

SITE: RedWing Carriers  
BREAK: 15.9 (Saraland)  
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**SUPERFUND FACT SHEET  
EPA REGION 4  
ATLANTA, GEORGIA**



## **EXPLANATION OF SIGNIFICANT DIFFERENCES**

### **REDWING CARRIERS, INC. (SARALAND) SUPERFUND SITE**

Saraland, Mobile County, Alabama

September, 2007

#### **INTRODUCTION**

The purpose of this fact sheet is to present an Explanation of Significant Differences (ESD) which will document a revision in the subsurface soil cleanup levels for the Redwing Carriers, Inc. (Saraland) Superfund Site. The subsurface soil cleanup levels for acetone, Aldrin, alpha-BHC, and Dieldrin contained in Tables 18 and 22B of the December, 1992 Record of Decision (as amended in June, 2000) have been revised based on a new understanding of the site's hydrogeology based on observations made during the 1996 Removal Action and on data collected during the development of the current Remedial Design.

Section 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA), and Section 300.435(c)(2)(i) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) require that the Environmental Protection Agency (EPA) publish an Explanation of Significant Differences (ESD) when significant changes in a Superfund remedy occur after the Record of Decision (ROD) has been signed.

The purpose of this ESD is to notify all parties of concern that the EPA, as the lead agency, with the support of Alabama Department of Environmental Management (ADEM), is enacting a significant change to the subsurface soil cleanup levels for the Redwing Site.

This ESD for the Redwing site was prepared by EPA's Region 4 office in Atlanta Georgia, in coordination with ADEM. The components of the remedy for the Redwing Site, as revised through this ESD, and the information that lead to these changes, are in compliance with CERCLA as amended by SARA, and with the NCP. The remedy for this Site, as revised through this ESD, is protective of human health and the environment, complies with federal and state requirements that are legally applicable or relevant and appropriate, and is cost-effective. This revised remedy decision is based on the Administrative Record for the Site. A more detailed explanation of the basis for these revisions is presented in the "Explanation of Significant Differences" section of this fact sheet.

#### **ADMINISTRATIVE RECORD**

The Administrative Record contains the information upon which the remedy



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selection was based, including the Record of Decision and the Responsiveness Summary. This ESD and the supporting information will become part of the Administrative Record in accordance with 40 CFR §300.825(a)(2) and 40 CFR §300.435(c)(2)(i)(A) of the National Contingency Plan and CERCLA Section 117(d). The Administrative Record documents are available for public review and copying in the Redwing Carriers, Inc. (Saraland) Superfund Site Information Repository located at the following addresses:

***Saraland Public Library  
111 Saraland Loop  
Saraland, Alabama 36571  
(251) 675-2879***

***Hours:***

***Monday, Wednesday, Friday, and  
Saturday: 10:00 am – 6:00 pm  
Tuesday and Thursday: 12 Noon – 9:00 pm  
Sunday: Closed***

***U.S. EPA – Region 4  
Superfund Records Center  
61 Forsyth St., SW  
Atlanta, GA 30303  
(800) 435-9234, ext. 2-8463***

***Hours:***

***Mon. through Friday: 8:00 am – 4:00 pm  
Saturday and Sunday: Closed***

**SITE BACKGROUND**

The Redwing Carriers, Inc. (Saraland) Site ("Redwing Site or the Site") is 5.1 acres in size and is located in the City of Saraland, Mobile County, Alabama. From 1961 to 1971, Redwing Carriers, Inc. (Redwing), a trucking company, owned and operated the site as a terminal for cleaning, repairing and parking its fleet of trucks. The firm transported a variety of substances,

including asphalt, diesel fuel, chemicals and pesticides from local plants. During cleaning, untreated hazardous substances were released to the ground creating a tar-like sludge and contaminating site soils. The tar-like sludge is composed predominately of polycyclic aromatic hydrocarbon compounds together with lesser amounts of pesticides, herbicides and volatile organic compounds. Figure 1 shows the location and relevant features of the site.

In 1973, Saraland Apartments Ltd. purchased the site and built a U.S. Housing and Urban Development (HUD) subsidized apartment complex on the site. During construction, the sludge and contaminated soils were covered over with up to five feet of clean soil. When completed, the complex consisted of 60 apartment units located in 12 buildings and at one time housed approximately 160 residents including eighty to ninety preschool-age or elementary school-age children.

