



## **PROPOSED PLAN OF REMEDIAL ACTION**

South Walnut Street Right-of-Way  
Wilmington, Delaware  
DNREC Project No. DE-1725



May 2021

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

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Wilmington, Delaware  
DNREC Project No. DE-1725



**Approval:**

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

Approved by:

Qazi Salahuddin, Environmental Program Administrator  
Remediation Section

05/03/2021

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 is the South Walnut Street Right-of-Way (ROW) Site?**

The South Walnut Street Right-of-Way (ROW) Site is located along portions of the South Walnut Street in Wilmington, Delaware, totaling approximately 0.896-acre (Figure 1). A New Castle County tax parcel has not been designated for the Site at the publication of this document. The nearest intersection of South Walnut Street and New Sweden Street transect the Site. The Site consists of asphalt-paved roadways, mowed vegetation easements, and undeveloped mowed vegetated areas (Figure 2). The South Walnut Street is used for access to the business at 906 South Market Street and as a secondary road access to the Wilmington Sports Complex parking lots.

### **What happened at the South Walnut Street ROW Site?**

The Site historically consisted of the State of Delaware Department of Transportation (DelDOT) Right-of-Way (ROW) for the South Walnut Street since the area was initially development in the mid-1950s. The Site is located within an area where multiple environmental investigations with DNREC-RS oversight were conducted to assess contamination from historical land use as automotive salvage yards and repair centers. These HSCA Sites include 800-810 South Market Street (DE-0368), Don Wilson's Auto Parts (DE-1174), Wilson Properties (DE-1655), and South Garasches Lane (DE-1681) Operable Unit 2 (OU-2) to the northeast and east; and, former A.M. Domino Salvage Yard (DE-1173) to the south.

### **What is the environmental problem at the South Walnut Street ROW Site?**

A Brownfield Investigation was performed on the Site in August 2020. During the environmental investigation, ten (10) soil borings were advanced and a total of twenty (20) soil samples [ten (10) samples from the shallow soil interval (0-2 ft. bgs.) and ten (10) samples from the deep soil interval (<2 ft. above the water table)] were collected from the soil borings. Additional quality assurance (QA) and quality control (QC) samples were collected in accordance with the Standard Operating Procedures for Chemical Analytical Programs (SOPCAP) under the Hazardous Substance Cleanup Act (HSCA). The soil samples were screened at the DNREC-RS Screening Laboratory for Target Compound List (TCL) Volatile Organic Compounds (VOCs), TCL Semi-Volatile Organic Compounds (SVOCs), TCL

pesticides, polychlorinated biphenyl, and Target Analyte List (TAL) inorganics. Based upon the screening results, soil samples were selected for confirmation analyses at a HSCA-approved laboratory.

Based on the confirmation laboratory results, the following contaminants were identified above their respective HSCA Screening Levels (SLs) [Feb. 2020] for their respective media:

- Shallow Soils (0 to 2 ft. Bgs)
  - SVOCs - benzo(a)pyrene, benzo(b)fluoranthene, and dibenz(a,h)anthracene
  - Inorganics – antimony, lead, thallium, and zinc
- Deep Soils (<2 ft. Above the water table)
  - Tentatively Identified Compound (TIC) VOCs -1,3,5-trimethylbenzene, 1,2,3-trimethylbenzene
  - SVOCs - naphthalene
  - Inorganics – antimony, arsenic, cadmium, copper, lead, thallium, and zinc

No other VOCs, pesticides, or PCB homologs were detected above their respective HSCA SLs in the shallow or deep soils.

During the soil boring activities, three (3) of the locations were converted into monitoring wells later identified as DPW-1, DPW-2, and DPW-3. Three (3) groundwater samples and their associated QA/QC samples were collected and analyzed for TCL VOCs, TCL SVOCs, TCL Pesticides, TAL Inorganics (total and dissolved), and PCBs (EPA method 680) at a HSCA-approved laboratory. Based on the analytical results, the following contaminants were detected above their respective HSCA SLs:

- Groundwater
  - VOCs - ethylbenzene, 1,2,4-trichlorobenzene, and xylene
  - TIC VOCs – 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and 1,2,3-trimethylbenzene
  - SVOC - naphthalene
  - TIC SVOCs - 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and 1,2,3-trimethylbenzene
  - Total Inorganics – arsenic, barium, cobalt, iron, and manganese
  - Dissolved Inorganics – antimony, arsenic, barium, cobalt, iron, and manganese

No other VOCs, pesticides, or PCB homologs were detected above their respective HSCA SLs in the groundwater (total and dissolved).

