AMENDED FINAL PLAN OF REMEDIAL ACTION

427 WEST 7TH STREET

427 West 7th Street *November 2022*
New Castle, Delaware *DNREC Project No. DE-1574*

This Amended Final Plan of Remedial Action (Amended Final Plan) presents clean-up actions required by the Department of Natural Resources and Environmental Control (DNREC) to address environmental contamination at the 427 West 7th Street Site.

DNREC issued public notice of the Amended Proposed Plan of Remedial Action (Amended Proposed Plan) for the Site on November 2, 2022 and opened a 20-day public comment period. The Proposed Plan is attached. There were no comments from the public; therefore, the Amended Proposed Plan is adopted as the Amended Final Plan.

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

Qazi Salahuddin, Program Administrator
Remediation Section

12/01/2022
Date

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AMENDED PROPOSED PLAN OF REMEDIAL ACTION

427 WEST 7TH STREET
NEW CASTLE, Delaware
DNREC Project No. DE-1574

October 2022

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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Approval:
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Approved by:
Qazi Salahuddin, Environmental Program Administrator Remediation Section
11/2/2022
Date

What is the Amended Proposed Plan of Remedial Action?

The Amended 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.

When new information regarding the release of contamination or Site redevelopment is identified at a Site after the Proposed Plan or Final Plan has been issued, an Amended Proposed Plan must be issued to solicit public comment once again. The Potentially Responsible Party (PRP) is proposing a redevelopment plan that includes mixed use which is a combination of both commercial and residential land use for the entire Site. Previous remedial actions as required per the Final Plan for Operable Unit 1 (OU-1) included an institutional control to restrict land use to non-residential only. As the current PRP wished to redevelop the entire Site as mixed use consecutively, the land use restriction would need to be reevaluated. This Amended Proposed Plan of Remedial Action is necessary in order to redevelop the entire Site wholistically in order to for mixed use while protecting human health and the environment.

What is the 427 West 7th Street Site?

The 427 West 7th Street Site is located at 427 West 7th Street in New Castle, New Castle County, Delaware, and consists of one tax parcel (21-014.00-400), totaling approximately 4.3 acres (Figure 1). The nearest intersection to the Site is West 7th Street and Gray Street. The majority of the Site is developed with two commercial structures and associated asphalt-paved parking lot and driveways in the northern and central portions. The remaining portion of the Site consists of undeveloped wooded, scrub-shrub, and wetlands (Figure 2).

The Site was originally certified as a Brownfield in March 2014. A Brownfield Investigation (BFI) was completed for the Site in May 2015. During the Brownfield process, the Site was administratively separated into two Operable Units (OUs): Operable Unit-1 (OU-1) and OU-2 (Figure 3). OU-1 consisted of approximately 0.83 acres developed area in the northern portion of the Site that included the former automotive showroom structure. Currently, the former showroom structure is occupied by a retail liquor store. OU-2 consisted of approximately 3.53 acres and included a vacant former automotive repair facility, office space, and automotive parts retail and the undeveloped lands. This structure was damaged by a fire in January 2015 and has remained vacant since. The 2015 fire revealed that the Brownfield Developer had violated the terms and conditions of the Brownfield Development Agreement (BDA). As a result, DNREC terminated the BDA and required the former-Brownfield Developer to enter into the Voluntary Cleanup Program (VCP). The VCP Agreement was signed in April 2015 in order to complete the Remedial Investigation of the Site.

What happened at the 427 West 7th Street Site?

Historically, an automotive sales and repair facility operated on the Site since the early-1990s. Prior to development, the Site was vacant and undeveloped.

Why is an Amended Proposed Plan of Remedial Action necessary for 427 West 7th Street Site?

