

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Copiah County Manufacturing Site
Removal Site Evaluation POLREP



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: POLREP
Seven Out Tank Site
901 Francis Street, Waycross, Ware County, Georgia

Latitude: 31.207401° North
Longitude: 082.363473° West

To: James Webster, USEPA R4 ERRB
Jeff Cown, GA EPD Land Protection Branch

From: Matthew J. Huyser, On-Scene Coordinator

Date: September 19, 2013

Reporting Period: September 5, 2013

1 Introduction

Site Number: A4FY
Response Authority: CERCLA
Response Type: Time-Critical
Response Lead: EPA
Incident Category: Removal Assessment
NPL Status: Non NPL

1.1 Site Description

The Seven Out facility (the "Site") is an industrial wastewater treatment plant in Waycross, Ware County, Georgia, that operated from 2002 to 2004. The Site consists of a tank farm, an abandoned office building, and a small warehouse. The tank farm has 37 tanks ranging in volume of 8,000 gallons to 44,000 gallons, and a combined capacity of approximately 400,000 gallons. It is approximately one-half acre and is made of a concrete floor with a short concrete containment berm. South of the containment area is an office building of about 3,000 square feet. Around the south and east sides of the office building is a fenced lot

that contains the warehouse of about 4,500 square feet. The warehouse contains several drums, totes, and dry bags of material.

When the facility operated, treated wastewater was discharged to the City of Waycross publicly owned treatment works (POTW) using the City's collection system. Precipitated solids were treated in a filter press, and then transported off-Site for disposal at a landfill. The treatment process was generally unsuccessful and effluents regularly exceeded requirements of the company's pre-treatment discharge permit. The Seven Out facility received several Notices of Violation and an Administrative Order from the City of Waycross. On March 1, 2004, the City of Waycross disconnected the facility's connection to the POTW. The facility discontinued processing wastewaters, although it still received shipments. Incoming wastewaters were stored in tanks on-Site as well as four rented portable tanks that were placed on an adjoining property. Shortly thereafter and since that time, the facility ceased all operations without discharging the remaining waste in storage. Georgia EPD determined the facility to be incorrectly storing hazardous wastes and out of compliance with State of Georgia regulations.

GAEPD referred the Site to EPA for a Removal Site Evaluation. From August 23-26, 2004, EPA collected samples from onsite storage and treatment tanks. Because discolored soil was observed in some areas, soil samples were collected from a drainage ditch near the containment area, an area adjacent to frac tanks that had been stored outside the containment area, and along the south wall of the containment area. An emergency action was initiated by EPA on January 27, 2005 following a request for assistance from GAEPD on January 21, 2005. Under the emergency response action, pumpable liquids in the tanks and standing water in the secondary containment area were removed to mitigate the threat of release.

From 8/28-9/1/2006, GAEPD collected samples from the Site and the surrounding area as part of a remedial Site Inspection (SI). Their findings were submitted to EPA's Superfund Site Assessment Section on 11/20/2006 where it was determined that the Site did not qualify for further remedial site assessment due to lack of releases and targets for groundwater, surface water, and soil pathways.

After the 2005 emergency response, significant quantities of liquid and solid waste remained at the Site. An administrative order was signed on July 30, 2008, between EPA and Respondents, consisting of several generators that sent waste to the facility, to conduct a time-critical removal action to remove all remaining waste materials from the Site. The work to be performed under the order included:

- Implementation of the OSC-approved removal action in accordance with the schedule and requirements of a Removal Action Work Plan;
- Removal of waste material from all tanks, drums, and other containers on the Site, as well as from the secondary containment area;
- Decontamination and/or disposal of all tanks, drums, and other containers on the Site, as well as decontamination of the secondary containment area; and,

- Disposal of the waste material removed from the Site, including any sampling and analysis necessary to determine proper treatment and disposal methods.

EPA conducted oversight of all removal activities, including collection of split-samples from several tanks. Over the course of the removal action, a total of 300,000 gallons of rainwater was discharged to the Waycross POTW, 905 tons of nonhazardous solid wastes were sent to an off-site landfill for disposal, and 3,900 gallons plus 108 tons of hazardous wastes (HW codes D002, D006, D007, and D018) were sent off-site for treatment and disposal. When the work was concluded and a final report was received, EPA issued the notice of completion letter on 11/16/2009.

