

FINAL PLAN OF REMEDIAL ACTION

NEW CASTLE AVENUE AND B STREET SITE
WILMINGTON, NEW CASTLE COUNTY, DELAWARE
DNREC PROJECT NO. DE-1396



February 2011

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

This Final Plan of Remedial Action (Final Plan) for the New Castle Avenue and B Street Site presents the Department of Natural Resources and Environmental Control's (DNREC's) determination that only minor residual contamination remains in the deeper soils of the site following interim action soil removals.

DNREC issued public notice of the Proposed Plan for the New Castle Avenue and B Street Site on January 5, 2011 and opened a 20-day public comment period. The Proposed Plan requires:

Soil Removal and Relocation: Soil excavated for the installation of the townhouse foundations and deck posts is to be placed into the parking lot area to be covered with asphalt paving. Soil currently present in the back yards will be excavated and placed into the parking lot area to be covered with asphalt paving, and replaced by a minimum of 2 feet of DNREC-approved clean fill to reestablish site grades, then covered with topsoil and seeded with a grass lawn.

Capping: The proposed construction of the townhouse community (the homes, sidewalks and an asphalt parking area) will cover the majority of the surface at the property with an impervious cover material. This "cap" is the largest part of the remedy by which the future residents will be prevented from coming into direct contact with metals, PAHs, or residual PCBs (at concentrations below 1 mg/kg) in the surface soils.

Institutional Controls: Because contaminated soils will remain on the site at locations below the capped areas, the remedy must include a means to limit access to these subsurface COCs. An Environmental Covenant (EC), prepared in accordance with Delaware's Uniform Environmental Covenant Act will be placed on each individual deed of record to describe the location and character of the remaining soil COCs, and to limit future actions on the property to restrict the possibility of allowing soil exposures by inadvertent disturbance of the capped areas. The EC will also require that the construction of the townhomes include compliance with a DNREC-approved Contaminated Materials Management Plan (CMMP), and that Long Term Stewardship (LTS) will be required to protect the cap remedy through the use of an Operations and Maintenance (O&M) Plan. The EC will also restate the prohibition of the installation of groundwater drinking water wells.

There were no comments or questions from the public regarding the proposed plan. Therefore, the Proposed Plan was adopted as the Final Plan (see attached).

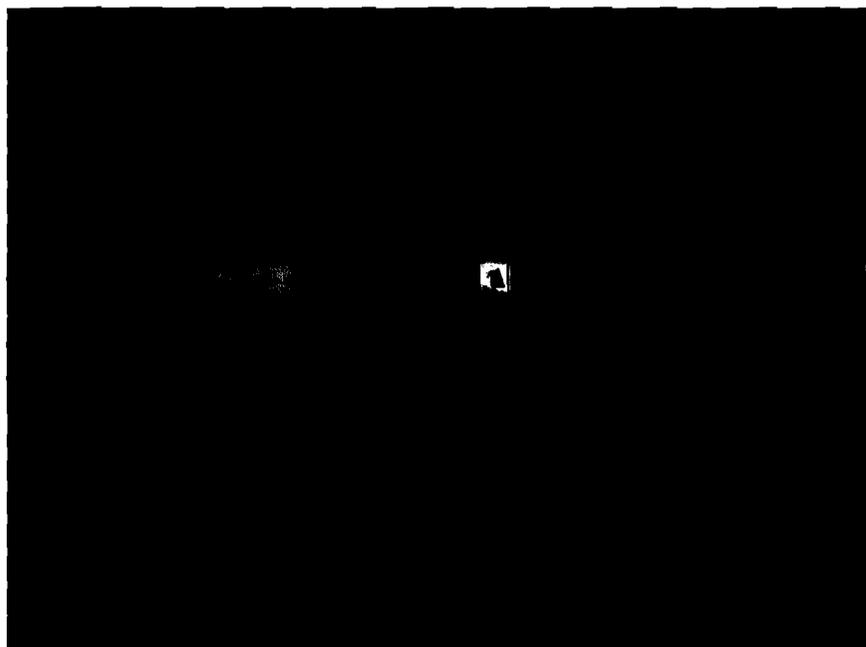
Approval:

This Final Plan meets the requirements of the Hazardous Substance Cleanup Act.


