

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Lobeco Products - Removal Polrep
Final Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: POLREP #4
Final POLREP - Removal Action Complete
Lobeco Products
B4N5
Seabrook, SC
Latitude: 32.5556550 Longitude: -80.7294280

To: Shane Hitchcock, USEPA R4 ERBB

From: Terry Stilman, On-Scene Coordinator

Date: 9/13/2012

Reporting Period: July 20, 2012 - September 7, 2012

1. Introduction

1.1 Background

Site Number:	B4N5	Contract Number:	
D.O. Number:		Action Memo Date:	1/17/2012
Response Authority:	CERCLA	Response Type:	Emergency
Response Lead:	EPA	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	1/17/2012	Start Date:	1/17/2012
Demob Date:	9/6/2012	Completion Date:	9/6/2012
CERCLIS ID:		RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

1.1.2 Site Description

The LP site operated as a specialty chemical manufacturer for more than 40 years, from 1966 to 2009. The product lines included dyes, farm chemicals, drilling fluid chemicals, herbicides, pesticides, and general specialty chemicals. The property has been abandoned since December of 2010, with power off to most or all of the property.

The property includes 125 acres of land surrounded by agricultural, rural residential, and undeveloped property. The closest crossroad is Keans Neck Road, located to the northeast. Currently the site includes a portion of the chemical processing structures, a storage/warehouse, a lab testing area, offices and the waste water treatment facility. Part of the processing facility has been demolished but the rubble remains onsite.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

The site was initially owned by Tenneco Chemicals, Inc. The Tenneco Chemicals Berkshire Color Division constructed the plant for the production of dyestuff intermediates in 1967.

While operating under Tenneco the facility used Monsanto Corporation's Aroclor 1248 PCB product as a heat transfer oil. The hot oil system in which Aroclor 1248 was used malfunctioned at times. Untreated liquids from an on-site lagoon were discharged directly into an adjacent stream, Whale Branch, which flows into Campbell Creek, and ultimately the Atlantic Ocean. In 1983 SC DHEC conducted an in-stream assessment of Campbell Creek and Whale Branch. A follow up SC DHEC study in December 1984 revealed the presence of PCBs in the immediate vicinity of the Lobeco plant effluent discharge point. As a result of this finding the facility conducted groundwater testing and produced a groundwater monitoring report which revealed the presence of PCBs at the Lobeco Plant.

Based on this information Tenneco Products commissioned further tests in order to characterize the extent and location of the PCBs at the Lobeco Plant. Initial soil borings indicated the presence of PCBs in the abandoned lagoon. In 1986 G & E Engineering, hired by SC DHEC, issued a preliminary investigation report pinpointing the location of the PCB contamination at the lagoon and burn site areas. In 1987, under the first of three SC DHEC consent orders, cleanup of the PCBs commenced and was concluded by November 1991. A subsequent well survey of residential wells was performed and found no PCB contamination of groundwater existed in the neighboring wells.

From 2005 to 2009 the facility was owned by ARR-MAZ Custom Chemicals Inc. (ARR-MAZ) known for pesticides and agricultural chemicals. The facility was shut down and sold at auction to Coastal Demolition in 2010. Upon taking ownership, Coastal Demolition began removing all scrap and recoverable materials. In 2010, the South Carolina Department of Health and Environmental Control (SCDHEC) issued an order to cease activity based on improper National Pollutant Discharge Elimination System (NPDES) discharges among other violations, including an unlicensed asbestos removal from the reactor building. Coastal Demolition made an attempt to correct the situation, but eventually abandoned the property. The site has been abandoned since 2010 with no power and no maintenance of the systems performed. Most of the plumbing and electrical systems have been scrapped and there are signs of trespass and vandalism at the site.

Based on a DHEC request for assistance, EPA's Emergency Response and Removal Branch (ERRB) conducted an initial site walkthrough in November 2011 to determine potential sampling locations. During the Site visit, approximately 9 - 250 gallon totes of suspected acid and several drums were found scattered throughout the Site. In addition, several above ground storage tanks labeled sulfuric acid and a debris pile containing suspected asbestos materials were observed.

Plans for sampling of the containers, the debris pile and an on-site waste treatment plant were discussed with DHEC. A subsequent sampling plan was prepared by EPA's START contractor for review by ERRB and DHEC.

EPA's Site Investigation Section and DHEC also planned to conduct sampling of potentially contaminated soils, sediment and surface water, focusing on longer-term contamination issues.

During the week of January 10, 2012, DHEC conducted its site investigation sampling event, focusing on the former lagoons, settling ponds, and the NPDES outfall into Whale Branch. Several soil samples from areas of interest were also collected.