In 1984, ADEM investigated apartment residents' complaints about the tar-like sludge seeping to the surface at numerous locations at the Site. In 1985, EPA conducted initial studies in which high concentrations of 1,2,4-trichlorobenzene and naphthalene were detected in the soil and in leachate coming from the sludge. On July 9, 1985, the Agency and Redwing entered into an Administrative Order on Consent which required Redwing to (among other things) conduct a limited sludge and contaminated soil removal.

The site was placed on the National Priorities List (NPL) in February 1990. On December 15, 1992, EPA issued a Record of Decision for the Site (described in more detail below). Redwing continued periodic

removal of surface seeps until 1994 when they stopped doing any work at the site.

On July 12, 1996, EPA issued a Unilateral Administrative Order to Redwing and Saraland Apartments, Ltd. directing them to remove the source of the recurring tar seeps. When both parties refused to comply with the order, EPA took action to do the removal by temporarily relocating 57 families living in the complex and excavating and transporting off site for disposal approximately 20,724 tons of sludge, contaminated soil and debris.

Air monitoring conducted in the Saraland Apartments after the removal was completed detected unacceptable levels of benzene and the pesticide Aldrin in some of the Saraland Apartments. Based on this monitoring, EPA determined that the residents could not return to live in the Saraland Apartments. Working together, EPA and HUD have relocated the residents to comparable permanent housing.

In July, 1997, EPA collected soil, sediment, and water samples from twenty-three properties adjacent to the Redwing Carriers Superfund Site. The purpose for this sampling was to address community concerns about possible releases from the site. Based on a risk evaluation of the analytical results of these samples, the Agency determined that there is no unacceptable health risk or hazard in the neighborhood adjacent to the Redwing site.

In April, 1999, EPA published a Proposed Plan to amend the 1992 ROD based on new data collected during the 1996-1997 Removal Action. The amended ROD was signed on June 14, 2000.

In 2002, a global settlement between the Redwing PRPs and the Federal government was reached on the final cleanup of the Redwing Site. A Remedial Design/Remedial Action Consent Decree was entered on February 26, 2002.

Demolition of the Saraland Apartments was completed in the summer of 2004. The 100% Remedial Design for the site has been approved.

### SELECTED REMEDY

The Record of Decision (ROD) for the Redwing Carriers, Inc. (Saraland) Superfund Site was signed on December 15, 1992. The Major components of the 1992 selected remedy include:

- *Excavation of sludge, sediments, and contaminated soils.*
- *Off-site treatment/disposal of contaminated soils, sediments and sludge.*
- *Regrading and backfill of excavations using clean, compacted fill material.*
- *Temporary and possibly permanent relocation of residents with the potential demolition of selected apartment units.*
- *On-site treatment of contaminated groundwater in the surficial aquifer. Monitoring and possible withdrawal and treatment of groundwater in the alluvial aquifer. Treated groundwater will be discharged to a Publicly Owned Treatment Works*

*(POTW), or if unavailable, to a nearby surface water body.*

The 1992 ROD was subsequently amended on June 14, 2000. The major components of the amended remedy are:

- *During the Remedial Design develop a phased approach to implement the amended remedy.*
- *Demolition, removal, and off-site disposal of all buildings, foundations, concrete walkways, asphalt driveways, and parking areas.*
- *Excavation, off-site treatment and disposal of the remaining source material (sludge, sediments, and contaminated soils). The goal of this source control remediation will be to restore and protect groundwater quality.*
- *Reestablish the groundwater monitoring program at the Site after the backfilling and regrading of excavated areas has been completed. The groundwater monitoring program will include an initial groundwater sampling event to establish baseline conditions at the Site and quarterly groundwater monitoring for up to three years to determine the effectiveness of the source material excavation in reducing surficial groundwater contamination. Additional monitoring well installation may be necessary.*
- *Delay the implementation of the 1992 ROD requirement for on-site*

