

CLEARWATER ENVIRONMENTAL RESOURCES, LLC

**AMENDMENT #1
VOLUNTARY REMEDIATION PLAN**

**RAYLOC FACILITY
600 RAYLOC DRIVE
FULTON COUNTY
ATLANTA, GEORGIA
HSI SITE # 10547**



CLEARWATER PROJECT NO. 1502-1-3

Prepared For:

Genuine Parts Company
2999 Circle 75 Parkway
Atlanta, Georgia 30339

Prepared By:

Clearwater Environmental Resources, LLC
3870 Peachtree Industrial Boulevard
Suite 340139
Duluth, Georgia 30096

MAY 31, 2017

CLEARWATER ENVIRONMENTAL RESOURCES, LLC

May 31, 2017

Mr. Allan C. Nix, P.G.
Georgia Department of Natural Resources
Georgia EPD Response and Remediation Program (GAEPD)
2 Martin Luther King Jr. Dr., SE, STE 1462 East
Atlanta, GA 30334

**Subject: Amendment #1
 Voluntary Remediation Plan
 Rayloc Facility
 600 Rayloc Drive, SW
 Atlanta, Fulton County, Georgia 30336
 HSI #10547
 Clearwater Project No. 1502-1-3**

Dear Mr. Nix:

Clearwater Environmental Resources, LLC (Clearwater), under contract to Genuine Parts Company (GPC), respectfully submits this Amendment to the Voluntary Remediation Plan for the Rayloc facility. This amendment describes the proposed Soil Blending project for the Source Area at the former Rayloc facility.

Please feel free to contact me at (678) 491-4601 or jack.wintle@clearwaterenv.net or Mr. Bob Lewis with Genuine Parts Company at (404) 858-2564 if you have any questions regarding this Amendment.

Sincerely,

Clearwater Environmental Resources, LLC



Jack A. Wintle, P.G.
Senior Environmental Geologist



cc: Mr. Bob Lewis, Genuine Parts Company
 Mr. Douglas E. Cloud, Kazmarek Mowrey Cloud Laseter LLP

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1.0 INTRODUCTION

A Voluntary Remediation Plan Application for the Rayloc facility located at 600 Rayloc Drive in Atlanta, Fulton County, Georgia, was received by the Georgia Environmental Protection Division Response and Remediation Program (GAEPD) on January 15, 2013 and conditionally approved by the GAEPD on October 11, 2013.

The remedial activities at the site include the continued treatment of contaminated groundwater in and downgradient of the former waste pit (Source) area using gas-infusion technology with the objective of achieving Type 3 Risk Reduction Standards (RRS). Clearwater has also operated an Air Sparge/Soil Vapor Extraction system using the gas-infusion technology and gravity fed In-Situ Chemical Oxidation (ISCO) to the only area of soil impact identified within the former Rayloc building to effect the same result.

Clearwater has conducted subsurface investigations for the eight (8) areas identified in the September 21, 2012 Sailors Engineering Associates, Inc. (SEA) PPCAP. Of the 8 areas, impacts were only detected in three areas. One area (the Parts Disassembly Area) is being remediated via AS/SVE and gravity fed ISCO with positive results and two (2) other areas (an area within the open trenches and an area near the former chemical AST storage bunker) have been remediated to below the Type 3 RRS.

The former waste pit (Source) area, located in the southwestern corner of the Subject Property, has been remediated using both Electro-Thermal Dynamic Stripping Process (ETDSP™) and most recently the injection of treatment gas throughout the source area to induce reductive dechlorination of PCE.

The ETDSP™ process was conducted for approximately one (1) year and used 1,122 electrodes in 28 approximately 70 foot borings, 15 multiphase extraction (MPE) wells, 6 temperature sensors and an oil/water separator. The estimated mass of contaminants removed was greater than 150,000 pounds.

The former waste pit area is more problematic and requires a more aggressive remedial approach, therefore Genuine Parts Company and Clearwater propose Soil Blending for this area.

2.0 SOIL BLENDING OF THE SOURCE AREA

Clearwater has worked with Redox Tech, LLC (Redox) to provide the proposed Soil Blending of the Source Area. The purpose of this corrective action is to remediate the Source Area to below the Type 3 RRS. The following outlines the proposed corrective action, including the sampling scenario and schedule to complete. Please refer to Figure 1 for a Site Aerial Map, Figure 2 for a Source Area Aerial Map, and Figure 3 for a Conceptual Approach Map.

Clearwater has horizontally delineated the Source Area to approximately 70-feet long by 70-feet wide and vertically to 49-feet deep (to groundwater). The impact extends from the ground surface to the groundwater table.

2.1 Soil Blending Process

Prior to initiating the soil blending work, the concrete surface will be sawcut, removed and disposed of. The impacted soil in the Source Area will then be excavated from the ground surface to the groundwater table, stockpiled on and covered with a heavy plastic on asphalt within the fenced area to ensure there is no runoff in case of storm events. Further, the storm water piping within the two storm water vaults near this area will be temporarily plugged to further ensure collection of any storm water runoff from the stockpile. Storm water collected from this area will be pumped into staged frac tanks for treatment or reuse.