1.2 Preliminary Removal Assessment/Removal Site Inspection Results

In August of 2013, EPA was contacted by residents of Waycross, Georgia, regarding health problems experienced by occupants of homes surrounding Folks Park (also known as “Mary Street Park”) and the potential relationship of these symptoms to contaminants originating from the Seven Out Tank Site. Information and concerns from the community are being posted and documented at a website (www.silentdisaster.org) as well as an accompanying facebook group page.

The community group has documented complaints from 13 individuals at residences surrounding Folks Park, as well as from members of a church at the perimeter of the park. The group has also documented complaints from employees of a bank and the Waycross City Hall which are located over or near the underground unnamed creek. Reported health problems include the following:

- Tumors or “masses” (both benign and malignant)
- Cancer
- Respiratory problems
- Neurological problems
- Headaches
- Shaking or tremors
- Fatigue
- Vision and hearing trouble
- Sores

The community group has also documented unidentifiable sheen(s) emanating from lawns around Folks Park and within the unnamed creek through Folks Park. The sheen is observed on pavement and surface water after rain events and a “dry white substance” is deposited when the sheen has dried. Additional concerns include the deterioration and death of trees in Folks Park and deformation of amphibians in the unnamed creek within Folks Park.

The community group collected a sediment sample from the unnamed creek in Folks Park on July 3, 2013, and sent the sample to an environmental analytical laboratory for analysis. The laboratory returned a report with detections of Polynuclear Aromatic Hydrocarbons (PAHs) including Benz[a]anthracene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Chrysene, Fluoranthrene, Phenanthrene, and Pyrene. These constituents correspond to a list of PAHs detected in a soil sample collected by EPA during a Removal Site Evaluation (RSE) on August 26, 2004 at the Seven Out Tank Site.

Due to the proximity of the Site to the Folks Park residences, the stormwater drainage flow from the Site to the unnamed creek, and the reported detections of PAHs in the unnamed creek sediments at Folks Park, the community group believes that contamination originating from the Seven Out Tank Site may be the cause of local health and environmental problems that they have observed.

1.3 Site Location

The Site includes an office building, storage building, tank farm, and paved parking areas. The tank farm is not fenced and is accessible to the public via Folks Street, Francis Street, or McDonald Street. The property is immediately surrounded by commercial buildings to the east, west, and north with a major CSX Railroad terminal to the south. A lot to the south was previously used for staging mobile tanks that the facility used to store untreated waste water. The nearest residential property is located at 103 Folks Street approximately 220 feet from the tank farm area; nearby residential neighborhoods are located to the west and north.

The Site lies in an area of minimal flooding outside of both the 100-year and 500-year flood zones. Overland flow from the Site flows into a drainage ditch south of the tank farm and north of the railroad tracks on the Site drainage ditch continues west, roughly parallel to the railroad tracks, for approximately 1200 feet into an unnamed creek. Just south of the ditch is a petroleum facility, C & M Oil Company, which also discharges overland runoff to the drainage ditch. Immediately south of this intersection is a former BP fuel tank farm, which also discharges overland runoff to the unnamed creek. The creek flows northeast for approximately 5000 feet, flowing through Folks Park and underground through the city center after which it emerges at Lee Avenue and Memorial Drive (Hwy 23). Water then flows east for less than 1000 feet then joins the Waycross City Drainage Canal the PPE. The City Drainage Canal flows in a northeast direction for approximately 3 miles before joining the Satilla River.

2 Removal Site Evaluation

EPA OSC Huyser visited the Site on September 5, 2013 and observed that no significant changes had occurred at the facility. Thick vegetative growth has occurred outside the south border of the tank farm and has reached heights in excess of 10 feet. Standing water was observed on the east side of the property both inside and outside the containment area; the inability of the Site to fully shed rainwater is consistent with observations made during the 2008-2009 removal action. This behavior is likely due to an intentional design that would help keep liquids on-site in the event of a spill.