*extraction and treatment of contaminated groundwater and associated compliance monitoring. The implementation of groundwater extraction and treatment and monitoring will be contingent upon the results of the baseline groundwater sampling and the annual evaluation of the quarterly groundwater monitoring data. As part of the annual evaluation, degradation rates for each of the groundwater contaminants of concern will be determined. The evaluation will also include a prediction of future decreases in concentrations for each contaminant. The Agency will evaluate the sufficiency of the decreases at that time and further groundwater remediation may not be required if it is found that the groundwater cleanup levels have been achieved or will be achieved as a result of the removal of the source material.*

#### **EXPLANATION OF SIGNIFICANT DIFFERENCES**

The Remedial Investigation (RI) of the Redwing Site was limited to a degree by the presence of the Saraland apartment buildings and other structures on the 5.1 acre site. This is not to say that the investigation was inadequate, but that there were areas on the site where investigation of the subsurface could not be conducted. The RI adequately characterized site conditions so that a ROD could be issued in 1992.

Based on the RI, the following characterization of the site's hydrogeology was presented on page 10 of the 1992 ROD: *The Redwing Site is underlain by strata that*

comprise the Alluvial aquifer of Mobile County. Three distinct hydrogeologic units were identified from four strata underlying the Redwing Site. The designations assigned to these three units are as follows: (1) the Surficial Aquifer (upper sands); (2) a Low Permeability Unit and (3) the Alluvial Aquifer (lower sands).

Based on this characterization, subsurface soil cleanup levels for twelve contaminants were calculated and presented in tables 18 and 22B of the 1992 ROD. These cleanup levels were calculated to protect the water quality in the Surficial Aquifer beneath the site.

During the 1996 Removal Action, additional information on site conditions was obtained. This information was the basis for amending the ROD in 2000. During removal activities, it was observed that the sands in the Surficial Aquifer were not saturated with groundwater. When excavations were extended down to the top of the Low Permeability Unit, the excavations did not fill with water as would have been expected if the sands were a continuous saturated unit acting as an aquifer.

In 2004, the Saraland apartment buildings, foundations, concrete walkways, asphalt driveways, and parking areas were removed. This allowed unrestricted access to the site so that additional site characterization could be conducted during development of the Remedial Design. As part of this additional characterization, the site was divided into thirty by thirty foot grids. Surface and subsurface soil samples were taken in each of these grids. The information from this sampling event has been used to develop a soil excavation plan

for the site. During this sampling event, it was again observed that the sands above the Low Permeability Unit were not acting as an aquifer.

Based on the information collected during the 1996 Removal Action and the Remedial Design, the characterization of the site hydrogeology has been revised. It has been determined that the first aquifer beneath the site where the groundwater protection levels (ROD Table 20) will apply is the aquifer identified in the 1992 ROD as the Alluvial Aquifer. The upper sands that had been previously characterized as the Surficial Aquifer are no longer considered to be an aquifer. Based on this revised characterization of the site hydrogeology, the subsurface soil cleanup levels for acetone, Aldrin, alpha-BHC, and Dieldrin have been recalculated based on computer modeling conducted during the Remedial Design. (In the Administrative Record, see report titled "Final Site-Specific Demonstration" located in the Remedial Design Report, Volume II). The following revisions have been made to ROD tables 18 and 22B:

	1992 ROD Subsurface Soil Cleanup Level (ug/kg)	Revised Subsurface Soil Cleanup Level (ug/kg)
Acetone	36	453
Aldrin	4	640,000
alpha-BHC	0.5	2.2
Dieldrin	0.1	81

(For the purpose of this ESD, "subsurface soil" is defined as the soil encountered at a depth of 2 feet below land surface and extending down to the water table)

#### SUPPORT AGENCY COMMENTS

ADEM has reviewed this ESD and has found it consistent with state requirements and herein concurs with these

changes to the Redwing ROD.

### **AFFIRMATION OF THE STATUTORY DETERMINATION**

Pursuant to the requirements of CERCLA Section 121, the modified remedy for the Redwing Carriers, Inc. (Saraland) Site is adequately protective of human health and the environment, complies with applicable or relevant and appropriate requirements, is cost-effective and utilizes permanent solutions and alternate treatment technologies or resource recovery technologies to the maximum extent practicable.