Contaminant concentrations above their respective HSCA SLs were retained as Contaminants of Potential Concern (COPCs) for carcinogenic and non-carcinogenic (Hazard Index, HI) risk assessment to human health. A Human Health Risk Assessment (HHRA) was completed as part of the Brownfield Investigation report for multiple exposure scenarios including resident, indoor commercial worker, outdoor commercial worker, composite (indoor and outdoor) commercial worker, excavation worker, recreational user, and trespasser. According to the results of the HHRA, unacceptable HI risk was calculated for the child resident from exposure to the contaminants in the combined shallow and deep soil. Unacceptable carcinogenic and HI risk

was calculated from the exposure to unfiltered groundwater for both the residential and the indoor commercial worker exposure scenarios. Both carcinogenic and HI risk was acceptable to the other exposure scenarios.

The VOCs and TIC VOCs concentrations in the groundwater were used to calculate the potential risk from Vapor Intrusion (VI) in both residential and commercial exposure scenarios. According to the results from the US EPA's Vapor Intrusion Screening Level (VISL) Calculator, the carcinogenic and HI risks were acceptable for commercial use, however the carcinogenic and HI risk were unacceptable for residential users. Furthermore, an offsite structure was located within 100 feet from monitoring well DPW-1 (the well with the most detections and highest concentrations of VOCs and TIC VOCs). In accordance with the DNREC-RS Guidance for HHRA and several other lines of evidence, a soil gas investigation was warranted. The soil gas well (SG-1) was installed adjacent to DPW-1 and sampled in January 2021. The soil gas sample was collected and analyzed for VOCs. Based on the results, one (1) VOC, acrolein, was identified above its respective HSCA SL. An estimated concentration of Acrolein was detected only in the parent sample, and not in the duplicate, and was not detected in soil or groundwater at the Site. Therefore, the presence and origin of Acrolein is uncertain, however, the VI risk was revised using the VISL Calculator with the soil gas data for both residential and commercial exposure scenarios. Based on the results, unacceptable HI risk was calculated for the residential exposure scenario, but acceptable risk was calculated for the carcinogenic risk. Acceptable carcinogenic and HI risk were calculated for the indoor commercial worker exposure scenario.

### **What does the owner want to do at the South Walnut Street ROW Site?**

The Brownfield Developer intends to incorporate the Site into the adjoining Wilmington Sports Complex and will continue to serve as access roads to the associated outdoor soccer field and the sports complex.

### **What additional clean-up actions are needed at the South Walnut Street ROW Site?**

**DNREC proposes the following remedial actions for the Site, which need 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 Final Plan of Remedial Action.
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 Final Plan of Remedial Action. The Environmental Covenant must include the following activity and/or use restrictions:

[a.] Use Restriction. Use of the Property shall be restricted solely to those non-residential type uses permitted within Commercial, Manufacturing, or Industrial Districts;

- [b.] Interference with Remedy. There shall be no digging, drilling, excavating, grading, constructing, earth moving, or any other land disturbing activities on the Property at depths greater than [1 foot] [including any repair, renovation or demolition of the existing structures on the on the Property] without the prior written approval of DNREC;
  - [c.] 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; and
  - [e.] 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.
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. All soil gas and groundwater monitoring wells should be closed and abandoned in accordance with state and local regulations.
  6. A Remedial Action Completion Report must be submitted to DNREC within 60 days of the completion of the remedial actions required in this Proposed Plan.
  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-residential (commercial/industrial) purposes by recording the environmental covenant. 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 online at:

