

FINAL PLAN OF REMEDIAL ACTION



680 Forest Street

680 Forest Street
Dover, Delaware

March 23, 2011
DNREC Project No. DE-1451

This Final Plan of Remedial Action (Final Plan) presents the Department of Natural Resources and Environmental Control's (DNREC's) requirements to address environmental contamination at the 680 Forest Street site (Site).

DNREC issued public notice of the Proposed Plan of Remedial Action (Proposed Plan) for the Site on February 16, 2011 and opened a 20-day public comment period. The Proposed Plan is attached. There were no comments or questions from the public. Therefore, the Proposed Plan is adopted as the Final Plan.

Final Plan will consist of the following requirements:

- Remove arsenic and poly-aromatic hydrocarbon (PAHs) contaminated soil from the center of the Site according to a DNREC approved contaminated material management plan.
- The Site owner will 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 include restricting the site use to commercial and the use of site groundwater without DNREC approval.
- DNREC will establish a ground water management zone (GMZ) for the Site or extend the current Dover GMZ, as appropriate.
- Monitor groundwater onsite and offsite to evaluate fate and transport of offsite PCE contamination. DNREC may require additional actions based on the results of the monitoring.

Approval:

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

Kathleen Stiller, Program Manager II
Site Investigation and Restoration Branch



PROPOSED PLAN OF REMEDIAL ACTION

680 Forest Street
Dover, Delaware
DNREC Project No. DE-1451



February 2011

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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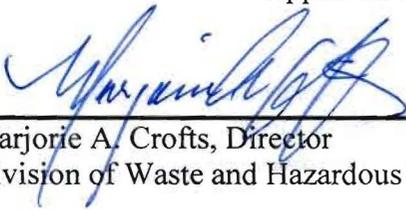
PROPOSED PLAN OF REMEDIAL ACTION

680 Forest Street
Dover, Delaware
DNREC Project No. DE-1451



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
2.8.11
Date



What is the 680 Forest Street Site?

The 680 Forest Street site is located in Dover, Delaware and consists of one acre tax parcel (Figure 1). The Site includes three commercial buildings. These buildings are used as offices, beauty salon and a warehouse. The northern portion has asphalt cover while the area south of the beauty salon to the warehouse has grass and gravel cover.

The Site is bordered by Forest Street to the north with a Salvation Army facility across the street. A taxicab dispatcher and auto repair garage are located to the east. An auto repair garage, a warehouse, and the In house Ministries and Lincoln Street are located to the west. Another site, Former Chesapeake Supply (DE-1334) and an auto repair shop are located to the south.

Tax Parcel Numbers: ED 05-076.12-02.39.00

Address: 680 Forest Street in Dover, Delaware.

Nearest major intersection: Forest and Lincoln Streets

Area: ± 0.99 acres

Surrounding Property: Surrounding land use is commercial

Zoning: Institutional/ Offices

Site Utilities: Water, sewage, gas, electric utilities

Surface water: Tar Branch, an intermittent stream, is located 250 feet south of the site.

Topography: Site slopes from north to south with elevations ranging from 28 to 30 feet (NAVD88).

Groundwater: Groundwater flows to the southeast toward the St. Jones river.

What happened at the 680 Forest Street Site?

The Site was operated as foundry, auto repair facility, warehouse, and offices for developers, roofers and builders. There is also evidence that the Site elevation was raised with fill material. The release likely occurred from these historic operations.

What were the environmental problems at the 680 Forest Street Site?

Surface soils were above the background level for arsenic and the DNREC residential standards for the following polycyclic aromatic hydrocarbons (PAHs)- benzo(a)pyrene, dibenzo (a,h) anthracene, benz(a) anthracene, and benzo (b)fluoranthracene. The soil poses a risk for indoor and outdoor workers. A soil hotspot area contaminated with arsenic and PAHs above DNREC commercial standards exist at the center of the Site.

The groundwater at the site has been impacted by trichloroethene (TCE), tetrachloroethene (PCE), methyl tert-butyl ether (MTBE) and manganese above drinking water standards. The standard for manganese is based on non-health criteria such as taste and odor and therefore is not a health risk. The PCE, TCE and MTBE groundwater contamination is determined to be from an offsite source. Soil gas sampling indicated that the contamination at the Site did not pose a risk to indoor air.

