United States Environmental Protection Agency
Region IV
POLLUTION REPORT

Date: Wednesday, July 16, 2008
From: Jason Booth

Subject: Removal Site Evaluation
Al's Radiator Shop
1298 State Road 60, Lake Wales, FL
Latitude: 27.9039250
Longitude: -81.6104860

POLREP No.:	1	**Site #:**	A4KY
Reporting Period:	04/30/2008-07/16/2008	**D.O. #:**	
Start Date:	4/30/2008	**Response Authority:**	CERCLA
Mob Date:	4/30/2008	**Response Type:**	Time-Critical
Demob Date:	4/30/2008	**NPL Status:**	Non NPL
Completion Date:		**Incident Category:**	Removal Assessment
CERCLIS ID #:		**Contract #**	
RCRIS ID #:			

Site Description

The Al's Radiator Site (ARS) site is located at 1298 State Route 60 in Lake Wales, Polk County, Florida in a predominantly commercial and residential area. Specifically, the geographic coordinates for the ARS site, as measured from the on-site debris pile located in the center of the property, are 27.903925 north latitude and -81.610486 west longitude within Township 30 South, Range 27 East, Section 3. The site covers approximately 0.9 acre of partially developed land located along the northern side of State Route 60. One building approximately 45 by 70 feet formerly existed centrally on the site. Two debris piles are located at the Site, the first consisting of building materials remaining from the demolished building and the second consisting of common refuse. The Site is bound to the north and west by a residence, to the east by vacant land, to the northeast by a flea market, and to the south by a drainage ditch that runs parallel to State Route 60. An advertising billboard located on-site is being utilized currently.

From the 1980s until 2000, the site had been used as a radiator repair facility. Activities conducted at the site included the core replacement of radiators, radiator repair and replacements, and storage of used radiators and fuel tanks. The repair process involved flushing antifreeze from radiator systems, soldering radiators with lead, flushing and cleaning the inner components of radiators with muriatic acid, and repainting radiators.

The first site investigation at ARS was conducted by the Florida Department of Environmental Protection – Southwest District (FDEP-SWD) in September 2000 prior to the issuance of a Consent Order (CO). The investigation was limited to a visual inspection of the site. In October 2000, the FDEP-SWD issued the CO for site cleanup of illegally dumped antifreeze and subsequently coordinated with the Florida Department of Law Enforcement (FDLE) to arrest the site owner and operator. As a result of the CO, several site investigations were conducted.

During a Resource Conservation and Recovery Act (RCRA) inspection conducted by the FDEP-SWD, soil and surface water sampling and analysis were conducted to confirm the presence of contamination. Lead and ethylene glycol were present at concentrations exceeding state regulatory threshold values. In August 2006 and June 2007, additional site investigation activities were conducted on behalf of EPA Region 4's Remedial Branch via the FDEP. Samples collected from surface soils, subsurface soils, and groundwater were submitted for analysis. Results of the sampling indicated that several surface soil samples collected at the site contained high concentrations of lead in the soil. The findings of the assessment indicated (1) a release had occurred at the site, (2) the release has contaminated the shallow on-site soils, and (3) the soil receptor pathway may be impacted. Additional Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) investigation activities were recommended for the site. After determining that the Site would not rank on the NPL, the Remedial Branch requested that EPA Region 4's Emergency Response and Removal Branch conduct a Removal Site Evaluation to determine if the Site met the requirements for a Time Critical Removal. In turn, a Removal Site Evaluation was conducted by ERRB on April 30, 2008.

Current Activities

On April 30, 2008, START personnel met OSC Chris Russell at ARS and discussed the day's field activities, as well as the health and safety plan. The purposes of the RA field sampling activities were to further characterize the extent and concentration of contamination at the site and to determine the appropriateness of a removal action in accordance with Title 40 of the Code of Federal Regulations (CFR), Part 300, Section 300.415. The sampling activities focused on collecting surface and subsurface soil samples.

Sixteen grab surface soil samples, including one duplicate sample, from a depth of 0 to 6 inches below ground surface (bgs) were collected. The soil collected from each boring was placed in a pre-cleaned stainless steel bowl and homogenized. A portion of the sample was transferred into a clean zip-top bag for screening with an X-ray fluorescence (XRF) detector. The remainder of the sample was containerized in a pre-cleaned laboratory grade container.