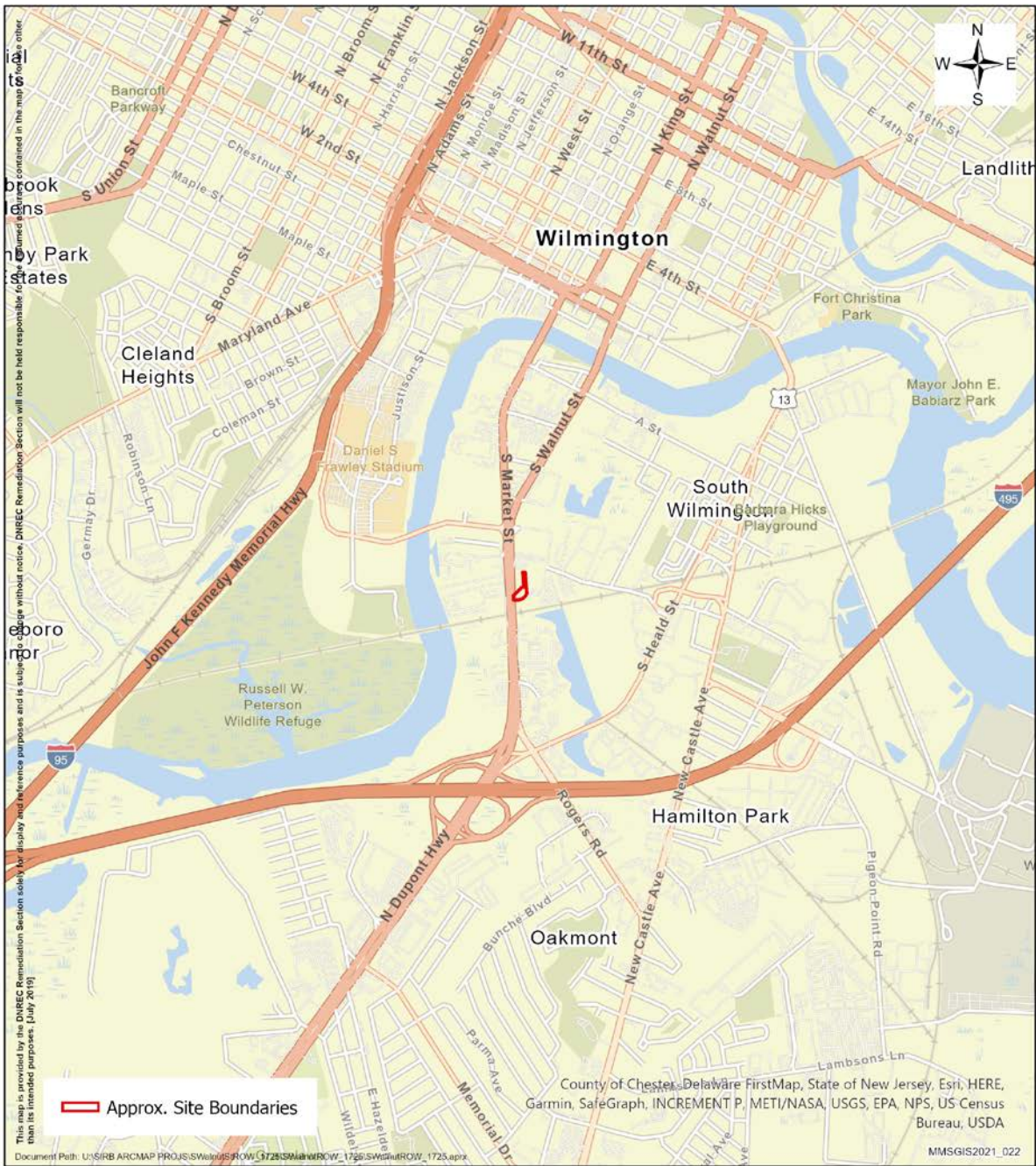
<http://www.nav.dnrec.delaware.gov/DEN3/Detail/FacilityDetail.aspx?id=10759751>

The 20-day public comment period begins on May 5, 2021, and ends at close of business (4:30 pm) on May 25, 2021. Please send written comments to Morgan McGee-Solomon, Project Officer via email to [RS\\_Public\\_Comments@delaware.gov](mailto:RS_Public_Comments@delaware.gov)

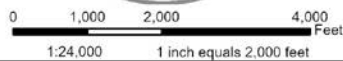
Figure 1: Location Map

Figure 2: Site Layout Map

MMS:slw  
MMS21019.doc  
DE 1725 II B 8



Data Sources: Site Boundaries [26 Feb. 2020 survey sheet 1 of 1 from Rummel, Klepper and Kahl, LLP]



**FIGURE 1**  
**DE-1725**  
**SOUTH WALNUT STREET**  
**RIGHT-OF-WAY**  
**LOCATION MAP**  
 WILMINGTON, DELAWARE





Data Sources: 2019 Aerial Imagery (New Castle County GIS); Site Boundaries (26 Feb 2020 survey sheet 1 of 1 from Rummel, Klepper and Kahl, LLP); Road Info (FirstMAP/DelDOT)



0 50 100 200 Feet  
 1:1,200 1 inch equals 100 feet

**FIGURE 2**  
**DE-1725**  
**SOUTH WALNUT STREET**  
**RIGHT-OF-WAY**  
**SITE LAYOUT MAP**  
 WILMINGTON, DELAWARE

## 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>	A hazardous substance identified during a remedy, which exceeds the HSCA screening level and contributes to the unacceptable site-specific risk.
<b>Contaminant of Potential Concern (COPC)</b>	A hazardous substance that may or may not be contributing to the unacceptable risk of the Site.
<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-RS restricts drilling for groundwater because of contamination.
<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>Polychlorinated biphenyls (PCBs)</b>	A synthetic, carcinogenic chemical formerly used in a wide variety of industrial applications but banned from most uses by the US EPA in 1979.
<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>Site Inspection (SI)</b>	Environmental study of a site which includes the sampling of soils, groundwater, surface water, sediment and/or wastes on the property, as appropriate. This evaluation is performed on behalf of the United States Environmental Protection Agency (U.S. EPA).
<b>RS</b>	Remediation Section of DNREC Division of Waste and Hazardous Substances, which oversees cleanup of sites that were contaminated as a result of past use, such as dry cleaners, chemical companies, etc.
<b>Toxic Substance Cleanup Act (TSCA)</b>	The federal statute requiring and regulating the cleanup of PCBs.
<b>US EPA</b>	United States Environmental Protection Agency