PROPOSED PLAN OF REMEDIAL ACTION

97 Vandever Avenue Site
Wilmington, Delaware
DNREC Project No. DE-1429

November 2010

Delaware Department of Natural Resources and Environmental Control
Division of Waste and Hazardous Substances
Site Investigation & Restoration Branch
391 Lukens Drive
New Castle, Delaware 19720

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Approval:
This Proposed Plan meets the requirements of the Hazardous Substance Cleanup Act.

Approved by:

Marjorie A. Crofts, Director
Division of Waste and Hazardous Substances

11.24.10
Date

PROPOSED PLAN
Questions & Answers

97 Vandever Avenue Site

What is the 97 Vandever Avenue Site? The 97 Vandever Avenue Site is located on the corner of Vandever and Lamotte Streets in Wilmington, Delaware (Figure 1). The surrounding properties are both residential and commercial. The site has most recently been operated by Moyer Academy as an elementary school in modular buildings. Habitat for Humanity of New Castle County is proposing to redevelop the property into 21 affordable housing units for the community.

Tax Parcel Numbers: 26-029.10-090
Address: 97 Vandever Avenue, Wilmington, Delaware
Nearest major intersection: Vandever Avenue and Lamotte Street
Area: +/- 1-acre
Surrounding Property: Surrounding land use is residential and commercial
Zoning: 26M-1 – Light manufacturing
Site Utilities: Site is currently vacant with no utilities
Surface water: Brandywine River is approximately 520 feet away
Topography: The site slopes to the southwest towards Vandever Avenue
Groundwater: The shallow water bearing zone is approximately 11 to 14 feet below ground surface (bgs) and flows to the south east towards the Brandywine River

What happened at the 97 Vandever Avenue Site? Historically, the site was a cotton mill, a textile manufacturing facility, a tobacco company, a phonograph company, a dry cleaner/laundry service, an auto body shop and most recently a school.

What is the environmental problem at the 97 Vandever Avenue Site? The Site surface soil has been impacted by chlorinated solvents and by polycyclic aromatic hydrocarbons (PAHs). The contamination may have resulted from the dry cleaner/laundry service that was located in the northeast portion of the site and from historic filling of the property on the adjacent property. In groundwater, tetrachloroethane (PCE), vinyl chloride, 1,1-dichloroethene, and manganese were detected above DNREC standards. However, groundwater is not being used at the Site and the Site is located within the City of Wilmington's groundwater management zone (GMZ), which prohibits installation and use of drinking water wells. A vapor intrusion evaluation on the Site was performed and showed that the vapors from the groundwater and soil may pose an unacceptable risk to the future residents.

Multiple environmental investigations were performed at the Site, including a Brownfield Investigation in July 2008, Supplemental Soil Sampling Investigation in September 2009, and an Interim Action Delineation Sampling Event in May 2010.

These investigations indicated that Site surface soil (0-2 feet depth) is contaminated with PAHs, primarily benzo(a)pyrene, above DNREC standards for a unrestricted (residential) use scenario. Other PAHs that exceed DNREC standards site wide included benz(a)anthracene and dibenz(a,h)anthracene. Arsenic, benzo(b)fluoranthene, ideno(1,2,3,cd)pyrene are localized contaminants of concern. In addition, the Site surface soil in the north east corner has been impacted by chlorinated solvents, specifically tetrachloroethene, trichloroethene, vinyl chloride, and 1, 1-dichlorethene, above DNREC standards. No contaminants of concern were identified in the subsurface soil. The site does not pose an unacceptable risk under the construction work risk scenario.

In groundwater, vinyl chloride, PCE, 1,1-dichloroethene, and manganese were detected above DNREC standards. However, groundwater is not being used at the Site and the Site is located in a groundwater management zone (GMZ) which prohibits the installation and use of drinking water wells. The evaluation of potential impact of groundwater contamination discharging to surface water (Brandywine River) indicated that the river is not impacted by the site contamination.

The potential risk from intrusion of subsurface vapors from groundwater and soil into the future buildings at the site was evaluated. The evaluation indicated that potential vapor intrusion risk above the acceptable level exists and requires a remedial action.

What does the owner want to do at the 97 Vandever Avenue Site? Habitat for Humanity of New Castle County is planning to redevelop the property into 21 affordable housing units.

The development plan for the 21 housing units includes site grading, installing utilities (i.e. water, gas, and electric), paving, construction of hardscaping (sidewalks and brick areas), building construction and landscaping.

What clean-up actions have been taken at the former 97 Vandever Avenue Site? Several tons of PAH contaminated soil was excavated from a 430 square foot area as an interim remedial action. The excavated soil was taken off site and was disposed properly.

What additional clean-up actions are needed at the former 97 Vandever Avenue Site? DNREC's clean-up plans include the institution of a cap/cover system made up of either two feet of DNREC approved clean fill or an impervious surface to minimize exposure to site surface soils. A vapor barrier system will be installed under the building slabs or in the crawlspaces to prevent the migration of site soil gas into the residences. During redevelopment of the site, the impacted soil in the immediate vicinity of the identified solvent contamination area will be excavated to approximately two feet below ground surface (bgs) and disposed properly. If contamination is noted below two feet, further excavation may be required.

