

# FINAL PLAN OF REMEDIAL ACTION



SCANNED

MAY 24 2007

File # 1357  
B9

*513 Lexington Avenue  
Smyrna, Delaware*

**DNREC Project No. DE-1357**

---

This Final Plan of remedial action (Final Plan) presents the Department of Natural Resources and Environmental Control's (DNREC's) no further action alternative for the remediation at 513 Lexington Avenue in Smyrna, Delaware. For site-related reports and more information, please see the public participation section of this document.

The purpose of the Final Plan is to provide specific information about contamination present at the site and the no further action recommendation given by DNREC. In addition, as described in Section 12 of the Delaware Regulations Governing Hazardous Substance Cleanup (Regulations), DNREC will provide notice to the public and an opportunity for the public to comment on the final plan. All investigations of the site, the proposed plan, and comments received from the public, DNREC's responses to the comments, and the final plan will constitute the Remedial Decision Record.

## **INTRODUCTION**

The 513 Lexington Avenue Property (Site) is located in Smyrna, Delaware (Figure 1). The Site is approximately 2.4 acres and is comprised of three tax parcels: 1-17-01905-04-2600-000, 1-17-01905-04-2900-000, and 1-17-01905-04-2700-000. The Site is surrounded by residential properties on the southwest, east, and northeast and by Lexington Avenue on the northwest. The development project proposed by Juanita, LLC would include minor re-grading and removal of any leftover debris and tree stumps to accommodate the construction of low-rise, garden apartment style town homes and a cul-de-sac entrance/parking area off of Lexington Avenue.

BrightFields, Inc. (BrightFields) was retained by Juanita, LLC, to conduct a Brownfield Investigation (BI) of the 513 Lexington Avenue Property in Smyrna, Delaware. The purpose of the Brownfield Investigation was to collect sufficient information to characterize environmental conditions on the Site and to determine if any remedial action is required in order to allow development to occur on the site, as appropriate. All work was conducted under the Delaware Department of Natural Resources and Environmental Control (DNREC) Brownfields Program.

## **SITE DESCRIPTION AND HISTORY**

The 513 Lexington Avenue Property is located in Smyrna, Delaware (Figure 1). The Site is surrounded by residential properties on the southwest, east, and northeast and by Lexington Avenue on the northwest as shown on Figure 2. The property, previously known as the Davis property, was the location of the Davis residence and a metal scrapping facility where cars, other metal, and possibly some transformers were cut up. There also was a tire pile, an engine pile, a crane, and another residential structure (other than the Davis residence) that burned down in the 1960s on the property. Currently, no structures exist on the property other than a metal shed. Trees have been cleared and all structures were razed. The development project proposed by Juanita, LLC would include minor re-grading and removal of any leftover debris and tree stumps to accommodate the construction of low-rise, garden apartment style town homes and a cul-de-sac entrance/parking area off of Lexington Avenue.

## **PREVIOUS INVESTIGATIONS**

The following sections briefly outline the Phase I Environmental Site Assessment (RRA, 2004) and the Facility Evaluation/Remedial Investigation Report (RRA, 2005), performed by Resource Recovery Atlantic, Inc. (RRA).

### **Site Investigation (SI) (RRA, 2004)**

Resource Recovery Atlantic, Inc. performed a Phase I Environmental Site Assessment (ESA) for the 513 Lexington Avenue Property on May 25, 2004. The Phase I noted that a historical review of Sanborn Fire Insurance Maps and aerial photographs of this property did not indicate the presence of any adverse environmental conditions or activities at the site. The two residential structures were noted in this review; however, the rear of the site where the scrap operations occurred had no Sanborn coverage.

### **Facility Evaluation/Remedial Investigation (RRA, 2005)**

In September 2005, Resource Recovery Atlantic, Inc. completed a Facility Investigation/Remedial Investigation (FE/RI) for the 513 Lexington Avenue Property. RRA conducted soil and sediment sampling on a portion of the 513 Lexington Avenue Property at various times between May 2004 and

May 2005. Soil borings were drilled, test pits were dug, and soil samples and a sediment sample from an old sewer inlet were collected, field screened and sent to a commercial laboratory for chemical analysis. The samples were analyzed for total petroleum hydrocarbons (TPH), Priority Pollutant List (PPL) metals, and PCBs. PCBs were detected in three soil samples at concentrations ranging from 0.728 mg/kg to 1.397 mg/kg and cadmium was detected in one sample at a concentration of 27mg/kg. These detections are above the Delaware Uniform Risk-Based Remediation Standard (URS) for unrestricted (residential) use criteria for PCBs and cadmium of 0.3 mg/kg and 4 mg/kg, respectively. In February 2005, RRA excavated and disposed approximately 71.54 tons of soil in the area of the PCB contamination. In addition, RRA collected and analyzed, confirmatory samples which indicated that the soil was still contaminated with PCBs at concentrations ranging from 0.45 mg/kg to 9.7 mg/kg. In May 2005, RRA conducted additional excavation in this area and collected confirmatory samples. One sample was reported on the RRA table as containing PCBs at a concentration of 1.906 mg/kg, but the laboratory reported the concentration as 1.967 mg/kg. The sampling locations were not well documented and the laboratory reported this result erroneously. It was determined to be a laboratory contaminant rather than the level of PCB remaining after the excavation by RRA. Therefore, there appears to be no PCB-impacted soil remaining on the property.

