



PROPOSED PLAN OF REMEDIAL ACTION

733 S. Market Street Site
Wilmington, Delaware
DNREC Project No. DE-1502



April 2011

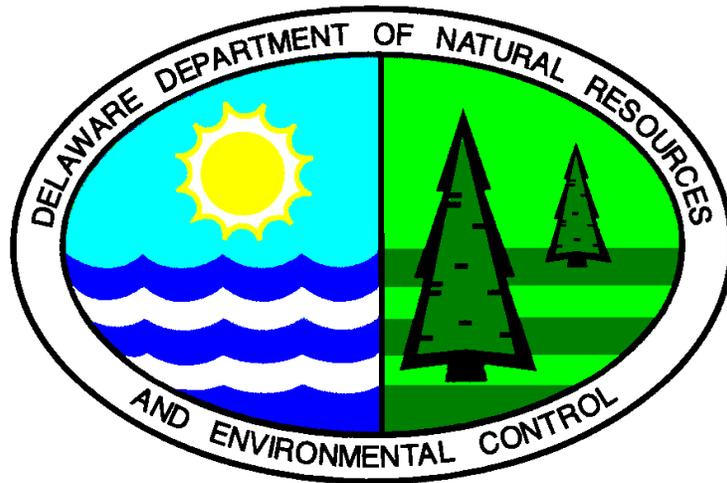
Delaware Department of Natural Resources and Environmental Control
Division of Waste Management and Hazardous Substances
Site Investigation & Restoration Branch
391 Lukens Drive
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Approval:

This is a Proposed Plan based on DNREC's 2007 Presumptive Remedy Guidance. This Proposed Plan meets the requirements of the Hazardous Substance Cleanup Act.

Approved by:

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

Date



What is the 733 S. Market Street Site?

The 733 South Market Street Site is located south of the intersection of South Market Street and James Court in Wilmington (Figure 1). The site is currently vacant. The site is bordered in all directions by industrial properties such as a tire distributor, aluminum and glass shop, machine shop, iron storage yard, and auto services. Future use of the site will be as a tire and wheel business. The property owner plans to construct a 2,500 sq ft addition onto the existing building in order to expand his business. The site was certified as a Brownfield on February 9, 2011.

Tax Parcel Numbers: 2605700004 and tax parcel 1000100001
Address: 733 S. Market Street
Nearest major intersection: James Court
Area: 0.95 acres
Surrounding Property: commercial/industrial
Zoning: New Castle County HI-UDC-Heavy Industrial & City of Wilmington 26W4 Waterfront Res/Comm
Site Utilities: Sewer service is provided by New Castle County. Water is provided by the City of Wilmington. Delmarva Power provides electric and natural gas
Surface water: Christina River
Topography: Topographic maps produced by the United States Geological Survey (USGS) suggest that groundwater in the water table aquifer would appear to mimic surface water runoff and flow west from the property toward the Christina River.
Groundwater: Based on monitoring wells installed during the Christina River Bridge SSA, groundwater is likely to be about 5 feet to 6 feet bgs and is assumed to flow westerly towards the Christina River.

What happened at the 733 S. Market Street Site?

The site has been previously maintained as a tire sales and services company, an auto parts store, and a truck rental company. Two underground storage tanks (USTs) were removed from the property in the mid 90's. Due to the past industry of the Wilmington Riverfront, the soil/fill that was placed over the marshland and surrounding area is believed to be a source of potential contamination for this property.

Two underground storage tanks (one 2,000 gallon gasoline tank and one 1,000 gallon heating oil tank) were removed in the mid-1990's. Sampling and overexcavation was performed around the former 2,000 gallon UST and DNREC issued a No Further Action for the 2,000 gallon UST on July 17, 1996. On August 16, 1996, Duffield Associates prepared a Proposed Scope of Exploration Report for

DNREC-UST Branch which proposed to recover and dispose of free product associated with the 1,000 heating oil tank.

On October 14, 1996 Duffield Associates prepared a Hydrogeologic Report and Proposed Corrective Action Work Plan which proposed construction of a Product Collection System and summarized the subsurface evaluation performed at the property on September 13, 1996. The subsurface evaluation found free product on groundwater in all six test pits.

