

**STATE OF DELAWARE**  
**DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL-**  
**SITE INVESTIGATION AND RESTORATION BRANCH**  
**FINAL PLAN OF REMEDIAL ACTION**



**Madison Garden Apartments  
Wilmington, DE**

**DNREC Project No. DE-1332  
March 2005**

This final plan of remedial action (final plan) presents the Department of Natural Resources and Environmental Control's (DNREC's) selected cleanup alternative for the Madison Garden Apartments Site (Madison Garden) in Wilmington, Delaware. The property is owned by the Wilmington Housing Authority and is slated for re-development. The final plan is issued under provisions of the Delaware Hazardous Substance Cleanup Act and Section 12 of the Delaware Regulations Governing Hazardous Substance Cleanup (Regulations). In January 2005, DNREC issued a proposed plan, placed a notice in the *News-Journal* and opened a public comment period. There were no comments from the public. All investigations of the site, the proposed plan and the final plan will constitute the Remedial Decision Record.

The DNREC decision concerning the appropriate remedial action at the Madison Garden is based on the following technical reports:

- Phase II Investigation Report for Madison Garden Apartments BrightFields, Inc. May 4, 2004.
- Work Plan for Environmental Monitoring During Subsurface Demolition BrightFields, Inc. July 22, 2004.

Copies of these documents can be obtained or viewed by contacting DNREC.

## INTRODUCTION

The Madison Garden site was formerly occupied by a three-story apartment building. The Wilmington Housing Authority demolished the building in 2004 and plans to construct residential townhouses on the property. The site is the former location of a leather tanning facility and was included in the DNREC Tannery Sites Initiative.

## SITE DESCRIPTION AND HISTORY

The Site is located at 710 West Third Street and is identified as tax parcel # 2603440223. The Site encompasses 0.6 acres and is located generally on the southwest corner of the intersection of Madison and Third Streets in the city limits of Wilmington, Delaware. The site is situated in a typical urban setting that includes housing, commercial properties, a restaurant and a play ground. The site is flat, has no surface water features, and is served by public water.

According to the Phase I Environmental Site Assessment performed by BrightFields, Inc., the property was developed as the location of the Pusey & Scott Company Morocco Manufacturers and the American Leather Morocco Factory beginning prior to 1884 and continuing in this use until at least 1901. Tannery sites are potentially contaminated with chemicals used in the tanning process, notably arsenic. BrightFields performed a limited soil evaluation in April, 2004 and found elevated concentrations of arsenic and lead indicative of tannery wastes in soil samples from four to eight feet below the ground surface (see Table 1 below). The Wilmington Housing Authority signed a voluntary cleanup agreement with DNREC on September 24, 2004. The agreement provides a framework for DNREC oversight of the development of the site.

Table 1. Subsurface soil results (mg/kg)

Contaminant	Samples/detections	Range (mg/kg)	URS*
Arsenic	6/5	3.5-507	23
Lead	6/6	14.5-918	400
Benzo(a)anthracene	6/5	.034-51	0.9

\*Uniform Risk based Standard

## REMEDIAL ACTION OBJECTIVES

The following qualitative objective(s) are determined to be appropriate for the site:

- Prevent exposure by residents of the new houses to contaminated soil;
- Prevent exposure by construction workers to unacceptable risks posed by exposure to contaminated soils.

These objectives are consistent with the future proposed use of the site as a residential development, City of Wilmington zoning policies, and worker health and safety.

Based on the qualitative objectives, the quantitative objective(s) are:

- Prevent human exposure to soils contaminated with arsenic and benzo(a)pyrene that would result in a carcinogenic risk above 1.0E-05 and a non-carcinogenic risk above Hazard Index (HI) of 1.0.
- Prevent human exposure to soil contaminated with lead over 1000 mg/kg (construction worker) or 400 mg/kg (resident) as an average.

## FINAL PLAN OF REMEDIAL ACTION

Based on DNREC's evaluation of the site information, which includes current and past environmental investigations, historical information, the above remedial action objectives, and the Wilmington Housing Authority's construction plans, DNREC determined that the following remedial actions be taken at the site:

1. Ensure contaminated soils remain below the zone of human contact and beneath pavement or concrete slabs.
2. Over excavate utility trenches, bed utility lines in clean fill material, and use additional clean material to fill trenches.
3. Implement the Work Plan for Environmental Monitoring during Subsurface Demolition (BrightFields, Inc. 2004).
4. Prepare and implement an operations and maintenance plan which will identify areas (if any) containing contaminated material.
5. Attach a deed restriction to the property requiring notification of DNREC in the event of future excavation on the site.

## PUBLIC PARTICIPATION

The Department advertised the proposed plan for the site and opened a public comment period on January 20, 2005. The public comment period ended February 8, 2005 and no comments were received

Any questions or concerns regarding the Madison Garden Apartments site can be directed to the project manager: Stephen F. Johnson, 391 Lukens Drive, New Castle, Delaware 19720, (302.395.2600).

## DECLARATION

The final plan of remedial action for the Madison Gardens site is protective of human health, welfare and the environment and is consistent with the requirements of the Delaware Hazardous Substance Cleanup Act.

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Marjorie A. Crofts, Acting Director

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Date