The excavation will be an open pit style where the soil will be removed to the groundwater table, approximately 30- to 35-feet below ground surface (bgs), maintaining sidewalls at a 1:1 slope for stability and a 2:1 slope on one side for access to the soil blender and support vehicles. Any storm water collected from the excavation will be pumped into staged frac tanks for treatment or reuse.

The soil from 30- or 35-foot bgs to approximately 49-feet bgs (groundwater) will be treated in-place using a 28-inch diameter rotary drum blender mounted on an excavator with specially designed teeth which rotate at speeds up to 100 rpm with a torque of over 20,000 foot-pounds to distribute the chemical amendments.

The previously excavated soil will then be backfilled and treated within the excavation in 10-foot lifts. These lifts will be subdivided into smaller cells for ease of treatment. Cell dimensions and chemical loading requirements will be determined prior to mobilization. Existing injection and monitoring wells located within the Source Area will be removed during the excavation process.

Since the blending process loosens and reduces the bearing capacity of the soils, there will likely be soil mounding in the blended area. This mounded soil may be excavated and properly disposed of at an appropriate landfill using Toxicity Characteristic Leaching Procedure (TCLP) or other analysis as requested by the landfill.

2.2 Enhanced Reductive Dechlorination Using ABC[®] + ZVI

Redox will use a proprietary mixture of an Anaerobic BioChem Plus (ABC[®]) and Zero Valent Iron (ZVI). The ABC[®] is a patented mixture of lactates, fatty acids, and a phosphate buffer. The ZVI will provide an immediate reduction while the ABC[®] will provide short-term and long-term nutrients to support anaerobic bacteria growth, which also assists in creating a reducing environment.


2.3 Sampling Scenario

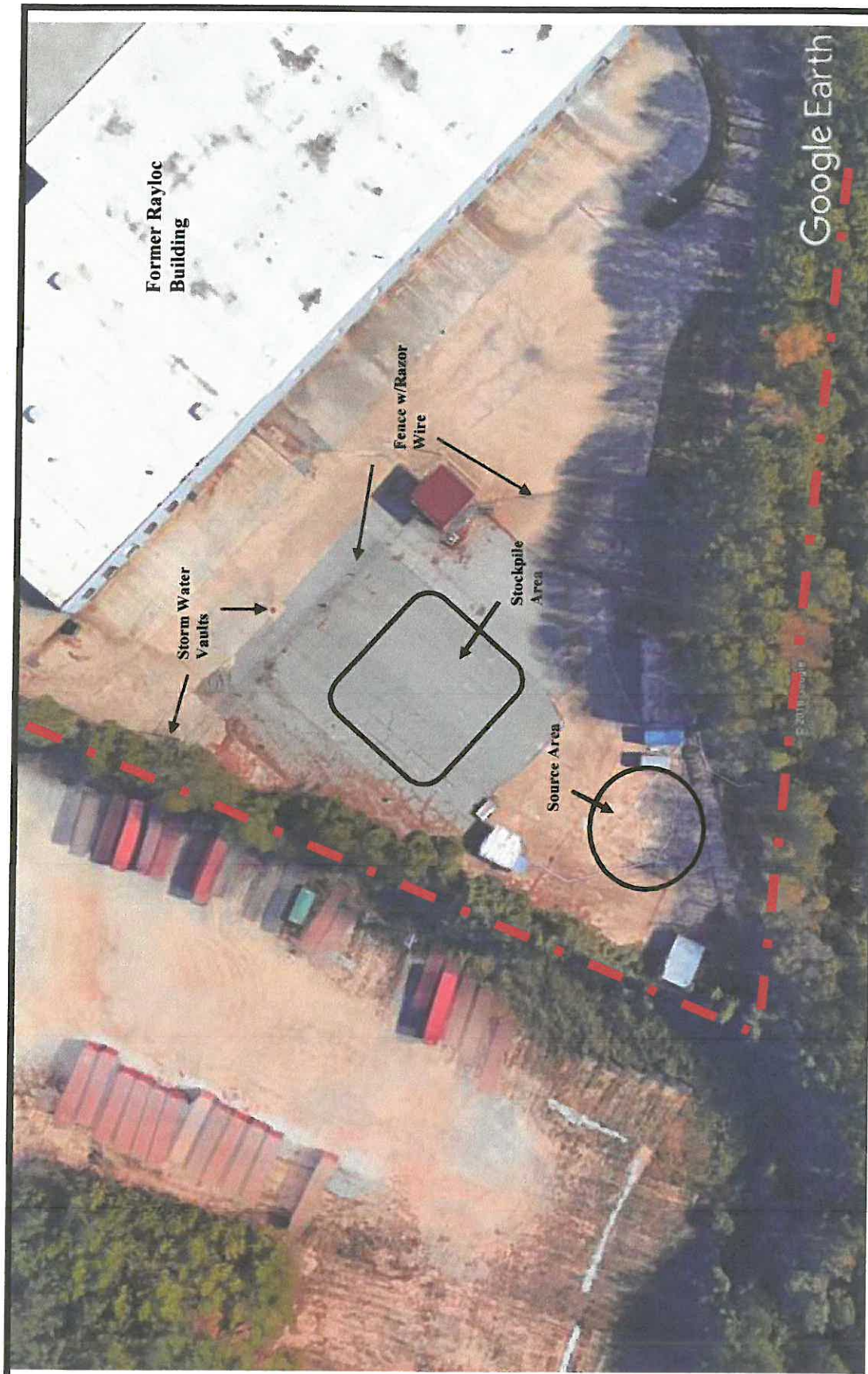
Clearwater will collect one soil sample from the 30- to 35-foot to groundwater blended cell and then one sample from each subdivided 10-foot lift cell as it is backfilled and blended. These samples will be analyzed for volatile organic compounds (VOCs) using EPA Method 8260B to ensure that the soil blending process treats the impacted soil to meet the Type 3 RRS.