In 2009, Brightfields, Inc. completed a Brownfield Investigation (BI) Report that included sampling of the soil and groundwater (7 to 17 feet below ground) at the property. Supplemental Groundwater and Soil Gas Sampling Report included sampling of slightly deeper groundwater (20 to 30 feet below ground) and soil gas. The reason for sampling the deeper groundwater is to evaluate if contamination found in this deeper zone on the Former Chesapeake Supply SIRB site, located immediately to the south, is also present in the Site groundwater. PCE, TCE and MTBE were present in the groundwater in this deeper zone but did not present a risk since there are no drinking water receptors at or near the site. The soil gas was collected to assess the risk from soil/groundwater to indoor air. The assessment determined that there is no health risk from vapor intrusion.

Manganese was found in the shallow groundwater at concentrations up to 2,100 micrograms per liter (ug/L). However, manganese is a Secondary Maximum Contaminant which is based on non-health based criteria such as taste and odor. For these reasons, it is not considered a contaminant of concern and does not pose a health risk. PCE, TCE and MTBE were detected at 96 ug/l, 5.1 ug/l and 27 ug/l, respectively. However, there are no onsite sources of these chemicals and thus they are considered to be from an offsite sources. There are 3 public wells within ½ mile of the site but these wells are screened in the deeper confined Cheswold and Piney Point aquifers. These contaminants have not been detected in these wells.

The highest concentrations of arsenic and PAHs are located at GP04 (hotspot), near the center of the site. This is the only location where arsenic exceeded the background standard of 11 milligrams per kilogram. According to the risk assessment, if soil in this area were removed, risk from exposure to the remaining contamination in the soil at the Site would be below the cleanup standard for commercial use.

What does the owner want to do at the 680 Forest Street Site?

The current owner of the property is redeveloping a portion of the western building into a homeless shelter. Additional redevelopment may take place in the future.

What clean-up actions are needed at 680 Forest Street Site?

The proposed remedy will be to excavate the soil in the center of the site; restrict groundwater use at the site; and implement groundwater monitoring.

DNREC proposes the following remedy for the site which needs to be completed before a Certificate of Completion of Remedy (COCR) can be issued:

1. Remove soil contaminated with arsenic above background and PAHs above DNREC commercial standards from the hotspot area around GP04 after delineation. Prepare a Contaminated Material Management Plan and Health and Safety Plan prior to conducting the removal.
2. 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 limit the site use to commercial development and reference the Groundwater management Zone (GMZ).

3. DNREC will establish a GMZ to ensure that no groundwater wells shall be installed and no groundwater shall be withdrawn from any well, on the Site without the prior written approval of DNREC-SIRB.
4. Implement a DNREC-approved groundwater monitoring plan, which includes site groundwater monitoring as well as offsite sampling and may include additional site well(s) to evaluate the fate and transport of the contaminants in groundwater at the site. DNREC may require additional actions based on the results of the monitoring.

What are the long term plans for the 680 Forest Street Site after the cleanup?

A portion of the Site, the western building, will be renovated for use as a homeless shelter. There are no immediate plans for the rest of the Site. Groundwater will be monitored to evaluate the fate and transport of the contaminants in groundwater 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 Report and the Supplemental Groundwater and Soil Gas Sampling 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 February 16, 2011 and ends at close of business (4:30 pm) on March 8, 2011. Please send written comments to the DNREC office (391 Lukens Drive, New Castle 19720) or call Rick Galloway, Project Manager, at:
302-395-2600.

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Figure

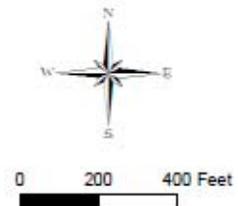


Figure 1
Site Location Map

680 Forest Street

Dover, Delaware

File: 2428.01.21



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.
Brownfield Investigation	A comprehensive study of environmental media at a certified brownfield site to determine the nature and extent of contamination present
Certified Brownfield	A brownfield that DNREC has determined is eligible for partial funding through the Delaware Brownfields Program.
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.
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 provides the regulatory framework for the Department's site cleanup programs.
Operable Unit	The cleanup of a site can be divided into a number of operable units, depending on the complexity of the problems associated with a site. Operable units may address geographical portions of a site, specific site problems, or initial phases of an action, or may consist of any set of actions performed over time or any actions that are concurrent but located in different parts of a site.
Proposed Plan of Remedial Action	A plan for cleaning up a hazardous site submitted by DNREC and subject to public comments.
US EPA	United States Environmental Protection Agency
Restricted Use	Commercial or Industrial setting
SIRB	Site Investigation Restoration Branch of DNREC, which oversees cleanup of sites that were contaminated as a result of past use, from dry cleaners to chemical companies.

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.