Kathleen Stiller, Program Manager II
Division of Waste and Hazardous Substances

PROPOSED PLAN OF REMEDIAL ACTION

NEW CASTLE AVENUE AND B STREET SITE
WILMINGTON, NEW CASTLE COUNTY, DELAWARE
DNREC PROJECT NO. DE-1396



December 2010

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

CONTENTS

- Proposed Plan: Questions and Answers
- Figures 1, 2, and 3
- Glossary of Terms
- Attachment: *What is a Proposed Plan?*

PROPOSED PLAN OF REMEDIAL ACTION

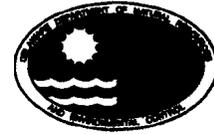
New Castle Avenue and B Street Site
Wilmington, New Castle County, Delaware
DNREC Project No. DE-1396



Approval:

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

| |
|---|
| Approved by: |
|  |
| Marjorie A. Crofts, Director Site Investigation & Restoration Branch |
| 12.28.10 |
| Date |



What is the New Castle Avenue and B Street Site? The site is located at the intersection of New Castle Avenue and B Street within the city limits of Wilmington, Delaware (Figure 1). The site is comprised of six (6) contiguous tax parcels and although the site is currently vacant, this property was historically occupied by residential structures. Future plans for the site include the construction of four (4) approximately 1,400 square-foot residential townhomes by the Neighborhood House, Community Development Corporation (Figure 2).

Tax Parcel Numbers: 26-058.10-075, -076, -077, -078, -079, and 26-058.10-252

Address: 501, 503, 505, 507, 509 New Castle Avenue and 1216 B Street, Wilmington, Delaware 19802

Nearest major intersection: New Castle Avenue and B Street

Area: 0.3 acres

Surrounding Property: Surrounding land use is primarily residential with some commercial uses.

Zoning: Residential

Site Utilities: Municipal (City of Wilmington) water and sewer are available to the property.

Surface water: The Christina River is located approximately 2000 feet north of the property.

Topography: The site is approximately 15 feet above mean sea level and surface grades generally slope towards the Christina River with a potential preference toward a mapped wetland located to the east-southeast of the site.

Groundwater: Shallow groundwater at the site was determined to generally flow in a northerly to northeasterly direction towards the Christina River

What happened at the New Castle Avenue and B Street Site? The site was historically occupied by residential row homes from before 1901 until at least 1992 based on historical mapping and aerial photography. There were also 8 structures identified as “stalls,” which were constructed sometime prior to 1951. The “stalls” were demolished sometime between 1992 and 2002. Based on the available historical information, potential sources of environmental impact include the demolition of residential structures and the placement of unknown fill material on the property. A Brownfield Investigation (BFI) was completed at the property in 2008.

What is the environmental problem at the New Castle Avenue and B Street Site? DNREC accepted the site into the Brownfield Program due to the perceived likelihood that it may contain contaminated soil, based on the historical activities at the site. The 2008 BFI findings showed that site soils contained elevated concentrations of metals, several carcinogenic polycyclic aromatic hydrocarbon (PAH) compounds (including benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene) and several polychlorinated biphenyl (PCB) compounds (Aroclors 1248, 1254, and 1260).

The results of the BFI Human Health Risk Assessment indicated some risks to human health based on the site-wide levels of PAHs and PCBs in the soils. However, under the exposure conditions consistent with the future residential development, approximately 75% of the site will be covered by townhomes and asphalt paved parking, which will limit the future exposure potential for residential contact with localized surface soil contaminants. However, small areas will not be covered by the development (e.g., back yard areas and landscaped areas) present the potential for direct contact with contaminated soils and fill material. In four (4) samples collected in these areas, metals and several PAH and PCB compounds were detected in surface soil samples at concentrations above DNREC's Uniform Risk-Based Standards (URSS) for unrestricted (residential) use. Soil at all four (4) locations will be subject to a remedial action.

Groundwater was found to contain low levels of the pesticides alpha chlordane and dieldrin, and the metal manganese was also detected at a concentration above the groundwater URSSs, the groundwater at the site was not identified as a media of concern because no users of site groundwater occur presently or in the future. The City and DNREC have defined a Groundwater Management Zone (GMZ) within the city limits that prohibits the use of groundwater for drinking water. Because volatile organic compounds (VOCs) were not detected in the groundwater samples, the proposed townhomes are not subject to vapor intrusion from groundwater creating exposure via the Indoor Air pathway.

