

United States Environmental Protection Agency
Region IV
POLLUTION REPORT

Date: Tuesday, August 4, 2009

From: Terry Tanner

To: Jim McGuire, EPA

Subject: Initial Polrep - Removal Site Evaluation

Former Industrial Chemical Co.

Highway 21, Rock Hill, SC

Latitude: 35.8140000

Longitude: -80.9280000

POLREP No.:	1	Site #:	A4ZJ
Reporting Period:		D.O. #:	
Start Date:		Response Authority:	CERCLA
Mob Date:		Response Type:	Time-Critical
Demob Date:		NPL Status:	Non NPL
Completion Date:		Incident Category:	Removal Assessment
CERCLIS ID #:	SCD980500292	Contract #	
RCRIS ID #:			

Site Description

The Former Industrial Chemical Company Landfill site, also known as Landfill Inc., is located in a rural area of Rock Hill, Chester County, South Carolina. The site is located on 63.4 acres of land and is surrounded by hardwood forest. The landfill consist of two cells which comprise about 10 acres of land at the southern portion of the property. The landfill which was owned and operated by Industrial Chemical Company (ICC) of Rock Hill, began operations in 1973. The landfill received still bottoms and sludge from the ICC solvent recovery operation. Approximately 30,000 cubic yards of waste were disposed of at the site.

The landfill operated from 1973 until 1986. The landfill was closed as the result of subsequent compliance problems associated with a court order issued in 1981. Since the closure the landfill has not being properly maintained. Drums were noticed protruding out of the edge of the landfill and leachate was observed in a small stream flowing from the base of the landfill.

This site has been the subject of several investigations. A Site Inspection (SI) conducted by SCDHEC in 1987 identified the presence of contaminated groundwater at this site. Volatile Organic Compounds (VOCs) detected in down gradient monitoring wells were consistent with waste disposed in the landfill. EPA conducted a sampling investigation at the site in March 1995 as part of a Site Inspection Prioritization (SIP). Sampling results from the SIP did not indicate that contaminants had impacted the surface water or groundwater pathways. It is worth noting that the results from the SIP were obtained from temporary wells and off-site private wells therefore the results would not be comparable to the previous sampling investigations.

Additional groundwater monitoring has been conducted by a third party as stipulated in their purchase of the ICC facility in Rock Hill. Groundwater sampling conducted at the site in May 2001 indicated that some VOCs have migrated to shallow monitoring wells located around the perimeter of the landfill.

Current Activities

EPA's Emergency Response and Removal Branch conducted a Removal Site Evaluation (RSE) at the Site on April 30, 2009. A representative from South Carolina DHEC met on-site with EPA for this evaluation. A reconnaissance of the Site revealed that the drums are still present and continue to release their contents on to the ground. Several of the drums are located approximately 50 feet from an intermittent stream. This stream which was observed to have running water at the time of the RSE feeds directly into the Catawba River. The presence of trees growing on top of the landfill suggests that the soil cap has been breached. Erosion of the soil cap has resulted in exposed drums some of which threaten to release their contents into the adjacent soil and surface water.

For this Removal Site Evaluation, the data generated during a Site Inspection Update by South Carolina

Department of Health and Environmental Control (dated June 18, 2004), was utilized to assess the Site conditions. This data was reviewed and the maximum detected concentrations were compared to the Removal Action Levels (RAL). The Removal Action Level (RAL) was determined by converting the Regional Screening Level (RSL) to risk-based concentrations appropriate for time-critical removal actions. The derived RAL is based upon a residential human health risk of 1×10^{-4} for carcinogens and a Hazard Index of 3 for non-carcinogens.

A waste sample collected from a leaking drum at the landfill had elevated concentrations of toluene (3,200 mg/kg), total xylenes (3,900 mg/kg), Aroclor 1016 (130 mg/kg), mercury (12 mg/kg), and cyanide (48 mg/kg), in addition to several other TAL/TCL constituents. The following constituents were present in a surface water sample collected immediately below the base of the landfill: vinyl chloride (1.2 µg/L), chloroethene (4.7 µg/L), 1,1-dichloroethane (22 µg/L), cis 1,2 dichloroethene (16 µg/L), and toluene (8.4 µg/L). The concentration of Aroclor 1016 in the sample collected from the drum (130 mg/kg) exceeds the RAL for industrial exposures (124 mg/kg). The other constituents present in this sample did not exceed the RALs for industrial land usage.

Planned Removal Actions

The presence of hazardous substances at the Site (Arochlor 1016, xylene, toluene) constitutes a release of hazardous substances as defined by CERCLA §101(14). Arochlor 1016, xylene, and toluene are hazardous substances listed in the Title 40 of the Code of Federal Regulations (CFR) Section 302.4. The release of a hazardous substance from the Site will continue to be a threat to public health and welfare if not mitigated.

Arochlor 1016, xylene, and toluene were detected in a sample collected from a partially buried drum on Site. The concentration of Arochlor 1016 on Site (130 ppm) exceeds the RAL for industrial exposures (124 ppm). The combined waste volume for both waste disposal cells is estimated at 30,000 cubic yards.

Arochlor 1016, xylene, and toluene are present at the Site and pose the following threats to public health or welfare as listed in Section 300.415 (b)(2) of the NCP:

-Section 300.415 (b)(2)(i) "Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants." Investigations of the Site has documented that a hazardous substance is present on-site at a concentration greater than EPA's Removal Action Level for commercial/industrial land use settings. Access to the Site is currently not restricted. The South Carolina DHEC reported that the Site is being used for hunting and ATV riding. Anyone entering the Site may potentially be exposed to a hazardous substance through direct contact and/or ingestion with waste at the Site. Off-site migration of waste via leachate may lead to the exposure of nearby populations to Arochlor 1016, xylene, and toluene. Continued infiltration of rainwater into the waste will increase the production of leachate migrating out of the landfill.

-Section 300.415(b)(2)(iv) "High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate." Arochlor 1016, xylene, and toluene were detected in a sample collected from a partially exposed drum at the Site. This drum was exposed due to the ongoing erosion of the soil cap. Furthermore the Site owner is not maintaining the cap. There is no natural or man-made boundary to restrict waste from migrating off-site by erosion.

-Section 300.415(b)(2)(v) "Weather conditions that may cause hazardous substances to migrate or be released." Rainfall is an example of a weather condition that may cause hazardous substances to migrate or be released from the Site. Erosion of the soil cap due to rainfall will continue to expose the underlying waste. Rainwater infiltrating the waste will in turn increase the volume of leachate migrating from the landfill.

-Section 300.415(b)(2)(vii) "Availability of other appropriate federal or state response mechanisms to respond to a release." South Carolina DHEC referred this Site to EPA in 2009 and has indicated that the State lacks available funds to implement a cleanup at the Site in a timely manner. If EPA Region 4 does not respond to this release, no other federal agency, state or local government has the capability to respond in a time-critical manner.

Due to the threat and/or future threat to human health from these hazardous substances, the Site achieves removal eligibility based on some or all of the removal criteria in 40 CFR 300.415(b)(2).

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				

Intramural Costs				
Total Site Costs	\$0.00	\$0.00	\$0.00	0.00%

* 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.

response.epa.gov/FormerIndustrialChemical

POLREP #1 Last Updated 10/26/2010