As previously mentioned, the Site was administratively separated into two OUs during the Brownfield Investigation Process in mid-2010s, and the Final Plans of Remedial Action (Final Plans) for OU-1 and OU-2 were initially advertised for their 20-day public comment periods in October 2014 and May 2015, respectively. The Final Plan for OU-1 initially documented that the Potentially Responsible Party (PRP) intended to operate a retail liquor store. The cleanup actions required for OU-1 in the Final Plan included establishing an institutional control through an Environmental Covenant that would prevent residential-type reuse, land disturbing activities, limiting groundwater withdrawal, and complying with both a Contaminated Materials Management Plan (CMMP) as well as a Long-Term Stewardship (LTS) plan. For OU-2, the Brownfield Developer intended to renovate the existing structure for retail and redevelop the remaining areas for mixed (commercial and residential) use. Cleanup actions required in the Final Plan for OU-2 included both engineering (e.g., cap) and institutional (e.g., Environmental Covenant) control measures. The significant difference between OU-1 and OU-2 was that there was a non-residential land use restriction for OU-1. As the current PRP wished to redevelop the entire Site as mixed use consecutively, the land use restriction would need to be reevaluated.

This Amended Proposed Plan of Remedial Action is necessary in order to redevelop the entire Site wholistically in order to allow for mixed (commercial and residential) use while protecting human health and the environment.

What is the environmental problem at the 427 West 7th Street Site?

A Remedial Investigation (RI) was completed on the entire Site in July 2022. Since data had been previously collected during the 2014 and 2015 investigations of the Site through the Brownfield Program, new and supplemental data was collected to reevaluate the entire Site for the new redevelopment plans. Eighteen (18) soil samples, four (4) monitoring wells, six (6) soil gas, two (2) sub-slab soil gas, two (2) ambient outdoor air samples, and three (3) sediment samples were collected from the Site during the 2022 RI.

During the 2014, 2015, and 2022 investigations, a total of thirty-one (31) shallow (0 to 2 ft.) soil samples and thirteen (13) deep (>2 ft. above the water table) soil samples were collected. Appropriate quality assurance (QA)/quality control (QC) soil samples were also collected during the sampling event. 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 biphenyls (PCBs) [EPA method 680], and Target Analyte List (TAL) inorganics. Based on the screening results, select soil samples were sent to a HSCA-approved laboratory for confirmatory analysis. All analytical results were compared to their respective February 2022 HSCA Screening Levels (SLs) and HSCA Ecological Surface Soil SLs (SSLs). According to the laboratory results, polycyclic aromatic hydrocarbons (PAHs) and a pesticide were detected in shallow soils above their

respective HSCA SLs. PAHs and total petroleum hydrocarbons (TPHs) were detected in both shallow and deep soil samples exceeding their respective HSCA SLs. And metals were detected in shallow soils above their respective HSCA Ecological SSLs. No other analytes were detected above their respective laboratory method detection limits (MDLs), HSCA SLs shallow and deep soil samples or Ecological SSLs in the soils.

During the 2022 sampling event, four (4) groundwater samples were collected from existing monitoring wells that were constructed during the previous environmental investigations and analyzed for TCL VOCs, TCL SVOCs, TCL pesticides, PCBs, and total and dissolved TAL inorganics. Appropriate QA/QC groundwater samples were also collected during the sampling event. According to the analytical results, total and dissolved metals, a pesticide, and Perfluorooctanoic Acid (PFOA) were detected above their respective HSCA SLs for groundwater. No other analytes were detected above their respective laboratory MDLs or HSCA SLs in the groundwater samples.

Eight (8) sediment samples were collected from the Site between the 2014 and 2022 environmental investigations. Appropriate QA/QC sediment samples were also collected during the sampling events. The sediment samples were screened at the DNREC-RS Screening Laboratory for TCL VOCs, TCL SVOCs, TCL pesticides, PCBs, and TAL inorganics. DNREC PCB Policies have changed since the 2014 environmental investigation, therefore, sediment samples collected in 2022 were analyzed per EPA method 1668 as the Site is located along a Clean Waters Act 303(d) impaired waterway. Based on the screening results, select sediment samples were sent to a HSCA-approved laboratory for confirmatory analysis. All analytical results were compared to their respective February 2022 HSCA SLs and HSCA Ecological Sediment Fresh SLs. According to the laboratory results from the 2014 and 2022 investigations, PAHs and metals were detected in sediment samples above their respective HSCA SLs. PAHs, metals, and pesticides were detected in the sediment samples above their respective HSCA Ecological SLs. No other analytes were detected above their respective laboratory MDLs, HSCA SLs or Ecological SLs in the sediment samples.