What does the owner want to do at the New Castle Avenue and B Street Site? Neighborhood House Community Development Corporation plans to construct four (4) residential townhomes (Figure 2- Site Redevelopment Sketch). The new townhomes will be constructed approximately 3 feet above the current ground surface which provides a small crawl space between the floor and the ground. The soil in the crawl space will be overlain with plastic sheeting and gravel. An asphalt-paved parking area is proposed for the southern portion of the property that will cover approximately half of the site. Each townhouse unit will have its own grass lawn area. Upon completion, approximately 75% of the site will be covered by townhomes and associated parking areas.

What clean-up actions have been taken at the former New Castle Avenue and B Street Site? An Interim Action has been completed for the excavation, removal, and off-site recycling/disposal of soils contaminated with PCBs. These soils were located in the northeastern approximate quarter of the property in several stages until the post-excavation sample results were less than 1.0 milligrams per kilogram (mg/kg) (Figure 3). The PCB-containing soils were transported to an offsite licensed soil disposal facility (Clean Earth of New Jersey).

What additional clean-up actions are needed at the New Castle Avenue and B Street Site? The Proposed Remedy proposed herein for the New Castle Avenue and B Street site consists of three elements: Soil Removal and Relocation, Capping, and Institutional Controls. Each part of the remedy is described below.

Soil Removal and Relocation: Soil excavated for the installation of the townhouse foundations and deck posts is to be placed into the parking lot area to be covered with asphalt paving. Soil currently present in the back yards will be excavated and placed into the parking lot area to be covered with asphalt paving, and replaced by a minimum of 2 feet of DNREC-approved clean fill to reestablish site grades, then covered with topsoil and seeded with a grass lawn.

Capping: The proposed construction of the townhouse community (the homes, sidewalks and an asphalt parking area) will cover the majority of the surface at the property with an impervious cover material. This "cap" is the largest part of the remedy by which the future residents will be prevented from coming into direct contact with metals, PAHs, or residual PCBs (at concentrations below 1 mg/kg) in the surface soils.

Institutional Controls: Because contaminated soils will remain on the site at locations below the capped areas, the remedy must include a means to limit access to these subsurface COCs. An Environmental Covenant (EC), prepared in accordance with Delaware's Uniform Environmental Covenant Act will be placed on each individual deed of record to describe the location and character of the remaining soil COCs, and to limit future actions on the property to restrict the possibility of allowing soil exposures by inadvertent disturbance of the capped areas. The EC will also require that the construction of the townhomes include compliance with a DNREC-approved Contaminated Materials Management Plan (CMMP), and that Long Term Stewardship (LTS) will be required to protect the cap remedy through the use of an Operations and Maintenance (O&M) Plan. The EC will also restate the prohibition of the installation of groundwater drinking water wells.

Before a Certificate of Completion of Remedy (COCR) can be issued for the property, the following cleanup actions are proposed for the site:

1. Issue a Final Plan of Remedial Action;
2. Issue a DNREC-approved Contaminated Materials Management Plan (CMMP);
3. Complete the Soil Removal/Relocation and Capping by Redevelopment (during construction);
4. Issue a DNREC-approved Operations and Maintenance (O&M) Plan; and
5. Finalize the Environmental Covenant on the property deeds.

What are the long term plans for the Site after the cleanup? The future residential use of the site will include four (4) townhomes with lawns and associated parking areas. Preserving the site cover (the buildings, walkways, and the paved parking areas) are Long-Term Stewardship requirements for the site.

DNREC plans to issue a Certificate of Completion of Remedy (COCR) for the site after the completion of the redevelopment of the property and the implementation of the uniform Environmental Covenants for each property.

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

The complete file on the site, including the Brownfields Investigation Report, is 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 January 5, 2011 and ends at close of business (4:30 pm) on January 25, 2010. Please send written comments to the DNREC office or call Mr. Larry Jones, Project Manager, at 302-395-2600.

LJJ:vdc; LJJ10009.doc; DE 1396 II B 9

Attachments

Figure 1: Site Location Map

Figure 2: Proposed Townhome Redevelopment Sketch

Figure 3: Soil Removal Area Sketch

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 (e.g. 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/sitefiles.asp>.

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.
