

**Redwing Carriers, Inc.**  
**Saraland and Creola, Alabama**  
**Region 4**  
**ALD980844385**

**Site Exposure Potential**

Redwing Carriers, Inc., is a trucking company with an abandoned truck washing site in Saraland and an active truck transfer station in Creola (Figure 1). Redwing used the 0.4-hectare Saraland site from 1961 to 1971. Trucks that were washed at this site transported asphalt, diesel fuel, weed killer, tall oil, and sulfuric acid. When the Saraland site was sold in 1971, it was covered with fill material, graded, and an apartment complex was built on it. After a tar-like substance was observed oozing to the surface at numerous locations in the apartment complex, a study of potential contamination was done in 1985. The study revealed contamination in soils and leachates from the tarry material. Redwing removed some of the contaminated soil in 1985 and periodically inspects the site, removing any tar that rises to the surface (NUS 1987).

Since 1972, Redwing has used a three-hectare site in Creola to wash tankers and trailers that haul bulk chemicals. The liquid wastes generated from steam-and-water washing of the trucks were originally treated using an oil-water separator and subsequently disposed of in two underground 3,800-liter railcars for settlement of solids. Liquid from the railcars was pumped into two connected surface ponds in the southeastern portion of the facility. Since 1980, the railcars and ponds have been closed and three new ponds have been

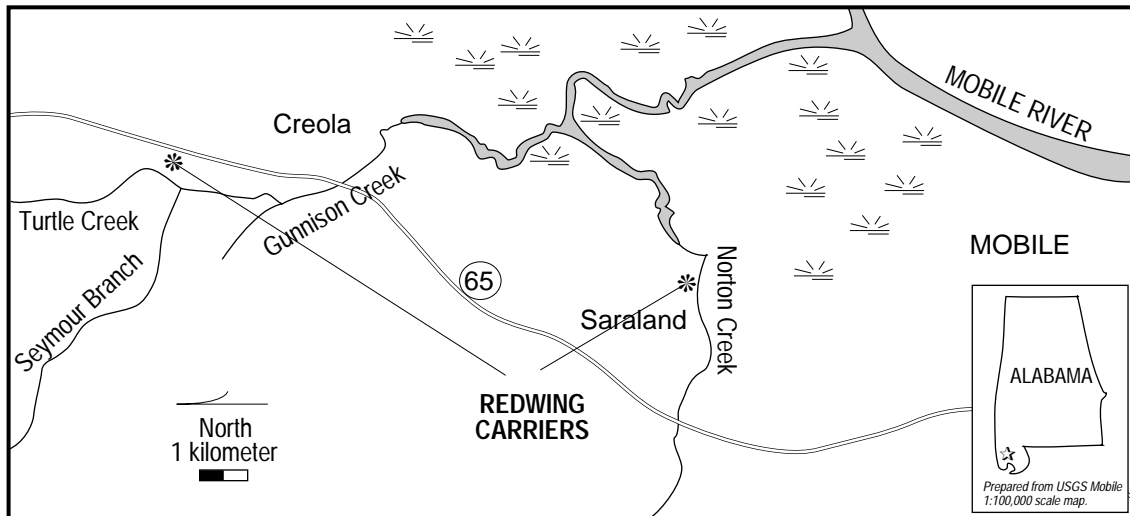


Figure 1. The Redwing Carriers, Incorporated, site in Saraland, Alabama.

excavated along the western edge of the site. These ponds, which average 0.25 hectares each and are 1.5 meters deep, were constructed of compacted clay to prevent seepage. During an earlier inspection of the site by the State of Alabama Water Improvement Commission, it was reported that water from one of the ponds was draining into an adjacent swamp (Allen 1980). It was also reported that sludge excavated from the inactive ponds was being buried on-site. In 1984, the Alabama Department of Environmental Management ordered RCRA closure (under 40 CFR 265) of the active ponds. By March 1985, all wastewater discharges into the ponds had ceased, and by May 1985, the wastewater and sludge ponds were deemed "empty and inactive." Since March 1985, all waste generated has been shipped off-site for disposal (NUS 1987).

The Saraland site is 1 km from Norton Creek, which drains into the Mobile River 9 km east of the site. The Mobile River flows south another 12 km into the Gulf of Mexico.

Redwing's Creola site is 855 meters east of Turtle Creek. The average slope of terrain between the site and Turtle Creek is 0.67 percent. Turtle Creek drains almost immediately downstream from the site into Seymour Branch, which drains into Gunnison Creek. Gunnison Creek drains into the Mobile River 5 km east of the site. The Mobile River flows south 20 km from Gunnison Creek and drains into the the Gulf of Mexico.