DNREC proposes the following cleanup actions for the site:

1. The surface of the Site will be covered with a cap which may consist of buildings, pavement, or a minimum of two feet of DNREC-approved clean fill material in the landscaped areas.

2. A DNREC –approved vapor barrier system will be incorporated under the building slabs or in the crawlspaces, dependent on construction type, to limit the migration of site soil gas into the residential structures.

3. During redevelopment of the site, the impacted soil in the immediate vicinity of the identified chlorinated solvent contamination area will be over excavated to approximately two feet below ground surface (bgs) and properly disposed of. If contamination is noted below two feet, further excavation may be required.

4. A groundwater monitoring plan will be developed as part of the Remedial Action Work Plan, which will require installation of monitoring wells.

4. All construction and redevelopment work will be performed in accordance with a DNREC-approved Contaminated Material and Water Management Work Plan (CMWMWP), and the Site Specific Health and Safety Plan (HASP).

5. Establish and implement a Long Term Stewardship (LTS) Plan within ninety (90) days following completion of the redevelopment. The LTS Plan will include annual inspections of the cap, a vapor intrusion monitoring plan, a groundwater monitoring plan and will address any additional remedial actions that may become necessary based on results of the inspections.

6. The Site is within the existing City of Wilmington Groundwater Management Zone (GMZ). The GMZ will prohibit the installation of any water wells on, or groundwater usage at the Site without prior written approval from DNREC.

7. Record an environmental covenant consistent with Delaware's Uniform Environmental Covenants Act, UECA (Title 7, Del. Code Chapter 79, Subtitle II). The environmental covenant will prohibit land disturbing activities without DNREC's prior written approval except in landscaping areas, prevent disturbance to the vapor barrier, and prohibit the installation of wells and use of any groundwater at the Site.

What are the long term plans for the Site after the cleanup? The site will be redeveloped into a residential community. After construction, a Long Term Stewardship Plan (LTS) will be submitted for DNREC approval, which will include vapor intrusion sampling, groundwater sampling and annual inspections of the cap.

DNREC plans to issue a Certification of Completion of Remedy for the site after the completion of clean-up, the redevelopment of the property, and the implementation of the uniform environmental covenant at the site.

How can I find additional information or comment on the Proposed Plan?

The complete file on the site including the Brownfield Investigation and Interim Action Report are available at the DNREC office, 391 Lukens Drive in New Castle. Most documents are also found on:

http://www.dnrec.state.de.us/dnrec2000/Divisions/AWM/sirb/

The 20-day public comment period begins on December 1, 2010 and ends at close of business (4:30 pm) on December 20, 2010. Please send written comments to the DNREC office or call Morgan Price, Project Manager, at 302-395-2600.

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Glossary of Terms
Used in this Proposed Plan

Brownfield	Property that is vacant or underutilized because of the perception or presence of an environmental problem.
Certified Brownfield	A brownfield that DNREC has determined is eligible for partial funding through the Delaware Brownfields Program.
Contaminant of Concern (COC)	These are potentially harmful substances at concentrations above acceptable levels (eg metals and PAH).
Certificate of Completion of Remedy (COCR)	A formal determination by the Secretary of DNREC that remedial activities required by the Final Plan of Remedial Action have been completed.
***Exposure**	Contact with a substance through inhalation, ingestion, or direct contact with the skin. Exposure may be short term (acute) or long term (chronic).
Final Plan of Remedial Action	DNREC's proposal for cleaning up a hazardous site after it has been reviewed by the public and finalized.
Hazardous Substance Cleanup Act (HSCA)	Delaware Code Title 7, Chapter 91. The law that enables DNREC to identify parties responsible for hazardous substances releases and requires cleanup with oversight of the Department.
Human Health Risk Assessment (HHRA)	An assessment done to characterize the potential human health risk associated with exposure* to site related chemicals.
Proposed Plan of Remedial Action	A plan for cleaning up a hazardous site submitted by DNREC and subject to public comments.
Risk	Likelihood or probability of injury, disease, or death.
Risk Assessment Guidance for Superfund (RAGS)	An EPA guidance document for superfund sites
Site Specific Assessment (SSA) and Site Inspection (SI)	Environmental studies of a site including sampling of soils, groundwater, surface water, sediment and/or wastes on the property.

What is a *Proposed Plan?*

A Proposed Plan of Remedial Action (Proposed Plan) is a summary of how DNREC plans to clean up a contaminated site. A Final Plan of Remedial Action (Final Plan) is the adoption of the Proposed Plan, after all comments made by the public within the comment period of twenty days have been considered and addressed by DNREC.

The Delaware State Legislature passed the Hazardous Substance Cleanup Act (HSCA) in 1990. The Legislature made sure that members of the public would be informed about environmental problems in their own neighborhoods and have a chance to express their opinion concerning the clean up of those environmental problems before DNREC takes action.