On January 17, 2012, OSCs Stilman and Berry, arrived at the Site with EPA's START contractor to conduct a sampling assessment of containers at the facility. During that assessment, tanks, drums and other containers of hazardous substances in poor condition were found on-site. Conditions at the Site were appreciably worse than in November 2011. Due to the presence of these containers, the EPA OSC activated EPA's clean-up contractor to stabilize the conditions on-site and prevent a release. From January 18 until January 20, 2012, crews collected all portable containers from around the site, transferring material to secure containers where needed. START opened and sampled each container and then performed field hazard characterization tests on those samples. Additionally, ERRS used a boom lift to reach access ports on the tops of the ASTs around the site. Some of the ASTs were found to contain several thousand gallons of unknown liquids. These were also sampled (where possible) and field tested.

START also completed sample collection of the debris pile for asbestos, the concrete impoundments and large ASTs at the wastewater treatment plant. Samples of the water within each impoundment and any sediment found therein were collected and submitted to an analytical laboratory for analysis.

All sample results from the debris pile, waste water treatment system, lagoons, and impoundments showed no analytes of concern above any human-health benchmarks which would require a response action. Containerized waste, however, showed several different waste streams that were determined to be hazardous to human health or the environment. These are discussed in Section 2.1.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

2.1.2 Response Actions to Date

On January 17, 2012, OSCs Stilman and Berry, arrived at the Site with EPA's START contractor to conduct a sampling assessment of the facility. Upon arrival, OSCs Stilman and Berry observed the totes of suspected acid to be bulging and generally in poor condition. Based on the presence of containers of hazardous substances in poor condition and the lack of on-site facility personnel, OSC Stilman activated EPA's ERRS contractor (ER) to conduct stabilization actions.

On January 18, 2012, ERRS arrived on site and transferred the acid into new totes. Additionally, EPA, START, and ERRS inventoried the contents of the on-site quality control laboratory. After reviewing the inventory and in consultation with ERRS and START, OSC Berry determined that many of the lab chemicals were neutral, nonreactive material, and the safest approach was to bulk these solids and liquids into two large containers, which ERRS performed in Level B personal protective equipment. Additionally, several of the additional waste streams, such as flammable liquids and oils, were also consolidated into existing waste streams on site. Some chemicals whose compatibility was unknown were left to be lab packed at a later date. No reactions were observed during any of the bulking. Some chemicals in the lab refrigerator were found to have ruptured and crystallized on the door. These were also left untouched until a chemist could definitively identify the chemicals and gauge their danger.

ERRS used a boom lift to reach access ports on the tops of the ASTs around the site. Most ASTs were found to be empty, but several were found to contain several thousand gallons of unknown liquids. These were also sampled (where possible) and field tested. One tank was found to have at least several hundred gallons of sulfuric acid.

Once bulking was complete, START, ERRRS, and OSC Berry designed preliminary waste streams and composite samples of each waste stream were collected. There were 8 general waste types: acid liquids, basic liquids, flammable liquids, petroleum liquids, neutral liquids, chlorides, oxidizers, and bulk solids. A total of 11 samples were submitted for analysis. ERRS used these samples to profile waste streams for disposal, and a disposal company was found to handle transportation and disposal of these containers.

On July 16, 2012, EPA and ERRS returned to the site to finalize the off-site shipment of all containerized wastes. ERRS' chemist went through the remaining chemicals in the laboratory and lab-packed them for disposal.

Technicians went through the southern building and moved all waste to the northern warehouse, where there was a loading dock that trucks could utilize. All containers were inventoried, labeled, and placarded as required by DOT. Overpacks were used to protect any damaged containers. On Friday, July 20, all containerized waste was shipped off site for disposal at EPA-approved facilities.

EPA and ERRS originally planned to neutralized an on-site sulfuric acid tank in place and not ship it off for disposal. However, after removing the manhole from the top of the tank, which provided much better access than the 2-inch port that was available during the initial assessment, it was determined that the tank had at least 1,000 gallons of liquid and at least 2 feet of sludge. A bench-scale test was performed, and it was determined that over 5 tons of neutralizing agent (Na₂CO₃) would be needed to neutralize what was determined to be nearly 1,200 gallons of 80% sulfuric acid. ERRS attempted to pump the liquid out into totes for off-site disposal, but the pump was unable to lift the dense liquid high enough to pump out through the manhole. It was decided at the time to leave the material and reassess removal options.

Once the containers from around the site were ready to ship, ERRS gathered up all of the empty containers. These empty containers have residual amounts of contamination and were cut up and also disposed of off-site. One load of cut up containers was stored on plastic until EPA returned to the site to handle the sulfuric acid.

On September 4, 2012, ERRS and EPA OSC Berry returned to the site to complete removal actions. ERRS began by pacing the stored containers into a roll-off box which was delivered to the site that morning. Preparations for removing the sulfuric acid began with ERRS cutting an 8-inch hole in the side of the tank above the level of the acid to ensure the pumps would have enough head to evacuate the material. On September 5, a tanker truck was used to remove the sulfuric acid from the tank. Approximately 1,000 gallons of material was removed from the tank. On September 6, a total of 1,200 pounds of sodium bicarbonate was then poured into the tank to neutralize the residual acid. After 30 minutes, the reaction was observed to stop. Since water is a product of the reaction and the top layer of powder was dry, it was determined the reaction was complete, and the tank was sealed back up. All parties then demobilized from the site.

