from basin 1. Sludge is being transferred to the drying beds to be solidified and stockpiled. Sludge is also being transferred from basin 1 to the final clarifier to thicken before solidification. Wastewater is being treated as basin 1 recharges from ground water through cracks in the basin walls. Air quality monitoring is still taking place along the perimeter of the Site and in a nearby neighborhood.

Week of Oct 14, 2013 - Emergency and Rapid Response Services (ERRS) completed sludge removal from basin 1. ERRS has moved on to removing sludge from basin 3. Sludge is being transferred to the drying beds to be solidified and stockpiled. Approximately 5,425 tons of solidified sludge have been transferred off-site for disposal. Wastewater continues being treated as needed to keep water levels down. Approximately 23,456,200 gallons of water have been treated and released to Shirtee Creek. Air quality monitoring is still taking place along the perimeter of the Site and in a nearby neighborhood.

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

The Office of Environmental Accountability (OEA) is pursuing enforcement.

### 2.1.4 Progress Metrics

Currently, Initial oxidative treatment listed below is 35% hydrogen peroxide to control hydrogen sulfide gas emissions.:

| <i>Waste Stream</i>      | <i>Medium</i> | <i>Quantity</i> | <i>Manifest #</i> | <i>Treatment</i> | <i>Disposal</i> |
|--------------------------|---------------|-----------------|-------------------|------------------|-----------------|
| Aeration Basin           | Water         | 7-mil gal       | N/A               | Filtration       | TBA             |
| Equalization Basin No. 2 | Water         | 3-mil gal       | N/A               | Filtration       | TBA             |
| Equalization Basin No. 1 | Water         | 3-mil gal       | N/A               | Filtration       | TBA             |
| Clarifier No. 1          | Water         | 250K gal        | N/A               | TBA              | TBA             |
| Clarifier No. 2          | Water         | 1-mil gal       | N/A               | Oxidation        | TBA             |
| Oily Sludge              | Soil          | 600 tons        |                   | Stabilize        | Started         |
| Drums                    | Liquid        | 15 drums        |                   |                  | TBA             |
| Lab Packs                | Liquid        | 13 packs        |                   |                  | TBA             |

## 2.2 Planning Section

### 2.2.1 Anticipated

Continue coordination with ADEM and Local officials.

#### 2.2.1.1 Planned Response Activities

Finish removing sludge from basin 3 and clarifiers and solidifying to transport off site.

#### 2.2.1.2 Next Steps

Continue discharging to Shirtee Creek. Stabilize sludge accumulating from water treatment process.

### 2.2.2 Issues

- Discharge to Shirtee Creek with a dilution factor.
- Sludge accumulation during water treatment.

## 2.3 Logistics Section

N/A

## 2.4 Finance Section

No information available at this time.

## 2.5 Other Command Staff

### 2.5.1 Safety Officer

### 2.5.2 Liaison Officer

### 2.5.3 Information Officer

Ms. Kerisa Coleman (Region 4 CIC)

## 3. Participating Entities

### 3.1 Unified Command

EPA  
ADEM

### **3.2 Cooperating Agencies**

City of Sylacauga  
Talladega County EMA  
Alabama EMA

#### **4. Personnel On Site**

- EPA (OSC) - 1
- START (Tetra Tech) - 1 (for off site sampling on Shirtee creek and Viper Support)
- ERRS (WRS Compass) - 9 with 1 off site for accounting
- ADEM - 1

#### **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**

None available at this time