Four (4) surface water samples were collected from the drainage ditch and the on-site wetlands during the 2014 environmental investigation of the Site. Attempts to collect new surface water samples during the 2022 environmental investigation were unsuccessful as there was no media in either the drainage ditch or the on-site wetlands at the time of the field investigation. Therefore, the surface water results were used in this Remedial Investigation report. The 2014 surface water samples were collected and analyzed for TCL VOCs, TCL SVOCs, TCL pesticides, PCBs, and total and dissolved TAL inorganics. The surface water samples collected during the 2014 only analyzed PCBs to the EPA method 8082 which, based on current DNREC PCB Policies, would no longer be applicable for this Site and EPA method number 680 and 1668 would be more appropriate. Appropriate QA/QC surface water samples were also collected during the sampling event. All analytical results were compared to their respective February 2022 HSCA SLs and HSCA Ecological Surface Water Fresh SLs. According to the 2014 analytical results, total and dissolved metals, PCBs, PAHs, and pesticides were detected above their respective HSCA SLs for surface water. No other analytes were detected above their respective laboratory MDLs, HSCA SLs or Ecological SLs in the surface water samples.

Two (2) sub-slab soil gas samples, six (6) soil gas samples, and two (2) outdoor ambient air samples were collected from the Site during both the 2014 and 2022 environmental investigations. Appropriate QA/QC samples were also collected during the sampling events. The 2022 soil gas sample locations

were selected based on the locations of the proposed building footprint of the future redevelopment. All vapor samples were analyzed for VOCs. All analytical results were compared to their respective February 2022 HSCA Sub-slab and Soil Gas SLs. According to the results, Acrolein was detected in the soil gas samples. No other analytes were detected above their respective laboratory MDLs or HSCA SLs in the sub-slab soil gas, soil gas, or ambient air samples.

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 Phase II SI report for multiple exposure scenarios including resident, indoor worker, outdoor worker, composite (indoor and outdoor) worker, excavator, recreational, and trespasser to exposure of shallow soil, combined shallow deep soil, surface water, and sediment. Additionally, HHRA was calculated for the residential and indoor worker exposure scenarios to exposure to groundwater. According to the results of the HHRA, unacceptable carcinogenic risk was calculated for the following exposure scenarios to exposure to the specified media: lifetime resident exposure scenario to the shallow soil; lifetime resident and indoor worker to the total and dissolved groundwater; and lifetime recreator to the sediment. Unacceptable non-carcinogenic risk, hazard index (HI), was calculated for the following exposure scenarios to the specified media: child, adult, and lifetime resident to total and dissolved groundwater; indoor worker to total and dissolved groundwater; and child recreator and trespasser to the surface water. No other unacceptable carcinogenic or HI risk was calculated for the remaining exposure scenarios to their respective media.

The soil gas COPCs 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, unacceptable HI risk was calculated for both residential and commercial exposure scenarios. No unacceptable carcinogenic risk was calculated for either of the residential or commercial exposure scenarios. According to the report, the redevelopment plans indicate that the site conditions will be changed by raising the Site grade.

Contaminant concentrations above their respective HSCA Ecological SLs were retained as Contaminants of Potential Ecological Concern (COPECs) for an Ecological Risk Characterization (ERC) through reviewing exposure pathways. ERC includes risk estimation and risk description. Risk estimation is the integration of the exposure and toxicity assessments to determine the potential risk to a community from exposure to a COPEC. Risk estimation is quantified by using the quotient method to calculate an ecological screening quotient (ESQ). Based on the results, SVOCs, pesticides, and inorganic COPECs were detected above their respective ecological SLs in shallow soil, sediment, and surface water, while inorganic COPECs in the sediment and surface water presents a concern within the food web analyses.

What does the owner want to do at the 427 West 7th Street Site?

The Site will be redeveloped into mixed use for commercial and residential space.

What additional clean-up actions are needed at the 427 West 7th Street 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 Remedial Action Work Plan must be submitted to DNREC for approval within 60 days of the issuance of the Final Plan of Remedial Action.

2. The hot spot around sample location identified as OU-2 SB-2S must be delineated and removed to acceptable risk levels.

3. A physical barrier must be constructed to restrict human access to the on-site wetlands. Green remediation technologies should be implemented in order to provide ecological revitalization and/or infrastructure aligning with the goals of the Delaware Wildlife Action Plan.