The groundwater beneath both sites is generally three to four meters deep and flows to the south and southwest.

Possible contaminant migration pathways to NOAA trust resources include groundwater flow and, possibly, surface water runoff to Turtle, Gunnison, and Norton creeks.

### Site-Related Contamination

Compounds detected in high concentrations in samples of soil and tar seeps at Redwing's Saraland site included 1,2,4-trichlorobenzene; phenanthrene; naphthalene; and acenaphthene (NUS 1987). No information was provided about the locations of these samples or the concentrations at which these compounds were found.

Contaminants in surface and groundwater at the Creola site included 2,4-D; lindane; arsenic; chromium; cadmium; lead; mercury; and silver (Table 1). Cadmium, chromium, and mercury were found at concentrations above AWQC for the protection of freshwater aquatic life. In addition, the company has reported that two unknown, "acutely toxic" substances, designated P020 and P022, were disposed of in the ponds (NUS 1987).

Table 1. Maximum concentrations of selected contaminants at the Redwing Carrier Creola site (Micro Methods 1982; Polyengineering 1982); AWQC for the protection of freshwater aquatic life (EPA 1986); concentrations in µg/l.

Contaminant	On-site Groundwater	On-site Surface Water	AWQC	
			Acute	Chronic
<u>Pesticides</u>				
lindane	0.08	N/A	N/D	N/D
2,4-D	6,100	N/A	N/D	N/D
<u>Trace Metals</u>				
arsenic	40	95	360	190
cadmium	51	<2	3.9†	1.1†
chromium	1,400	990	16	11
lead	<10	<10	82†	3.2†
mercury	1.5	N/A	2.4	.012
silver	<10	<10	4.1†	0.12
N/A: Not available      N/D: Not determined      † Hardness-dependent (based on 100 mg/l CaCO <sub>3</sub> )				

## NOAA Trust Habitats and Species in Site Vicinity

Habitats of concern to NOAA include Gunnison and Norton creeks, the wetlands at the mouth of the creeks where there are critical nursery areas, and the lower Mobile River. The Mobile Delta, of which Norton and Gunnison creeks are a part, is the second largest river delta system in the United States. It extends 64 km upriver and is 16 km wide. The delta is a network of brackish wetlands that serves as important nursery habitat and forms the main marine wetland resource for the state of Alabama. Norton Creek flows through Saraland; there are light industry and residential housing developments along its shores. In some parts of the stream, the banks have been riprapped and channeled. Gunnison Creek is less impacted by development and is used for recreational fishing. Both creeks are tidal and have brackish water.

NOAA trust resources use the delta wetlands, including the wetlands at the mouth of Gunnison and Norton creeks (Table 2) (USFWS 1981). These wetlands serve as both adult and nursery habitat for estuarine-dependent species, including coastal fish species; blue crab; and brown, white, and pink shrimp, all species of commercial fisheries importance in the Gulf of Mexico. The brackish water clam occurs throughout the lower river delta area. The anadromous gulf sturgeon and Alabama shad use the Mobile River as a migration corridor (Tucker 1989).

Table 2. NOAA trust resource use of the lower wetlands of Gunnison and Norton creeks near the Mobile River Delta and the lower reach of Mobile River (USFWS 1981).

Species	Gunnison and Norton Creeks	Lower Mobile River
<b>INVERTEBRATES</b>		
blue crab	A,N,R	A,N,R
brackish water clam		A
shrimp	A,N,R	A,N
<b>FISH</b>		
Alabama shad	A,M,N,R	A,M,C
Atlantic threadfish	A,N,R	A,N,R
black drum	A,N,R	A,N,R
gulf flounder	A,N,R	A,N,R
gulf menhaden	A,N,R	N
southern flounder	A,N,R	A,N,R
gulf sturgeon	A,M,N	A,M,N,R
red drum	A,N,R	A,N,R
sheepshead	A,N,R	A,N,R
spotted sea trout	A,N,R	A,N,R
striped mullet	A,N,R	A,N,R
A: adult habitat; C: commercial fishery; M: migration corridor; N: nursery habitat; R: recreational fishery		

**Response Category:** Federal Enforcement Lead

**Current Stage of Site Action:** RI/FS Workplan

### EPA Site Manager

Ben Moore/Charles King	404-347-2643
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## **NOAA Coastal Resource Coordinator**

John Lindsay

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### **References**

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