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

EPA has received consent for access to conduct assessment, stabilization and clean-up actions. EPA continues to review PRP information.

2.1.4 Progress Metrics

Waste Name	Quantity Shipped	Unit of Measure	Manifest #	Disposal Facility
UN1993, Waste Flammable Liquid, N.O.S (Kerosene)	6	Gallon	010546829	EEL
UN326, Waste Corrosive Liquid, Basic, Inorganic, N.O.S (Magnesium Hydroxide Soln)	10	Gallon	010546829	EEL
UN3139, Waste Oxidizing Liquid, N.O.S, (Potassium Iodide)	5	Liter	010546829	EEL
UN2810, Waste Toxic Liquid, Organic, N.O.S. (Phenol)	1	Liter	010546829	EEL
UN2734, Waste Amine Liquid, Corrosive, Flammable, N.O.S. (Polyamines)	3	Gallon	010546830	EEL
UN3265, Waste Corrosive Liquids, Acidic, Organic, N.O.S. (Sulfuric Acid)	6	Pounds	010546830	EEL
UN1238, Waste Methylchloroformate	1	Liter	010546830	EEL
UN2054, Waste Morpholine	1	Pounds	010546830	EEL
UN3224, Waste Self Reacting Solid	1	Pounds	010546831	EEL
UN3265, Waste Corrosive Liquids, Acidic, Organic, N.O.S. (Trifluoroacetic Anhydride)	1	Liter	010546831	EEL
Waste Corrosive Liquids, Flammable, N.O.S (Dinonylnaphthalenedisulfuric Acid in Heptane)	1	Liter	010546831	EEL
UN2809, Waste Mercury	2	Pounds	010546832	EEL
UN3102, Waste Organic Peroxide, Type E, Liquid	2	Pounds	010546832	EEL
UN3103, Waste Organic Peroxide, Type C	10	Pounds	010546832	EEL
UN2014, Waste Hydrogen Peroxide	1	Pounds	010546832	EEL
UN3264, Waste Corrosive Liquid, Acidic, Inorganic, N.O.S. (Chloroform)	800	Pounds	010546836	EEL
UN3264, Waste Corrosive Liquid, Acidic, Inorganic, N.O.S. (Chloroform)	300	Pounds	010546836	EEL
UN3139, Waste Oxidizing Liquid, N.O.S, (Sodium Nitrate)	400	Pounds	010546836	EEL
NA3082, Hazardous Waste Liquid, N.O.S (Chloroform)	2400	Pounds	010546837	EEL
NA3082, Hazardous Waste Liquid, N.O.S (Chloroform)	601	Pounds	010546837	EEL
UN3264, Waste Corrosive Liquid, Acidic, Inorganic, N.O.S. (Phosphoric Acid)	800	Pounds	010546837	EEL

UN3264, Waste Corrosive Liquid, Acidic, Inorganic, N.O.S. (Phosphoric Acid)	400	Pounds	010546837	EEI
UN3264, Waste Corrosive Liquid, Acidic, Inorganic, N.O.S. (Hydrochloric Acid)	16000	Pounds	010546838	EEI
NA3077, Hazardous Waste Solid, N.O.S. (Chromium)	3600	Pounds	010546838	EEI
UN3266, Waste Corrosive Liquid, Basic, Inorganic, N.O.S. (Sodium Hydroxide)	100	Pounds	010546838	EEI
UN1263, Waste Paint Related Material	400	Pounds	010546838	EEI
NA3082, Hazardous Waste Liquid, N.O.S (Benzene)	3000	Pounds	010546839	GRR
NA3082, Hazardous Waste Liquid, N.O.S (Benzene)	2200	Pounds	010546839	GRR
NA3082, Hazardous Waste Liquid, N.O.S (Benzene)	800	Pounds	010546839	GRR
UN3264, Waste Corrosive Liquid, Acid, Inorganic, N.O.S. (Sulfuric Acid)	1000	Gallons	010546981	Vickery
Nonregulated Material	600	P	19760	CMEG
Defoamer FO-120 (nonreg)	4250	P	19742	CMEG
Defoamer FO-120 (nonreg)	1000	P	19742	CMEG
Bulk Nonregulated Material	8000	P	19763	CMEG
Bulk Nonregulated Material	8000	P		CMEG
Bulk Nonregulated Material	8000	P	19962	CMEG

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

All planned response activities are complete. EPA's Site Assessment Section is still assessing soil, sediment, and groundwater samples from the site. No further Removal Actions are anticipated at this time.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	\$100,000.00	\$80,692.51	\$19,307.49	19.31%
TAT/START	\$50,000.00	\$0.00	\$50,000.00	100.00%
Intramural Costs				
Total Site Costs	\$150,000.00	\$80,692.51	\$69,307.49	46.20%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

South Carolina Department of Health and Environmental Control

4. Personnel On Site

During Reporting Period

EPA - 2

ERRS - 5

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.

POLREP #4 Last Updated 9/13/2012