On May 20, 1997 Duffield Associates prepared a Product Collection Summary Report which summarized the installation of the product collection sumps and a subsurface investigation which included test pit excavation and sampling. The analytical results indicated that the estimated concentrations of petroleum hydrocarbons ranged from approximately 80 mg/kg to 350 mg/kg.

Product recovery began in November 5, 1996 and pads were changed monthly until March 1997 when collection of product declined. Product Collection System Progress Reports dated October 21, 1997, March 3, 1998 and June 9, 1998 were prepared by Duffield for DNREC on a quarterly basis. These reports estimated the total volume of petroleum removed to be 56.2 gallons.

This property is on an area that has been historically filled. Soil sampling for DeIDOT's Christina River Bridge project was performed on this property on August 14, 2008. One shallow and one deep sample was collected and screened by DNREC. Screening results indicated that arsenic and lead were detected in the deep sample from 4-5.2 feet bgs at concentrations exceeding restricted use.

What is the environmental problem at the 733 S. Market Street Site?

A large amount of environmental data exists from previous DNREC Delaware Brownfield Program investigations in the immediate vicinity of this site that show soil impacts from PAH's, lead and arsenic. Potential contaminants at the site are also likely to include these compounds. Based on the existing information and our knowledge of this site, it is unlikely that additional impacts will be found, however, a site investigation is currently being conducted to assess if there are additional impacts. This site investigation will be completed in April 2011.

The 733 S. Market Street Site was one property (0.95 acres) out of 32 acres that was included in the Christina River Bridge Site Specific Assessment (BrightFields, April 2009)

One shallow and one deep sample was previously collected from this property and screened by DNREC. Screening results indicated that arsenic and lead were detected in the deep sample from 4-5.2 bgs feet at concentrations exceeding restricted use.

Several contaminants including metals (arsenic and lead), PAHs (benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and dibenz(a,h)anthracene), PCBs in two areas, and some petroleum compounds are potential contaminants of concern under a restricted use scenario for the Christina River Bridge Focus Area.

If the April 2011 site investigation identifies environmental conditions inconsistent with the model

site criteria (i.e. site contains PCB levels in excess of SIRB standards), then the developer will be required to undertake additional investigation activity in order for Amended Proposed Plan of Remedial Action to be published that states the actual conditions and amended proposed remedy, followed by a Final Plan.

Five monitoring wells were installed within the Focus Area during the SSA. A groundwater sample was collected from each of the wells. The samples were analyzed at Test America – Edison for TCL VOCs, TCL SVOCs, TCL pesticides/PCBs, and TAL metals (dissolved) and cyanide using HSCA protocols. No groundwater samples were collected from the subject property during the SSA. Groundwater samples have been collected as part of the current site investigation.

Aluminum, barium, iron, and manganese are typically detected at elevated concentrations in the groundwater in the Wilmington area and are not considered contaminants of concern. However, arsenic is considered a contaminant of concern in the groundwater.

Because arsenic was detected at a concentration above the URS criteria and the City of Wilmington Industrial Pretreatment Regulations limit of 90 µg/L in CRB-MW04, the well was re-sampled and analyzed for arsenic only in order to confirm the result. Arsenic was detected at 1,490 µg/L in the original sample (CRB-MW04-W001) and at 1,200 µg/L in the verification sample (CRB-MW04-W002).

Based on topography (which shallow groundwater often mimics) and based on data collected from wells north of the Focus Area, it is expected that a groundwater flow separation exists within the Focus Area on the east side of the Christina River, which would cause groundwater to flow west towards the Christina River and also east toward Market Street and the South Wilmington Wetlands.

What does the owner want to do at the 733 S. Market Street Site?

The property owner plans to construct a 2,500 sqft addition onto the existing building in order to expand his business and provide for additional office, storage and work space.

Limited soil excavation is anticipated for redevelopment. Soil excavation for the construction of the new addition may consist of limited excavation for pole foundation footers, retaining wall, fence posts and landscaping. Portions of the walls, windows, and roof will need to be demolished in order to accommodate the building addition.

What clean-up actions have been taken at the former 733 S. Market Street Site?