4. The risk to vapor intrusion must be reevaluated after significant Site condition changes occur (e.g., elevation of the Site out of the floodplain) in order to reevaluate whether the Site condition changes had changed the current risk to human health from soil gas.

5. 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.

6. 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 [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-RS and DNREC Division of Water.

    [b.] Compliance with the Long-Term Stewardship Plan. All work required by the Long-Term Stewardship Plan must be performed to DNREC's satisfaction in accordance with the Plan; and

    [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.

7. 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.

8. The CMMP will be implemented upon its approval by DNREC.

9. A Long-Term Stewardship Plan (LTS) shall be submitted to DNREC for approval in accordance with the schedule set forth in the approved Remedial Action Work Plan. The LTS plan will detail: the site-inspection schedule to be followed in order to ensure the long-term integrity of the remedy.

10. The LTS Plan must be implemented within 60 days of its approval by DNREC.

11. 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.

12. 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 PRP intends to redevelop the Site into mixed use which will include a combination of residential and commercial uses.

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

The complete file on the Site including the Remedial Investigation Report and the various reports is available online at:

https://den.dnrec.delaware.gov/

The 20-day public comment period begins on November 2, 2022 and ends at close of business (4:30 pm) on November 22, 2022. Please send written comments to the DNREC Morgan McGee-Solomon, Project Officer via email to RS_Public_Comments@delaware.gov; or written letter to 391 Lukens Drive, New Castle, DE 19720

Figure 1: Location Map
Figure 2: Site Layout Map
Figure 3: Former Operable Unit Location Map

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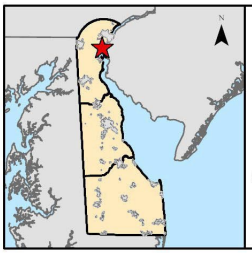
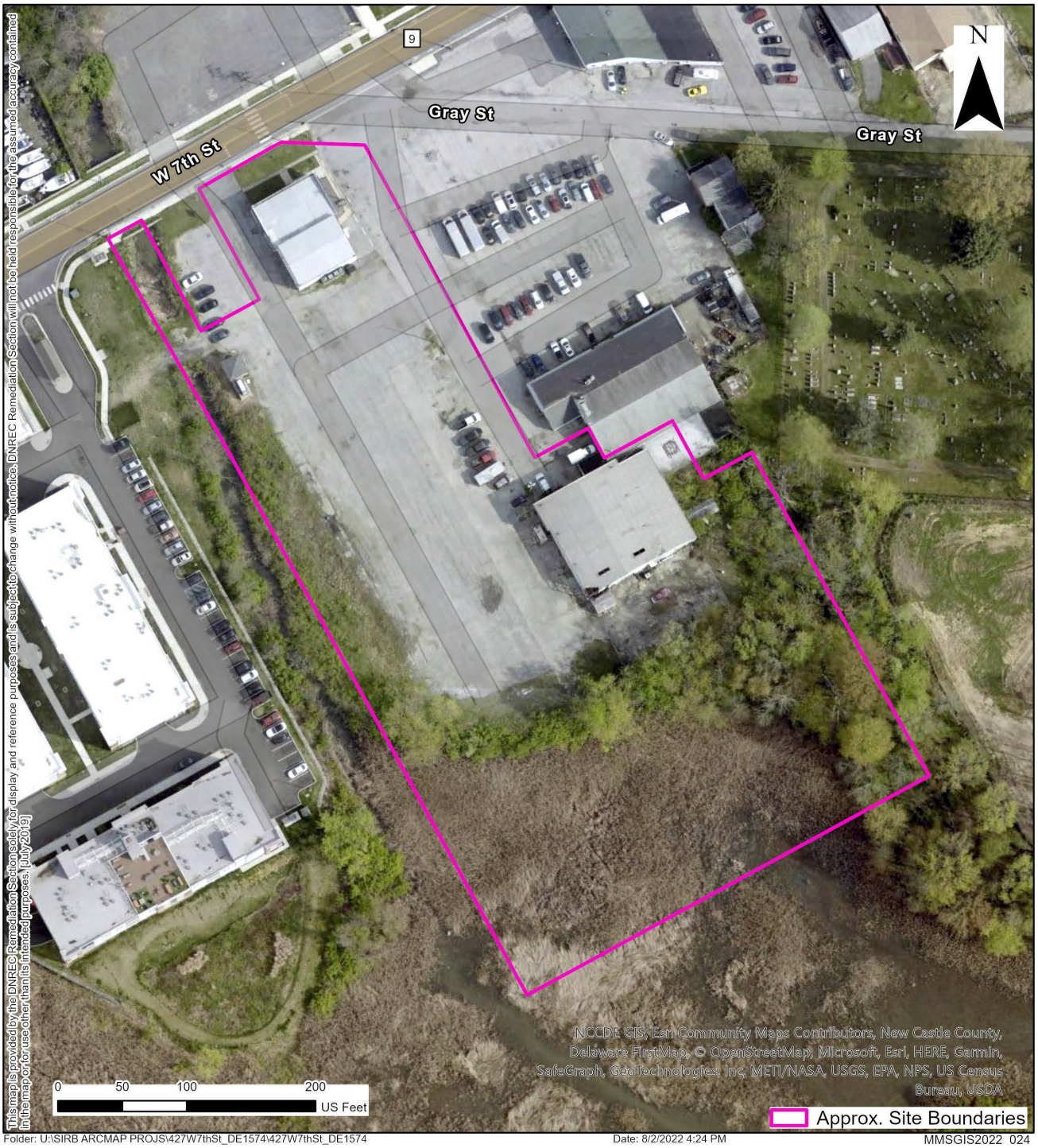