2.4 Schedule

Clearwater anticipates the soil blending work will be completed within 6 to 8 weeks from mobilization, weather permitting and will compile a Soil Blending Completion report within 30 days of site work completion. The report will include a summary of the site work, a site map showing dimensions of the excavation/blended area, the stockpile location, the sampling locations and laboratory data, and a table summarizing the sample results.



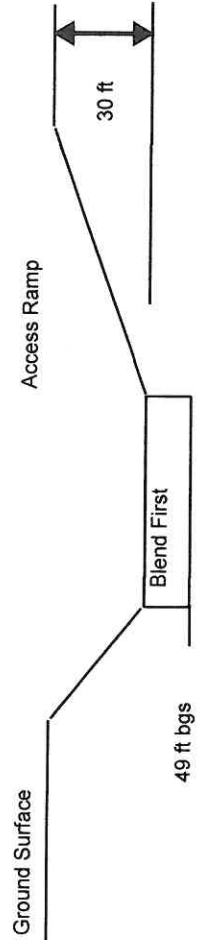
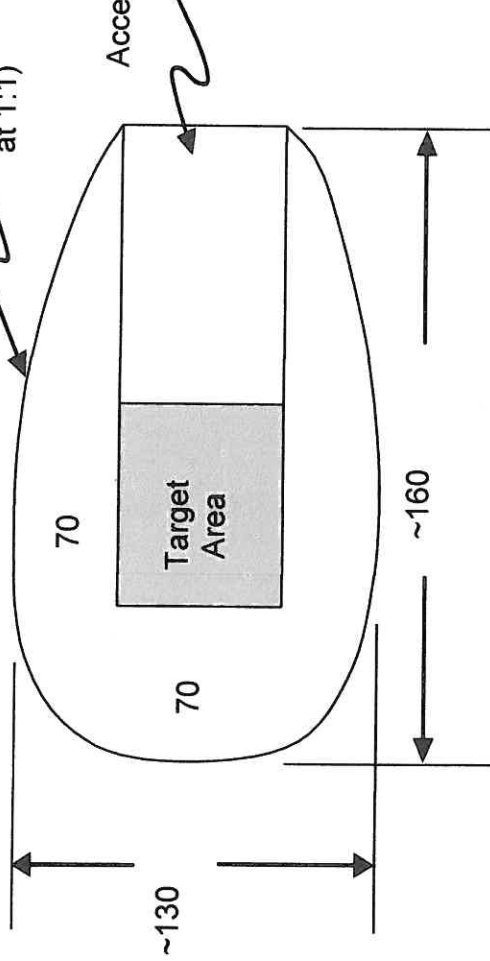
Legend		Figure 1 – Site Aerial Map	Scale
Map Source: Google Earth		Rayloc Facility 600 Rayloc Drive Atlanta, Fulton County, Georgia	NTS
Map Date: 10-31-2012		CLEARWATER ENVIRONMENTAL RESOURCES, LLC 3870 Peachtree Industrial Boulevard Suite 340139 Duluth, Georgia 30096	
Project No.: 1502-1-3	JAW		



Legend		Figure 2 – Source Area Aerial Map	Scale
Map Source: Google Earth		Soil Blending Project Rayloc Facility 600 Rayloc Drive Atlanta, Georgia	SCALE: Not To Scale
Project No.: 1502-1-3		CLEARWATER ENVIRONMENTAL RESOURCES, LLC 3870 Peachtree Industrial Boulevard Suite 340139 Duluth, Georgia 30096	
	JAW		

Extent of Excavation (Sidewalls at 1:1)

Access Ramp @ 2:1



Legend

Map Source:
Redox Tech, LLC



Image Date: 2017

Project No.: 1502-1-3

JAW

Figure 3 – Conceptual Approach Map

Soil Blending Project
Rayloc Facility
600 Rayloc Drive
Atlanta, Georgia

Scale

SCALE: Not To Scale

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