### **PUBLIC PARTICIPATION**

This ESD Fact Sheet is being made available to the public in accordance with the requirements of CERCLA Section 117 and the National Contingency Plan §300.435(c)(2)(i) and the Community Relations Plan for the Redwing Carriers, Inc. (Saraland) Superfund Site. A notice of availability will be placed in the Mobile Press-Register newspaper, and copies of this Fact Sheet are available at the Redwing Carriers Information Repository. Copies of this Fact Sheet also will be distributed to the community mailing list for the Redwing Carriers Site.

As required by CERCLA Section 117(d) and Sections 300.435(c)(2)(i)(A) and 300.825(a)(2) of the NCP, this ESD will be added to the Administrative Record for the Redwing Carriers Site. Copies of the Administrative Record are kept at the two locations listed below, and are available for viewing at the noted hours:

**Saraland Public Library**  
**111 Saraland Loop**  
**Saraland, Alabama 36571**  
**(251) 675-2879**

**Hours:**

**Monday, Wednesday, Friday, and**  
**Saturday: 10:00 am – 6:00 pm**  
**Tuesday and Thursday: 12 Noon – 9:00 pm**  
**Sunday: Closed**

**U.S. EPA – Region 4**  
**Superfund Records Center**  
**61 Forsyth St., SW**  
**Atlanta, GA 30303**  
**(800) 435-9234, ext. 2-8463**

**Hours:**

**Mon. through Friday: 8:00 am – 4:00 pm**  
**Saturday and Sunday: Closed**

A copy of the ESD will also be placed on the Internet. The RODs, ESDs, and Five-Year Review can be found through a search at:

**<http://www.epa.gov/superfund/sites/sitedocs.htm>**

Site updates can also be found at:

**<http://www.epa.gov/region4/waste/npl/index.htm>**

### **ADDITIONAL INFORMATION**

For additional information about the changes to the remedy as described in this ESD or for general Site information, contact:

**Michael Arnett**  
**Remedial Project Manager**  
**Superfund Remedial Branch**  
**U.S. EPA - Region 4**  
**61 Forsyth Street, S.W.**  
**Atlanta, Georgia 30303**  
**(800) 435-9234**

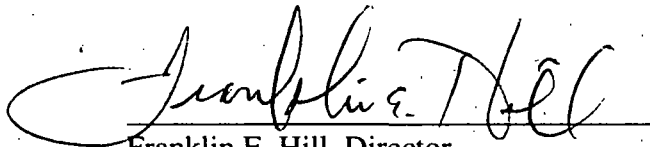
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**DECLARATION**

For the foregoing reasons and as explained herein, by my signature below, I approve the issuance of an Explanation of Significant Differences for the Redwing Carriers, Inc. Superfund Site in Saraland, Mobile County, Alabama, and the changes stated therein.

9/25/07

Date



Franklin E. Hill, Director

Superfund Division

U.S. Environmental Protection Agency Region 4

**ACRONYMS AND ABBREVIATIONS**

ADEM	Alabama Department of Environmental Management
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR	Code of Federal Regulation
EPA	U.S. Environmental Protection Agency
HUD	U.S. Housing and Development
µg/kg	micrograms per kilogram
NCP	National Contingency Plan
RA	Remedial Action
RI	remedial investigation
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act of 1986





**LEGEND**  
—— Site Boundary

Color Aerial flown September 3, 2006  
project/Saraland/A9035/Saraland.mxd

**NEWFIELDS**

1340 W. Peachtree Street, Suite 2000  
Atlanta, Georgia  
Tel: 404-347-9050 - Fax: 404-347-9000  
www.newfields.com

Saraland Apartments  
Superfund Site  
Saraland, Alabama  
DRAFT Conceptual  
Construction Drawings  
June 2007

Drawing C-3  
Plat and  
Boundary Survey

Figure 1

**Redwing Carriers, Inc. (Saraland) Superfund Site**  
**Mailing List Additions/Corrections**

If you would like your name and address placed on the mailing list for the Redwing Carriers, Inc. (Saraland) Superfund Site, please complete this form and return it to:

**Angela Miller**  
**Community Involvement Coordinator U.S. EPA - Region 4**  
**61 Forsyth Street, S.W.**  
**Atlanta, Georgia 30303**

**NAME:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**AFFILIATION:** \_\_\_\_\_