## **INVESTIGATION RESULTS**

As a confirmation to the historical investigations at this Site, BrightFields, Inc. completed a Brownfield Investigation (BI) Report in October 2006. This investigation involved the collection of samples from surface soil, subsurface soil, and groundwater beneath the Site. There were no contaminants detected in soil or groundwater above Delaware's restricted use Uniform Risk-Based Standard (URS) values. A discussion of the sampling results is included in the BI Report. The following discussion summarizes the results of the investigation.

### **SOIL**

All of the surface soil samples were collected from 0 to 2 feet below ground surface (bgs) and all of the subsurface soil samples were collected deeper than 2 feet bgs. All compounds, except lead, were absent in site soil samples above the unrestricted URS use. Lead was detected in one surface soil sample (SP11-S001) at a concentration of 419 mg/kg, which is above the unrestricted use criteria of 400 mg/kg. (See Figure 2)

### **GROUNDWATER**

Groundwater was encountered at depths ranging from 26 to 26.5 feet bgs in the borings advanced across the Site. Two of the four monitoring wells that were installed were either damaged or destroyed before top of casing elevations could be measured. However, the site is flat and the wells were all installed identically; therefore, based on the relative groundwater levels measured during groundwater sampling, the surficial water bearing zone appears to flow north, toward Duck Creek.

Manganese was the only compound detected in groundwater above its respective URS value. DNREC's URS for manganese is based on the Secondary Maximum Contaminant Levels (SMCLs) that are aesthetic-based (taste and odor), not health-based standards. Additionally, these standards were developed assuming daily ingestion of groundwater, and groundwater is not currently used, or planned to be used, as a source for drinking water on or near the property. Therefore, manganese is not considered a site contaminant of concern in groundwater.

## Demonstration of Attainment

The selection of statistical methods for use in assessing the attainment of cleanup standards depends on the characteristics of the environmental media. The DNREC Remediation Standards Guidance Under the Delaware Hazardous Substance Cleanup Act (DNREC, 1999) provides a discussion on demonstration of attainment of Uniform Risk-based Standards. One method, the Default Background Standard or Uniform Risk Standard Approach (75%/10x Rule), states that “75% of all samples collected for attainment purposes shall be equal to or less than the remediation standard with no individual sample exceeding ten times the standard on the property, or two times the standard beyond the property.” DNREC approved this approach.

According to the HSCA soil samples, only one compound (lead) was detected above the unrestricted URS. Even if this sample result is included (419 mg/kg of lead in sample SP11-S001) without taking into account that lead was detected in the duplicate sample at a concentration of only 234 mg/kg, the soil results from the 513 Lexington Avenue property meet the 75%/10x rule criteria for the unrestricted URS level as shown below. Therefore no additional assessment of risk is required for this project.

Number of Soil Samples Analyzed	Number of Soil Samples Below Unrestricted Use URS Criteria	Percentage of Samples Equal or Less Than Unrestricted Use URS Criteria	Maximum Lead Detection (mg/kg)	Unrestricted Use URS Criteria (mg/kg)	Exceedance
4	3	75%	419	400	1.05 x

## FINAL PLAN OF REMEDIAL ACTION

Based on DNREC’s evaluation of the site information, it was determined that at this time, no further action is needed to develop this Site for unrestricted use and that a Certificate of Completion of Remedy (COCR) for this site will be issued.