Also on September 5, OSC Huyser met with representatives of the community group and observed the areas in the unnamed creek and the residential yards where sheens had been observed and photographed. A light sheen of approximately 5 cubic centimeters was observed between vegetation within the creek flowing through Folks Park; this sheen presented characteristics consistent with a hydrocarbon source as opposed to a discharge from a bacterial or other local organic source. The sheen and/or residue on paved surfaces that had been reported from residential yards after rain events were not visible on September 5. Another area observed was near a culvert where the drainage ditch at the southern border of the Site passed under S Nicholls Street; concerns of dying or absent vegetation were pointed out in an area at the northwest corner of a property owned by CSX Railroad. The final area observed was at the intersection of the unnamed creek and Margaret Street, approximately 2500 feet upstream from Folks Park and 1000 feet upstream from the confluence with

the drainage ditch that passes the southern border of the Site. Concerns of previously observed sheens and light tan foam were pointed out; no sheen was visible on September 5 but light foam was observed collecting around debris in the creek.

The analytical results from a sediment sample collected by the community group from the unnamed creek in Folks Park point to a presence of PAHs that correspond to a list of PAHs detected in a soil sample collected by EPA during a Removal Site Evaluation (RSE) on August 26, 2004 at the Seven Out Tank Site (See Table 1):

Table 1. Soil Samples Collected by EPA (2 of 4) and by Community Group (1 of 1)

	Source:	Soil Sample SO-SW	Soil Sample SO-DD	Sediment Sample
		Taken by EPA Near	Taken by EPA Near	Collected by Resident
		South Perimeter of	Drainage Area of	in Unnamed Creek at
		Seven Out Site	Seven Out Site	Folks Park
Date:	Collected	Collected	Collected	Collected 7/3/2013
Units:	8/26/2004	8/26/2004	8/26/2004	
	mg/kg	mg/kg	mg/kg	
Polynuclear Aromatic Hydrocarbons (PAHs)	Benz[a]anthracene	2.4	0.33 UJ	0.556
	Benzo[a]pyrene	2.8	0.33 U	ND
	Benzo[b]fluoranthene	1.8	0.33 U	0.827
	Benzo[k]fluoranthene (*California-Modified)	3.2	0.33 U	0.398
	Chrysene (*California-Modified)	3.1	0.330UJ	0.067
	Dibenz[a,h]anthracene	0.65	0.33 U	ND
	Fluoranthrene	4.6	0.33 U	0.069
	Indeno[1,2,3-cd]pyrene	3	0.33 U	ND
	Phenanthrene	1.8	0.4	0.378
	Pyrene	4	0.330UJ	1.52

Sample SO-SW was collected from discolored surface soils outside the containment area of the tank farm, near the mechanical sludge press at the southeast corner. Of the four samples collected during EPA's assessment, this was the only sample which showed detectable levels of PAHs. One of the samples which did not show detectable of PAHs was sample SO-DD, which was collected within the drainage path (but no, in the drainage ditch) exiting the Site at the southeast corner. The two other soil samples were collected from discolored soils near the frac tanks at the south lot from the facility.

The community's primary concern regarding EPA's samples relates to a comparison that was made in EPA's December 9, 2004 Removal Assessment Report in which the soil sample results are evaluated against to the EPA Region 9 Preliminary Remediation Goal (PRG) Residential Screening Levels (RSLs) and Industrial Screening Levels (ISLs) (See Table 2):

Table 2. Screening Levels used for Comparison in Removal Assessment Report

	Source:	R9 PRG RSLs for Residential Soil Use for Comparison in RSE Report	R9 PRG ISLs for Industrial Soil Used for Comparison in RSE Report	R9 PRGs for Residential Soils	R9 PRGs for Industrial Soils
		Referenced on 12/9/2004	Referenced on 12/9/2004	Distributed Oct, 2004	Distributed Oct, 2004
		mg/kg	mg/kg	mg/kg	mg/kg
Polynuclear Aromatic Hydrocarbons (PAHs)	Benz[a]anthracene	0.621	2.11	0.62	2.1
	Benzo[a]pyrene	0.0621	0.211	0.062	0.21
	Benzo[b]fluoranthene	0.621	2.11	0.62	2.1
	Benzo[k]fluoranthene (*California-Modified)	0.378	1.28	6.2 (*0.38)	21 (*1.3)
	Chrysene (*California-Modified)	3.78	12.8	62 (*3.8)	210 (*13)
	Dibenz[a,h]anthracene	0.0621	0.211	0.062	210
	Fluoranthrene	2290	22000	2300	22000
	Indeno[1,2,3-cd]pyrene	0.621	2.11	0.62	21
	Phenanthrene	NSA	NSA	NSA	NSA
	Pyrene	2320	29100	2300	29000

When compared to the Region 9 PRGs, sample SO-SW exceeds the industrial soil screening level for Benz[a]anthracene, Benzo[a]pyrene, Benzo[k]fluoranthene, Dibenz[a,h]anthracene, and Indeno[1,2,3-cd]pyrene; and also exceeds the residential soil screening level for Benzo[b]fluoranthene. Only Benzo[a]pyrene is exceeded by an order of magnitude (2.8 mg/kg in the sample against an industrial PRG of 0.211 mg/kg) while the remaining exceedences are within a range of 150% to 300% of the PRG value.

