

# FINAL PLAN OF REMEDIAL ACTION



## 2004 & 2008 Shipley Road - Wilmington Site

*2004-2008 Shipley Road  
Wilmington, Delaware*

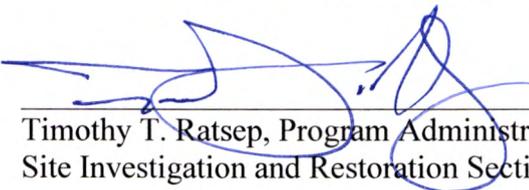
*May 2016  
DNREC Project No. DE-1612*

This Final Plan of Remedial Action (Final Plan) presents clean-up actions required by the Department of Natural Resources and Environmental Control (DNREC) to address environmental contamination at the 2004 & 2008 Shipley Road - Wilmington Site.

DNREC issued public notice of the Proposed Plan of Remedial Action (Proposed Plan) for 2004 & 2008 Shipley Road - Wilmington Site on April 27, 2016 and opened a 20-day public comment period. The Proposed Plan is attached. There were no comments from the public; therefore, the Proposed Plan is adopted as the Final Plan.

**Approval:**

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

  
\_\_\_\_\_  
Timothy T. Ratsep, Program Administrator  
Site Investigation and Restoration Section

*May 18, 2016*  
\_\_\_\_\_  
Date



## **PROPOSED PLAN OF REMEDIAL ACTION**

2004 & 2008 SHIPLEY ROAD SITE  
Wilmington, Delaware  
DNREC Project No. DE-1603



April 2016

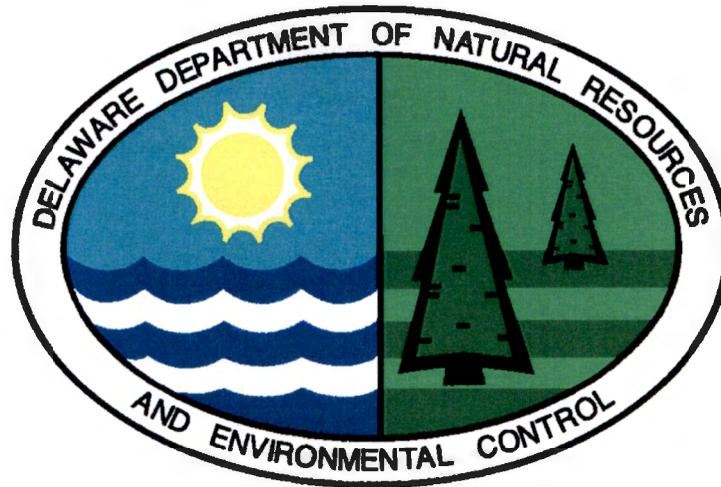
Delaware Department of Natural Resources and Environmental Control  
Division of Waste and Hazardous Substances  
Site Investigation & Restoration Section  
391 Lukens Drive  
New Castle, Delaware 19720

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# PROPOSED PLAN OF REMEDIAL ACTION

2004 & 2008 SHIPLEY ROAD SITE  
Wilmington, Delaware  
DNREC Project No. DE-1603



**Approval:**

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

Approved by:

Timothy Ratsep, Environmental Program Administrator  
Site Investigation & Restoration Section

April 21, 2016

Date



### **What is the Proposed Plan of Remedial Action?**

The Proposed Plan of Remedial Action (Proposed Plan) summarizes the clean-up (remedial) actions that are being proposed to address contamination found at the Site for public comment. A legal notice is published in the newspaper for a 20-day comment period. DNREC considers and addresses all public comments received and publishes a Final Plan of Remedial Action (Final Plan) for the Site.

### **What are the 2004 & 2008 Shipley Road Site?**

The 2004 & 2008 Shipley Road site (Site) is located on the west side of Shipley Road at 2004 and 2008 Shipley Road, Wilmington, Delaware. The Site consists of two tax parcels (2004 Shipley # 0607800404 and 2008 # 0607800459), totaling approximately 8.42 acres (See attached Figure 1).

The nearest intersection to the Site is Shipley Road and Parkside Drive. The 2008 Shipley Road property consists of a one story single family home and a small storage shed. The property is currently zoned S-UDC–SUBURBAN.

The 2004 Shipley Road property surrounds the 2008 Shipley Road property on three sides and consists of several depilated green house structures, a former gift and retail shop where flowers were sold, a workshop, and a vacant two-story residential structure. The property is currently zoned S-UDC–SUBURBAN.