**PUBLIC PARTICIPATION**

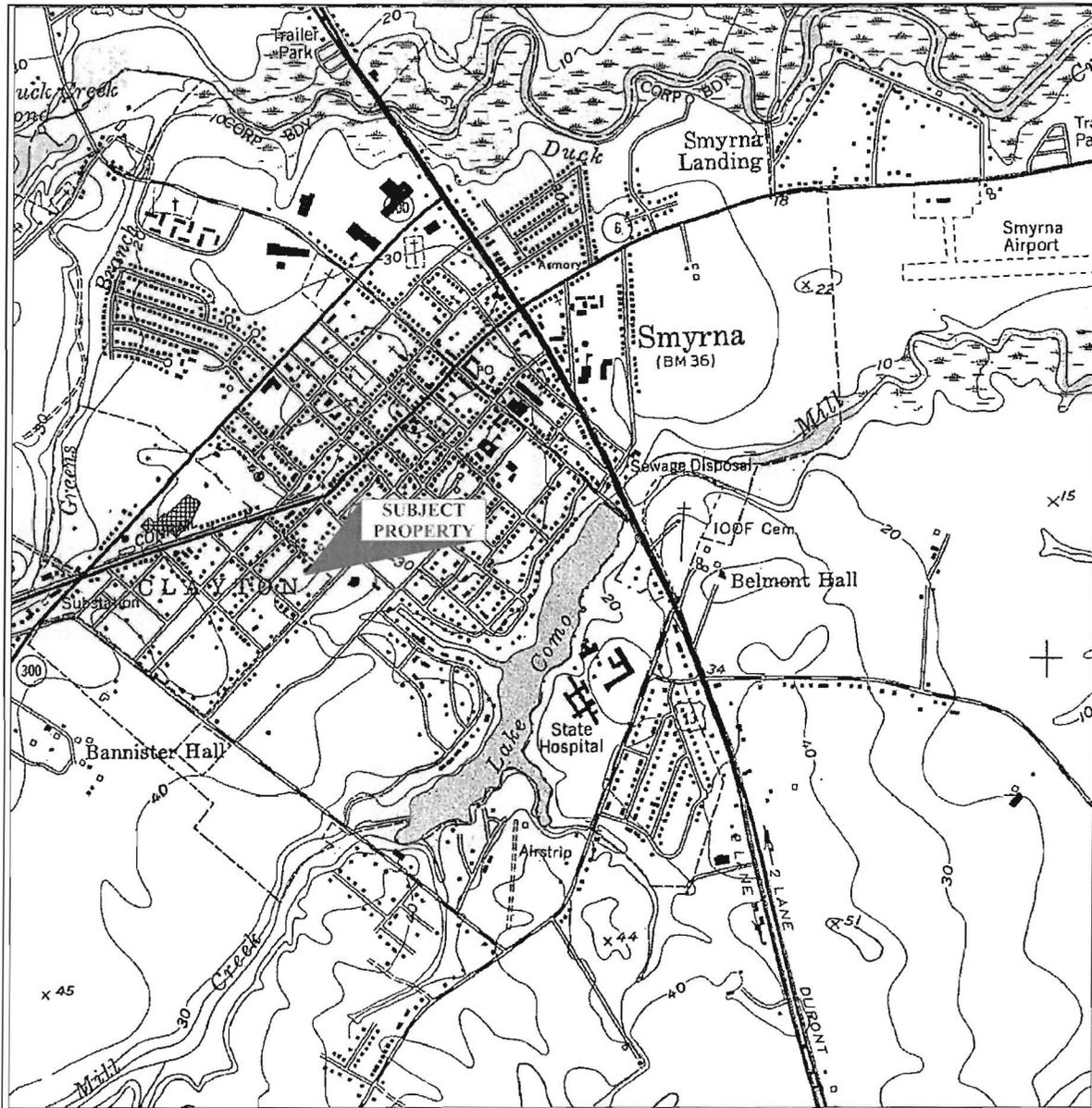
DNREC did not receive any comments from the public regarding the Proposed Plan of remedial action between the period of April 2, 2007 and April 23, 2007.

If you have any questions or concerns regarding the 513 Lexington Avenue Property, or if you would like to review the reports or other information regarding the site, please contact the project manager, Babatunde Asere, 391 Lukens Drive, New Castle, Delaware 19720 or at 302.395.2600.

  
James D. Werner  
Director, Division of Air and Waste

5/24/07  
Date

# **FIGURE 1**



**FIGURE 1 - Site Location Map**

From USGS Smyrna Quadrangle  
 Smyrna Delaware  
 7.5 minute series, Photorevised 1982

513 Lexington Avenue Property  
 Smyrna, Delaware

File No. 2159.01.21



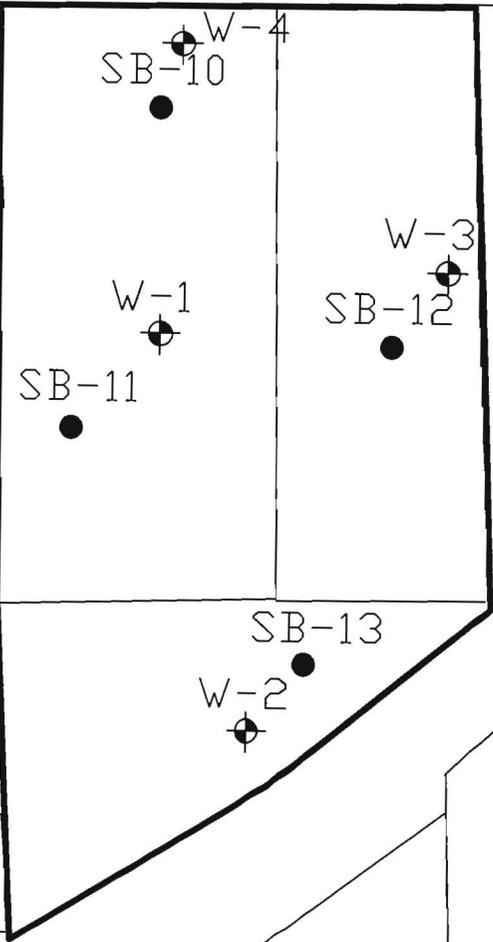
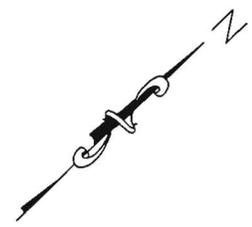
**FIGURE 2**

Lexington Ave

South Upham St

South Howard St

West South St



- W-1 Groundwater Sampling Location
- SB-12 Soil Boring Sampling Location
- Investigation Area