After DNREC studies a site, it summarizes the problems there and proposes one or more possible solutions in a Proposed Plan. The Proposed Plan contains enough information to allow lay persons to understand the site. More detailed information can be found in the reports and documents approved by DNREC. All of the documents and reports created by DNREC or consultants during the course of the investigation of the site are available to the public at the offices of DNREC-SIRB or at DNREC's website:

http://www.dnrec.state.de.us/dnrec2000/Divisions/AWM/sirb/

DNREC issues the Proposed Plan by advertising it in at least one newspaper in the county where the site is located. The legal notices for the Proposed Plans and the Final Plans usually run on Wednesdays or Sundays in the legal classified section of the News Journal and/or the Delaware State News. The public comment period begins on the day (Wednesday), or the day after (Sunday) the newspaper publishes the legal notice for the Proposed Plan.

DNREC frequently holds public meetings during the comment period. Those meetings are usually held near the site in the evening. Citizens can request a public meeting if DNREC did not already schedule one.

Comments are collected at the public meetings, by phone or in writing. DNREC considers all comments and questions from the public before the Proposed Plan is finalized and adopted as a Final Plan.

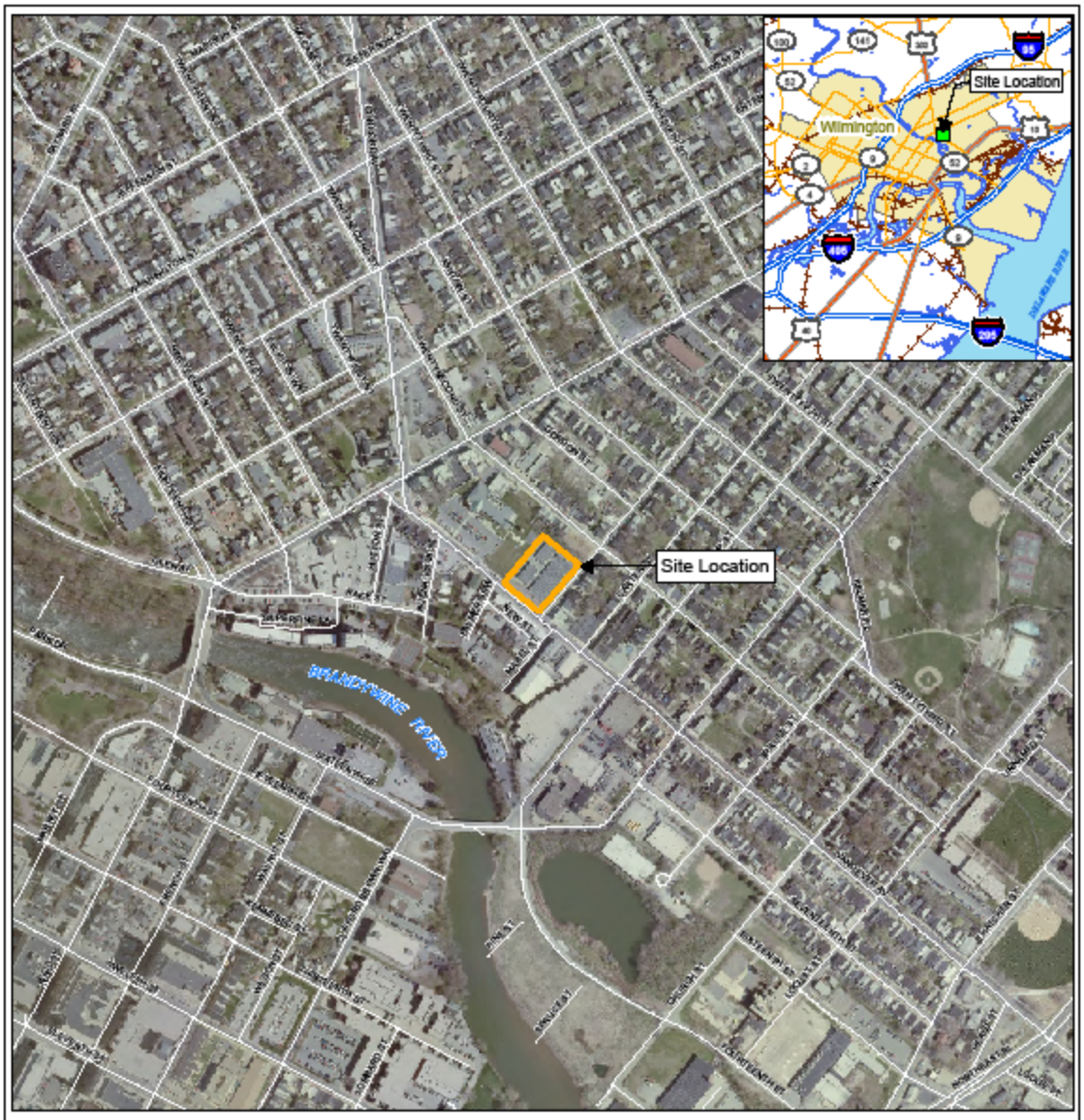

FIGURE 1
Site Location Map

97 Vandever Avenue

Wilmington. Delaware

File: 2192.10.21

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W
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550 275 0 550 Feet

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