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

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: **POLREP #15**
Progress Report
REEF Environmental

Sylacauga, AL
Latitude: 33.1888040 Longitude: -86.2640480

To:
From: Jason Booth, OSC
Date: 7/24/2013
Reporting Period: 6/6/2013-7/24/2013

1. Introduction

1.1 Background

Site Number:	B4W3	**Contract Number:**	EP-S4-07-03
D.O. Number:	TO-0132 Mod 2	**Action Memo Date:**	2/25/2013
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	10/2/2012	**Start Date:**	10/2/2012
Demob Date:		**Completion Date:**	
CERCLIS ID:		**RCRIS ID:**	
ERNS No.:	1026286	**State Notification:**	ADEM
FPN#:		**Reimbursable Account #:**	

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 H2S.

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 sheme 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 June 17, 2013 - Emergency and Rapid Response Services (ERRS) continued discharging treated water into Shirtee Creek. Additional ERRS personnel were mobilized to the site in order to run two shifts. Total volume discharged into Shirtee Creek to date was 4,371,000 gallons. The EPA Emergency Response and Removal Branch (ERRB) managers and Alabama Department of Environmental Management (ADEM) managers met with the On-Scene Coordinator (OSC) to discuss exit strategy of closing down the site. Basins 1 and 2 were treated with another 5,000 gallons of 35% hydrogen peroxide each to keep any hydrogen sulfide emissions suppressed. Effluent and creek samples continued to be collected and analyzed in addition to the constant air monitoring.

Week of June 24, 2013 - Emergency and Rapid Response Services (ERRS) continued treating and discharging water into Shirtee Creek. Total volume discharged into Shirtee Creek to date was 6,247,000 gallons. The Superfund Technical Assessment and Response Team (START) mobilized to the Site to collect sludge samples from basins and clarifiers. Sludge build up in the clarifier caused treatment and discharge activities to be limited until ERRS crews could solidify and stockpile the existing sludge in the drying beds. The On-Scene Coordinator (OSC) mobilized an additional two ERRS personnel to work on solidifying and stockpiling the increasing sludge being generated during the treatment process. The OSC, ADEM and the EPA counsel spoke with REEF LLC owners and their counsel regarding the future of the basins and clarifiers on-site; no decision was reached. Another phone conference was set for the week of July 8th.

Week of July 8, 2013 - Total discharge to Shirtee Creek and land surface since April 18th is over 9.3 million gallons. In preparations for the Independence Day holiday, the treatment system was cleaned and shutdown at the end of July 2nd, all blower motors were activated for full aeration, smaller recirculation pumps were installed on the primary clarifier to prevent algae growth, and approximately 50 gallons of hydrogen peroxide was added to the clarifier. These measures were successful in preserving the state of the water and equipment; the treatment system was restarted when crews returned on July 8th. 5,000 gallons of hydrogen peroxide was added to each of the basins EQ1 and EQ2 (10,000 gallons total) on July 3rd to further treat these waters to a condition more comparable to the aeration basin. Solidification of sludge was conducted the week of July 1st and resumed on July 8th. Large volumes of sand, sawdust and Portland cement were initially being mixed with sludge (estimated ratios of 2:3:1:1, respectively), but was found that when the mixture is stockpiled, it will further dry and can be reused multiple times. Sludge levels in the primary clarifier had exceeded 10 feet and were pumped to drying beds on July 8th and 9th; the sludge level in the primary clarifier was then reduced to 5 feet. All drying beds have been filled and material in them is being solidified to open capacity. Air monitoring stations have been experiencing power failures due to wet weather. All stations were restarted on July 2nd but failed again between July 4th - 6th. A waterproof electrical power supply was installed during the week of July 8th to provide a more reliable power source. Sampling activities for the week of July 1st were canceled, and the sampling schedule was moved by one week. Sampling of the effluent and the creek resumed on July 11th. Analysis of VOC and SVOC results from the effluent have consistently shown that the small concentrations of the few VOC and SVOC constituents in the water have been successfully removed by the treatment system; as a result, water analysis will no longer include these items.

Week of July 15, 2013 - Emergency and Rapid Response Services (ERRS) continued treating and discharging water into Shirtee Creek. Total volume discharged to date was 9,124,000 gallons. ERRS crews continued to work on managing the sludge accumulation during the treatment process, including using the large clarifier on-site as a sludge thickener. The On-Scene Coordinator (OSC) and Alabama Department of Environmental Management (ADEM) started discussions on staging the stabilized sludge onto the grassy field on-site instead of into the basins to minimize impacting the PRP's assets.

Week of June 22, 2013 - Emergency and Rapid Response Services (ERRS) continued treating and discharging water into Shirtee Creek. Total volume discharged to date was 12,322,900 gallons. ERRS crews

continued stabilizing sludge accumulation with portland cement, sand and sawdust in order to handle and stockpile the sludge more effectively. The On Scene Coordinator (OSC) and Alabama Department of Environmental Management (ADEM) gave Sylacauga Mayor Doug Murphree and Talladega County Commissioner Greg Atkinson a tour and update of the site.

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.:

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*
Aeration Basin	Water	7-mil gal	N/A	Oxidation	TBA
Equalization Basin No. 2	Water	3-mil gal	N/A	Oxidation	TBA
Equalization Basin No. 1	Water	3-mil gal	N/A	Oil Removal	TBA
Clarifier No. 1	Water	250K gal	N/A	TBA	TBA
Clarifier No. 2	Water	1-mil gal	N/A	Oxidation	TBA
Oily Sluge	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

Begin treatment of the approximately 18-million gallons of waste water and discharge it to Shirtee Creek per parameters established by ADEM.

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) - 7 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