Two (2) USTs were removed from the property in accordance with Tank Management Branch (TMB) regulations. Overexcavation was performed in the area of the 2,000 gallon gasoline UST and a recovery sump collection system was installed to recover product from the 1,000 gallon heating oil UST. No other clean-up actions have taken place at the 733 S. Market Street Site.

What additional clean-up actions are needed at the former 733 S. Market Street Site?

This site cleanup plan is based on existing information from numerous

investigations in the area. As mentioned above, a site investigation is currently being conducted to fully assess this site. This site investigation will be completed in April 2011. DNREC's clean-up plans include the implementation of a cap/cover system made up of either one foot of DNREC approved clean fill or an impervious surface to minimize exposure to site native surface soils. A vapor barrier system or vent system will be incorporated into the new addition being constructed (if a risk pathway is present) in order to prevent the migration of site soil gas into the building. Lastly, during redevelopment activities, any impacted soil encountered during construction of the new addition including but not limited to excavation for foundations, retaining wall and/or fence posts will be excavated and removed according to the Contaminated Materials and Management Work Plan (CMMWP). These measures will prevent human exposure to the contaminated soil and groundwater at the Site.

The following cleanup actions are proposed for the site:

These cleanup actions are being proposed in accordance with the November 16, 2007 DNREC SIRB "Policy on Administrative and Model Criteria Requirements for Presumptive Remedy Approach to Certified Brownfield Sites". The following remedy will need to be completed prior to the issuance of a Certificate of Completion of Remedy:

1. The surface of the Site will be covered with a cap which may consist of buildings, pavement, or a minimum of one foot of DNREC-approved clean fill material in the landscaped areas. Portions of the Site may be covered with two feet or more of fill for construction purposes; however, this will not be considered as a required remedy for reimbursement purposes.
2. Although not seen in the existing information from previous investigations in this area, if the site investigation reveals unacceptable impacts from volatile organic compounds (VOCs), a DNREC – approved vapor barrier system or vent system will be incorporated under the building slabs or in the crawlspaces, dependent on construction type, to limit the migration of volatiles into the building if a risk pathway is present.
3. All construction and redevelopment work, including any soil excavation, will be performed in accordance with a DNREC-approved Contaminated Material and Water Management Work Plan , and the Site Specific Health and Safety Plan (HASP), which addresses the proper handling, removal and disposal of excavated contaminated material.
4. A DNREC-approved Long Term Stewardship (LTS) Plan will be established and implemented within ninety (90) days following construction completion. The LTS Plan will detail the procedures and practices including regular inspections to minimize the potential for disturbing the cap and to promote the long-term integrity of the cap. In addition, the LTS Plan will include a vapor intrusion monitoring plan to address potential vapor intrusion (if required). The LTS Plan will address any additional remedial actions that may become necessary if monitoring shows migration of contaminants of concern into the commercial structure.
5. A Ground Management Zone (GMZ) is already in place for the City of Wilmington (July 2007). The Site is within the City of Wilmington boundary limits. The GMZ will prohibit the installation of any water wells on, or groundwater usage at the Site without prior written approval from DNREC. In addition, the City prohibits drinking water wells to be installed within the City limits.
6. 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 prohibit land disturbing activities without DNREC's prior written approval except in landscaping areas, prevent disturbance to the vapor barrier (if required), 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 cap will need to be maintained. Operations and Maintenance (O&M) inspections will be performed in accordance with an approved DNREC O&M Plan. DNREC plans to issue a Certificate 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 covenants at the site.

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

The complete file on the site including the Brownfields Investigation, Conceptual Site Model and Sample and Analysis Plan is available at the DNREC office, 391 Lukens Drive in New Castle. Most documents are also found on:

<http://www.nav.dnrec.delaware.gov/DEN3/>

The 20-day public comment period begins on April 27, 2011 and ends at close of business (4:30 pm) on May 25, 2011. Please send written comments to the DNREC office or call Larry Jones, Project Manager, at 302-395-2600.

Figure 1: Location Map

Figure 2: Site Photos

Figure 3: DNREC Policy, November 16, 2007, "Policy on Administrative and Model Criteria Requirements for Presumptive Remedy Approach to Certified Brownfield Sites"

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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.nav.dnrec.delaware.gov/DEN3/>

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.