Sources: Approx. Site Boundaries [DNREC];

1:24,000 1 inch equals 2,000 feet

FIGURE 1
DE-1574
427 WEST 7TH STREET
SITE LOCATION MAP
NEW CASTLE COUNTY, DELAWARE



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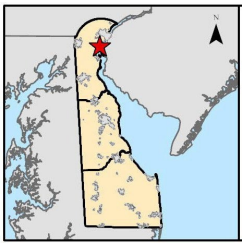

Sources. 2021 Aerial Imagery (New Castle County GISJ; Approx. Site Boundaries (DNREC);

DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
Remediation Section

11,200 1 inch equals 100 feet

FIGURE 2
DE-1574
427 WEST 7TH STREET
SITE LAYOUT MAP
NEW CASTLE COUNTY, DELAWARE

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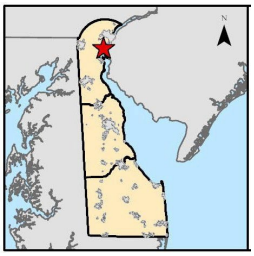

Sources. 2021 Aerial Imagery (New Castle County GISJ; Site and OU Boundaries (ONREC);

11,200 1 inch equals 100 feet

FIGURE 3
DE-1574
427 WEST 7TH STREET
FORMER OPERABLE UNIT
LOCATION MAP
NEW CASTLE COUNTY, DELAWARE

Glossary of Terms Used in this Proposed Plan

Brownfield Development Agreement (BDA)	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.
Brownfield Investigation (BFI)	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.
Certified Brownfield	A Brownfield that DNREC has determined is eligible for partial funding through the Delaware Brownfields Program
Contaminant of Concern (COC)	Potentially harmful substances at concentrations above acceptable levels.
Contaminated Materials Management Plan	A written plan specifying how potentially contaminated material at a Site will be sampled, evaluated, staged, transported, and disposed of properly.
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 adopted plan for cleaning up a hazardous site.
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.
Poly chlorinated biphenyls (PCBs)	A synthetic, carcinogenic chemical formerly used in a wide variety of industrial applications but banned from most uses by the US EPA in 1979.
Preliminary Risk Assessment	A quantitative evaluation of only the most obvious and likely risks at a site
Risk	Likelihood or probability of injury, disease, or death.
Risk Assessment Guidance for Superfund (RAGS)	An EPA guidance document for superfund sites
Restricted Use	Commercial or Industrial setting
RS	Remediation Section of DNREC, which oversees cleanup of sites that were contaminated as a result of past use, from dry cleaners to chemical companies
US EPA	United States Environmental Protection Agency