Sampling locations with surface soil XRF results above 400 mg/kg for lead were advanced to 24 inches bgs and sampled from the depth interval between 24 and 30 inches. START collected 10 grab subsurface soil samples, from a depth of 24 to 30 inches bgs.

All samples were packaged and shipped to the EPA Contract Laboratory Program (CLP) laboratory, Bonner Analytical Services of Hattiesburg, Mississippi, for analysis. The EPA CLP laboratory analyzed the samples for RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver).

A portion of the surface soil sample aliquot collected from soil borings ARS-SF-001 through ARS-SF-015 was placed in a clean zip-top bag for lead screening using an XRF detector. XRF screening was conducted through the zip-top bag for a duration of 60 nominal seconds. Additional subsurface sampling from the depth interval between 24 and 30 inches bgs was conducted at surface soil sampling locations with XRF screening results exceeding EPA Region 4 Removal Action Level (residential)400 mg/kg for lead. The surface soil samples exceeding the EPA Region 4 RAL for lead included: ARS-SF-003, ARS-SF-004, ARS-SF-008, and ARS-SF-009 through ARS-SF-015. Lead XRF concentrations above the EPA Region 4 RAL (residential) ranged from 931.1 mg/kg in sample ARS-SF-003 to 8,259 mg/kg in sample ARS-SF-013.

AL'S RADIATOR SHOP
COMPARISON OF X-RAY FLUORESCENCE SCREENING AND LABORATORY ANALYTICAL RESULTS

ID	Lead XRF Result	Error	Lab Result
ARS-SF-001	72.9	±34.8	250 J
ARS-SF-002	152.2	±50	220 J
ARS-SF-003	931.9	±104.8	1,000 J
ARS-SF-004	3,007	±197	5,800 J
ARS-SF-005	133	±45.2	300 J
ARS-SF-006	58.7	±33.8	470 J
ARS-SF-007	<48	NA	66 J
ARS-SF-008	908.5	±103.4	980 J
ARS-SF-009	1451	±134	10,000
ARS-SF-010	958.9	±105.4	1,600
ARS-SF-011	1,459	±133	2,800
ARS-SF-012	5,433	±261	5,200
ARS-SF-013	8,259	±360	8,400
ARS-SF-014	7,773	±327	4,800
ARS-SF-015	3,070	±206	2,600

Planned Removal Actions

Lead is a hazardous substance as defined by Section 101(14) of CERCLA. Hazardous Substances, if released from the Site, have the capability of presenting a potential hazard to the general public. The threats come primarily from human exposure to the Hazardous Substance located in the surface soils on-site, as well as the potential for exposure via off-site surface migration. Direct contact, ingestion, and inhalation of lead are the primary pathways of exposure. Continued exposure to the lead in the surface soils may cause potential chronic health effects to persons living nearby, individuals working on-site, as well as to trespassers.

The hazardous conditions identified at the Site meet the following National Oil and Hazardous Substances Pollution Contingency Plan (NCP) Section 300.415(b)(2) criteria for a time-critical removal action:

• 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". A residence, as well as an active flea market are nearby the Site. Evidence of trespassing was noted during the RSE. No barriers are present (fences, etc.) to preclude individuals from entering the Site. Furthermore, an active advertising billboard is located at the Site. Due to these factors, a potential direct exposure is present at this Site.
• Section 300.415(b)(2)(iv): "High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that migrate": Sample analysis indicated the presence of lead (a hazardous substance) in surface soils, at levels that exceed the Region 4 Removal Action Levels. In turn, the possibility of off-site migration via surface (run-off) migration or air (dust) migration exists at this Site.
• Section 300.415(b)(2)(v): "Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released." Due to the high concentrations of lead in the surface soils, the possibility exists that run-off, due to seasonal rains, may cause the hazardous substance to migrate off-site.
• Section 300.415(b)(2)(vii): "Availability of other appropriate Federal or State response mechanisms to respond to a release.". The State of Florida has advised that they do not have the funds to conduct this removal and in turn referred the Site to the EPA for action. No other governmental entity has funds available to conduct the necessary removal activity.

Due to the threat and/or future threat to human health and the environment, from the identified hazardous substance, this Site achieves removal eligibility based on the removal criteria listed above.

response.epa.gov/Al'sRadiatorShop