Section 3.2 of the 2004 Removal Assessment Report for the Seven Out Tank Site quotes the EPA Region 9 PRG website (<http://www.epa.gov/region09Avaste/srund/prg/rndex.htm>.) to provide the following explanation of why this comparison was made:

PRGs "are risk-based concentrations that are intended to assist risk assessors and others in initial screening-level evaluations of environmental measurements. The PRGs contained in the Region 9 PRG Table are generic; they are calculated without site specific information". The website also states that "PRGs should be viewed as Agency guidelines, not legally enforceable standards. They are used for site 'screening' and as initial cleanup goals, if applicable. PRGs are not de facto cleanup standards and should not be applied as such. However, they are helpful in providing long-term targets to use during the analysis of different remedial alternatives."

Screening levels that are used to evaluate sites for an emergency or a time critical removal action are typically higher than the PRG value and have been referred to as "Removal Action Levels" (RALs) or "Removal Management Levels" (RMLs). These values are similar to PRGs in that they are not site-specific and not enforceable, but are different in that they are used to provide guidance for initiating an action. Table 3 compares the most recent version of RMLs to the most recent version of RSLs:

Table 3. Latest versions of Regional Screening Levels and Removal Management Levels

		Source:	RSL for Residential Soils	RSL for Industrial Soils	RML for Residential Soils	RML for Industrial Soils
		Date:	Distributed May, 2013	Distributed May, 2013	Distributed Dec, 2012	Distributed Dec, 2012
		Units:	mg/kg	mg/kg	mg/kg	mg/kg
Polynuclear Aromatic Hydrocarbons (PAHs)	Benz[a]anthracene		0.15	2.1	15	210
	Benzo[a]pyrene		0.015	0.21	1.5	21
	Benzo[b]fluoranthene		0.15	2.1	15	210
	Benzo[k]fluoranthene		1.5	21	150	2100
	Chrysene		150	210	1500	21000
	Dibenz[a,h]anthracene		0.015	0.021	1.5	210
	Fluoranthrene		230	2100	6900	66000
	Indeno[1,2,3-cd]pyrene		0.15	2.1	15	210
	Phenanthrene		NSA	NSA	NSA	NSA
	Pyrene		170	1700	5200	50000

When compared to the RMLs for residential and industrial soils, a single RML for residential soil (1.5 mg/kg) is exceeded by Benzo[a]pyrene in sample SO-SW (2.8 mg/kg). Despite exceeding the residential RML by 180%, the concentration is still only 13% of the industrial RML and is merely a single location within an industrial property (it is not representative of the property as a whole). Moreover, PAHs were not detected within the contents of the tanks on-site when samples were collected during EPA’s removal assessment in 2004. PAHs were reported in samples that were taken from the tanks as part of the 2008 removal action, and several of these samples were split for independent analysis by EPA’s START contractor, but all results were flagged as unreliable estimates of an actual concentration. Tables 4 and 5 present the data from samples that were collected from the tanks during November 2008; the acronym “ND” means that the analyte was “not detected” while the letter “J” means that the value is merely an approximated concentration:

Table 4. Concentrations of PAHs from Tanks CT-1 and CT-4

		Source:	Tank CT-1 (Liquid)		Tank CT-1 (Solid)		CT-4 (Solid)	id)
		Sampler:	EPA START Contractor Tetra Tech (split)	RP Group Contractor Winter Environmental	EPA START Contractor Tetra Tech (split)	RP Group Contractor Winter Environmental	RP Group Contractor Winter Environmental	
		Date:	11/11/2008	11/11/2008	11/11/2008	11/11/2008	11/11/2008	
		Units:	mg/L	mg/L	mg/kg	mg/kg	mg/kg	
Polynuclear Aromatic Hydrocarbons (PAHs)	Benz[a]anthracene		ND	0.0346 J	ND	ND	0.66 J	
	Benzo[a]pyrene		ND	0.0262 J	ND	ND	0.54 J	
	Benzo[b]fluoranthene		ND	0.0341 J	ND	ND	0.69 J	
	Benzo[k]fluoranthene		0.0045 J	0.0287 J	ND	0.67 J	1.1 J	
	Chrysene		0.0089 J	0.0463 J	ND	0.57 J	1.2 J	
	Dibenz[a,h]anthracene		ND	ND	ND	ND	ND	
	Fluoranthrene		0.027 J	153	28 J	1.3 J	2.7 J	
	Indeno[1,2,3-cd]pyrene		ND	0.0147 J	ND	ND	ND	
	Phenanthrene		0.011 J	221	54 J	1.8 J	1.6 J	
	Pyrene		0.0071 J	88.8	ND	ND	1.4 J	

Table 5. Concentrations of PAHs from Tank CT-5

Table 3: Concentrations of PAHs from Tank CT-5							
		Source:	Tank CT-5 (Liquid)		Tank CT-5 (Solid)		id)
		Sampler:	EPA START Contractor Tetra Tech (split)	RP Group Contractor Winter Environmental	EPA START Contractor Tetra Tech (split)	EPA START Contractor Tetra Tech (split duplicate)	RP Group Contractor Winter Environmental
		Date:	11/11/2008	11/11/2008	11/11/2008	11/11/2008	11/11/2008
		Units:	mg/L	mg/L	mg/kg	mg/kg	mg/kg
Polynuclear Aromatic Hydrocarbons (PAHs)	Benz[a]anthracene	ND	ND	10 J	17 J	ND	
	Benzo[a]pyrene	0.0060 J	ND	ND	ND	ND	
	Benzo[b]fluoranthene	0.01 J	ND	ND	24 J	ND	
	Benzo[k]fluoranthene	0.0084 J	ND	ND	19 J	0.59 J	
	Chrysene	0.017 J	ND	25 J	ND	0.63 J	
	Dibenz[a,h]anthracene	ND	ND	ND	ND	ND	
	Fluoranthrene	0.037 J	0.0032 J	95 J	130 J	2.8 J	
	Indeno[1,2,3-cd]pyrene	ND	ND	ND	ND	ND	
	Phenanthrene	0.0099 J	ND	55 J	78 J	2.3 J	
	Pyrene	ND	0.00305 J	14 J	24 J	0.8 J	

Upon initial inspection, it appears that the sludge in Tank CT-5 was the only potential source of PAHs (the 250 gallons of sludge in tank CT-5 represented less than 1/25 of the tank's total contents and less than 1/2,000 of all waste at the Site) but the values were difficult to discern and could only estimated. Split samples were analyzed by two separate laboratories using the same EPA extraction methods (SW-846 3510C) and analysis methods (SW-846 8270C). Discrepancies between split samples were not consistent and values within the same sample could not be repeated (as evidenced

by the duplicate sample for CT-5-Solid) which indicates a high level of interference within the sample itself.

Not represented in Tables 4 and 5 are samples that EPA collected from the tanks as of the 2004 RSE. No PAHs were detected in these 2004 tank samples and thus PAHs were not identified as a contaminant of concern at the Site. The contaminants of concern that were cited in EPA's 2007 Enforcement Action Memorandum included: acetone, benzene, sulfuric acid, sodium hydroxide, D002 hazardous wastes (corrosives), and used oil.

3 Recommendation

Additional sampling is recommended to delineate the potential contaminants in the drainage pathway that may have been released from the Site. Furthermore, a detailed and up-to-date drainage path evaluation should be conducted to determine whether previous determinations of runoff behavior from the Site were either inaccurate or have changed.

Concerns identified by the community representatives had included illnesses and surface waters at the Ruskin Elementary School in Ware County. OSC Huyser visited the Ruskin Elementary School on September 5th and observed that the school is in a remote location, it is relatively distant from the Site (more than 5.5 miles), and there were no visible surface water contaminants or potential sources of contamination (additionally, no groundwater contamination has been suspected or attributed to the Site and no groundwater wells exist at-, or are used by-, the school). OSC Huyser informed representatives from Ware County Schools that there is no available information to suggest that the Ruskin Elementary School has been impacted by the Seven Out Tank Site. Assistance regarding any other health or environmental concerns at the school can be elevated through agencies of Ware County and the State of Georgia.