### **What happened at 2004 & 2008 Shipley Road Site?**

The Site was historically operated for agricultural and horticultural purposes. The Site contains a series of dilapidated greenhouses, a gift shop, workshop, and two residential structures.

Eight (8) above ground storage tanks (AST's) reportedly used for fuel oil were observed at the Site, five (5) of which were subsequently removed. Two 10,000 gallon underground storage tanks (UST's) were removed from the Site in 1998 and an NFA letter was issued from DNREC TMS for the UST removals.

In 2015 an environmental investigation was completed at the Site in accordance with DNREC-SIRS Brownfield Program.

## **What is the environmental problem at the 2004 & 2008 Shipley Road Site?**

A Brownfield Investigation (BFI) was performed at the Site from May through July, 2015 and found contaminants of potential concern (COPCs) that were above DNREC SIRS human health screening levels are the following:

### Shallow Soil

- ◆ SVOC's: Benzo(a)pyrene, Benzo(b)fluoranthene, Dibenz(a,h)anthracene
- ◆ Inorganics: Antimony, Arsenic, Lead, Thallium
- ◆ TPH-DRO (Total Petroleum Hydrocarbons-Deiseal Range Organics)

### Subsurface Soil

- ◆ SVOCs: Benzo(a)pyrene
- ◆ Inorganics: Aluminum, Antimony, Arsenic, Chromium, total, and Iron

### Groundwater

- ◆ Total Inorganics: Aluminum, Antimony, Barium, Beryllium, Total Chromium, Cobalt, Iron, Lead, Manganese, Mercury, Nickle, Selenium, and Vanadium
- ◆ Dissolved Inorganics: Aluminum, Barium, Chromium, Cobalt, Iron, Manganese, Mercury, Nickle, and Vanadium.

### Sediment

- ◆ SVOCs: Benzo(a)pyrene, Benzo(b)fluoranthene

### Surface Water

- ◆ VOCs: Chloroform
- ◆ Pesticides: Dieldrin
- ◆ Inorganics: Manganese

## **What clean-up actions have been taken at 2004 & 2008 Shipley Road Site**

Two (2) 10,000 gallon fuel oil UST's were removed from the Site in 1998. Records indicate at least one (1) tank leaked and required a Hydrogeologic evaluation. Based on the results of the investigation, DNREC-TMS (Tank Management Section) issued a "No Further Action" (NFA) letter dated July 29, 1998. Select soils were bio-remediated onsite. The NFA letter issued by DNREC-TMS indicated that a maximum concentration of 54 mg/kg of TPH-DRO remained.

In 2015, a small soil excavation was completed in the area of the heating oil AST alongside the 2008 Shipley Rd. residential structure to remove TPH-DRO impacted soils. An NFA letter from DNREC-TMS was issued November 30, 2015 at the completion of the excavation activities.

A small soil excavation was also completed in 2015 in the area of a floor drain inside the main greenhouse structure. The excavation was completed to remove and delineate Lead and SVOCs in shallow soils within the drain, and to also determine the fate of materials that flowed into the

drain. It was determined that fluids flowing into the drain were allowed to infiltrate into soils beneath the slab. Post excavation samples indicated that Lead and SVOCs in remaining soils were below DNREC screening levels with the exception of Benzo(a)pyrene.

### **What does the owner want to do at the 2004 & 2008 Shipley Road Site?**

Upon purchase of the two parcels, the Harbor Retirement Associated, LLC plans to develop the Site as an adult retirement and assisted living facility.

### **What additional clean-up actions are needed at the 2004 & 2008 Shipley Road Site?**

**DNREC proposes the following remedial actions for the Site, which needs to be completed before a Certificate of Completion of Remedy (COCR) can be issued:**

