



PROJECT UPDATE FACT SHEET

Former Spellman Engineering Site
Orlando, Florida

EPA-Region 4

May 2010

PROJECT UPDATE MEETING

**June 10, 2010
7:00 – 8:30 pm**

Lake Highland Preparatory
School
Harriett Coleman Center for
the Arts

The US Environmental Protection Agency (EPA) will hold a public meeting at 7:00 pm on June 10, 2010 to provide an update on the status of design and implementation of the cleanup of contaminated groundwater at the Former Spellman Engineering site.

Please join us as we discuss the results of the sampling, proposed revisions to the remedial strategy and upcoming activities.

EPA CONTACT INFORMATION

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COMMUNITY INVOLVEMENT

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INTRODUCTION

The United States Environmental Protection Agency (EPA) periodically issues fact sheets and holds public meetings regarding the Former Spellman Engineering site remediation project. Investigations concerning this site have been on-going since 1992 under both state and federal oversight. Since 2003, EPA has been the lead agency in charge of ensuring the contamination at the site is addressed to be protective of human health and the environment. The Florida Department of Environmental Protection (FDEP), Central District is the support agency representing the interests of the State of Florida and is the lead agency in charge of overseeing the implementation of the Brownfields Site Rehabilitation Agreement (BSRA).

SITE BACKGROUND

Spellman Engineering was a parts cleaning business located on Brookhaven Drive which operated from approximately 1963 to 1969. It was reported to the Central District of the Florida Department of Environmental Protection (FDEP) that Trichloroethene (TCE), a common Volatile Organic Compound (VOC), was used by Spellman Engineering to clean electronic components for the National Aeronautics and Space Administration (NASA).

In 1992, TCE was initially detected in the groundwater during an unrelated contamination assessment performed by the FDEP at a nearby former Orlando Utilities Commission (OUC) maintenance facility. After several investigations were conducted, the source of the TCE was traced back to the property which was the former location of the Spellman Engineering parts cleaning business.

In 2003, a Remedial Investigation was voluntarily conducted by the City of Orlando with EPA's oversight to define the horizontal and vertical extent of the TCE groundwater contaminant plume. A Baseline Risk Assessment and Feasibility Study were also conducted by the City in 2004 to evaluate the risks associated with the contamination and to evaluate cleanup alternatives. A proposed plan fact sheet was issued on July 23, 2004 which described EPA's preferred remedy and requested public comment during a 30-day public comment period. On September 23, 2004, EPA issued the Record of Decision (ROD) containing the selected remedial action. In October 2008, the City entered into an agreement with EPA to implement the remedy.

The overall cleanup strategy for this site is to eliminate or reduce VOC contamination in the groundwater to or below Federal and State maximum contaminant levels and human-health risk-based criteria by using a combination of in-situ chemical oxidation, enhanced in-situ bioremediation, and monitored natural attenuation depending upon the contaminant concentration levels. The major components of the selected remedy included:

In-Situ Chemical Oxidation:

- Surfactant enhanced in-situ chemical oxidation in the source area where TCE concentrations are above 100,000 micrograms per liter (ug/l);
- In-situ chemical oxidation in the highly-impacted zone where TCE concentrations are above 10,000 ug/l but below 100,000 ug/l followed by performance monitoring; and,
- If identified, address non-saturated soils exceeding leachability criteria in the source area.

Enhanced In-Situ Bioremediation:

- Enhanced in-situ bioremediation where TCE concentrations are above 2,000 ug/l; and,

- Partial enhanced in-situ bioremediation of groundwater with TCE concentrations greater than 300 ug/l followed by performance monitoring.

Natural Attenuation:

- Monitored natural attenuation until cleanup goals are met.

Other:

- Engineering controls to protect injection and monitoring points from damage or public access; and,
- Institutional controls to restrict groundwater use until cleanup goals are met.

PROJECT UPDATE

Since EPA last participated in a public meeting on October 1, 2008, much work has been done to design and implement the selected remedy.

As proposed at the October 1, 2008, public meeting held at the Lake Highland Preparatory School, the City has voluntarily accepted responsibility for remediating the Site. The City hired the environmental consultant ARCADIS to implement the EPA's selected remedy.

During the first few months of 2009, ARCADIS submitted a Remedial Action Work Plan (RAWP) an Environmental Health and Safety Plan (HASP), the Site Management Plan (SMP), and a Sampling and Analysis Plan (SAP) to EPA for review. These documents were reviewed by EPA and the FDEP. Comments were submitted to the City and final versions of these documents were approved at various times throughout the spring, summer, and fall of 2009.

EPA, FDEP, the City, and ARCADIS attended a public meeting held at the Lake Highland Preparatory School on April 13, 2009, regarding the master plan for development of the recently acquired City and OUC property adjacent to the Site.

A significant amount of field design work was conducted in 2009 in order to refine the understanding of the mass of contaminants in the source area, assess the hydraulic conductivity of the subsurface, and further define the vertical mass distribution of the groundwater contaminants in the downgradient groundwater contaminant plume.

As a result, 53 separate locations were evaluated and more than 900 soil samples were analyzed. During this sampling effort, additional information was learned about site conditions including the identification of VOCs in the groundwater in Dense Non-Aqueous Phase Liquid (DNAPL) form and that the highest levels of VOCs are present in the finer grain sediments in the source area. Both of these conditions caused ARCADIS to recommend that EPA consider adding Electrical Resistance Heating (ERH) as an additional component of the groundwater treatment approach because it is more effective in treating contaminants that are in DNAPL form and is more effective in treating contaminants that are present in the tighter grain sediments.

UPCOMING SITE ACTIVITIES

The rationale for adding ERH to the groundwater treatment remedy will be further discussed in an Explanation of Significant Differences (ESD) fact sheet which is expected to be issued by EPA in the summer of 2010.

ARCADIS anticipates submitting a report which documents recent sampling and the rationale for adding ERH to the groundwater remedy in May 2010 and anticipates full scale implementation of the remedy to begin in the summer of 2010.

EPA is coordinating with the FDEP Central District and the City to identify locations for additional permanent groundwater monitoring wells to be installed either to replace existing wells which have been damaged or to provide permanent monitoring wells at locations where only temporary wells had been installed during the remedial investigation. The wells will be used to monitor the stability of the groundwater contaminant plume and to collect data to monitor progress of the natural attenuation component of the remedy. EPA plans to begin installation of these wells in the mid to late summer of 2010. Proposed wells locations can be viewed in the figure below. Wells will be installed in City Right of Way to the maximum extent possible.



SITE INFORMATION REPOSITORY

The EPA maintains a site information repository at the Orlando Public Library and at the EPA Superfund Records Center in Atlanta, GA. These repositories contain administrative record files and site documents, fact sheets, and reference material. The EPA encourages the public to review these documents to gain a more complete understanding of the site. The information repository addresses are listed below:

Orlando Public Library,
101 East Central Boulevard
Orlando, Florida
(407) 316-0021
EPA Region 4 Superfund Record Center
61 Forsyth Street SW
Atlanta, Georgia 30303
(800) 435-9234

U.S. Environmental Protection Agency Region 4
Superfund Division
61 Forsyth Street, SW
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