1. A proposed Environmental Covenant must be submitted to DNREC for approval within 60 days of the issuance of the approved Long Term Stewardship (LTS) Plan.
2. An Environmental Covenant, consistent with Delaware's Uniform Environmental Covenants Act (7 Del.C. Chapter 79, Subchapter II) must be recorded in the Office of the New Castle County Recorder of Deeds within 60 days of the issuance of the Long Term Stewardship Plan. The Environmental Covenant must include the following activity and/or use restrictions:
  - a. Limitation of Groundwater Withdrawal. No groundwater wells shall be installed, and no groundwater shall be withdrawn from any well on the Property without the prior written approval of DNREC-SIRS and DNREC Division of Water.
  - b. Compliance with Long Term Stewardship Plan. Perform all work required by the Long Term Stewardship Plan ("LTS Plan"), as issued, approved, modified or amended by DNREC.
  - c. Compliance with Contaminated Materials Management Plan. All work required by the Contaminated Materials Management Plan must be performed to DNREC's satisfaction in accordance with the Plan.
  - d. Use Restriction. The Site will be limited to non-child residential use. No person under the age of 7 years is permitted to occupy the Site as their permanent residence. All other land uses are permitted (e.g., adult residential, recreational, commercial).
3. A Contaminated Materials Management Plan (CMMP) must be submitted to DNREC within 60 days of the issuance of the Final Plan of Remedial Action. The CMMP will provide guidance to enable construction workers to safely handle any potential contaminated soil and groundwater at the Site.

4. The CMMP will be implemented upon its approval by DNREC.
5. Develop and implement a DNREC-approved LTS Plan. The LTS Plan will detail: 1) the inspection schedule to be followed in order to document continued compliance with the environmental covenant.
6. The LTS Plan must be implemented within 60 days of its approval by DNREC.
7. A request for a Certification of Completion of Remedy (COCR) must be submitted to DNREC within 60 days of approval of the Remedial Action Completion Report.

### **What are the long term plans for the Site after the cleanup?**

The Site use will be restricted to non-child residential use with the Environmental Covenant in place. The LTS plan will be implemented and the CMMP will be completed and available for 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 the various reports are available at the DNREC office, 391 Lukens Drive in New Castle, 19720. Most documents are also found on:

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

The 20-day public comment period begins on April 27, 2016 and ends at close of business (4:30 pm) on May 17, 2016. Please send written comments to the DNREC office at 391 Lukens Drive, New Castle, DE 19720 to Meghan Crystall, Project Officer or Robert Newsome, Public Information Officer.

- Figure 1: Regional Topo Map
- Figure 2: Site Vicinity Map
- Figure 3: Site Base Map

MC:tlw; MC16014.doc; DE 1603 II B 8



Figure 1





Figure 3

## Glossary of Terms Used in this Proposed Plan

<b>Area of Concern (AOC)</b>	A discrete section of the Site representing the local bounds of contamination in soil or ground water.
<b>Brownfield Development Agreement (BDA)</b>	This legal agreement is between a potential developer of a Delaware-certified Brownfields Site and the DNREC. The developer agrees to investigate and cleanup a Brownfields property under the oversight of the Department in exchange for liability protection.
<b>Brownfield Investigation (BFI)</b>	Thorough environmental study of a site which includes 1) sampling of site environmental media and/or wastes on the property and 2) conducting a preliminary risk assessment using the data collected to determine the risk posed to human health and the environment.
<b>Certified Brownfield</b>	A Brownfield that DNREC has determined is eligible for partial funding through the Delaware Brownfields Program.
<b>Certification of Completion of Remedy (COCR)</b>	A formal determination by the Secretary of DNREC that remedial activities required by the Final Plan of Remedial Action have been completed.
<b>Contaminant of Concern (COC)</b>	Potentially harmful substances at concentrations above acceptable levels.
<b>Contaminated Materials Management Plan</b>	A written plan specifying how potentially contaminated material at a Site will be sampled, evaluated, staged, transported and disposed of properly.
<b>Exposure</b>	Contact with a substance through inhalation, ingestion, or direct contact with the skin. Exposure may be short term (acute) or long term (chronic).
<b>Final Plan of Remedial Action</b>	DNREC's adopted plan for cleaning up a hazardous site.
<b>Groundwater Management Zone</b>	A geographical area where DNREC restricts drilling for ground water because it is contaminated.
<b>Hazardous Substance Cleanup Act (HSCA)</b>	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.
<b>Human Health Risk Assessment (HHRA)</b>	An assessment done to characterize the potential human health risk associated with exposure* to site related chemicals.
<b>Preliminary Risk Assessment</b>	A quantitative evaluation of only the most obvious and likely risks at a site.
<b>Risk</b>	Likelihood or probability of injury, disease, or death.
<b>Risk Assessment Guidance for Superfund (RAGS)</b>	An EPA guidance document for superfund sites.
<b>Restricted Use</b>	Commercial or Industrial setting.
<b>US EPA</b>	United States Environmental Protection Agency.