



Exhibit 15  
GM-OU-4 Public Hearing  
April 9, 2020

# DNREC Virtual Public Hearing

## Proposed Plan of Remedial Action for the General Motors Corp. Wilmington Assembly Plant Operable Unit 4 (Docket #2020-R-WH-0008)

Welcome. Any visual content that is part of this hearing will appear in this window. You can use your computer audio to listen to this hearing. Use the audio connections menu to turn audio on your computer on or off. Or you can dial-in to the hearing using the following information:

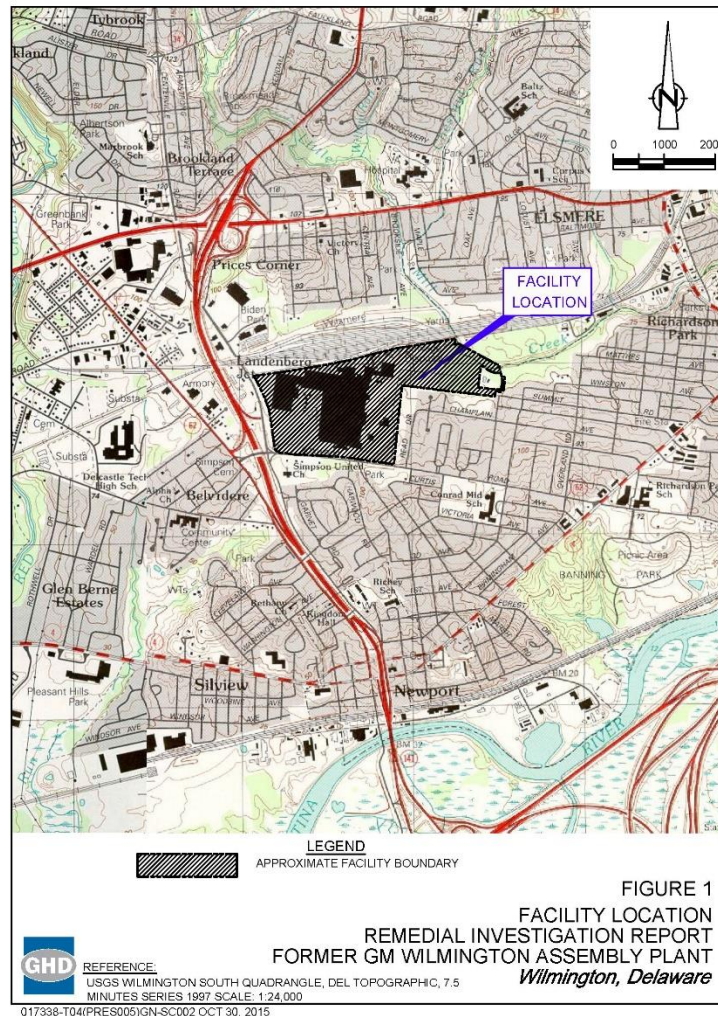
DIAL-in Number: 1-408-418-9388

Access code: **350 462 960**

No comments will be taken in person during this hearing. Comments will be accepted using the DNREC comment form, via email, or by USPS mail as noted on the hearing event page ([de.gov/dnrechearings](https://de.gov/dnrechearings))

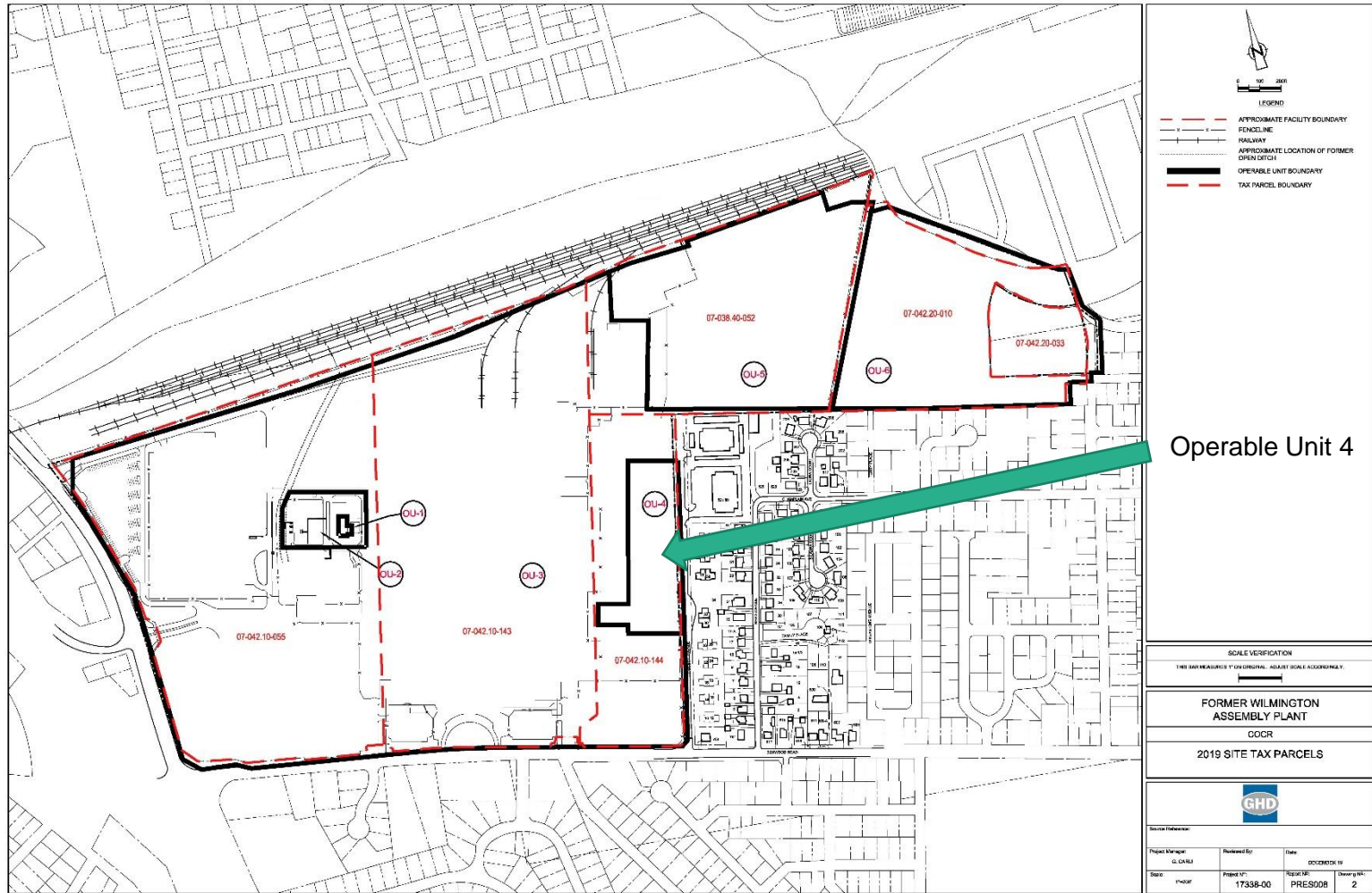


# Facility Location Map



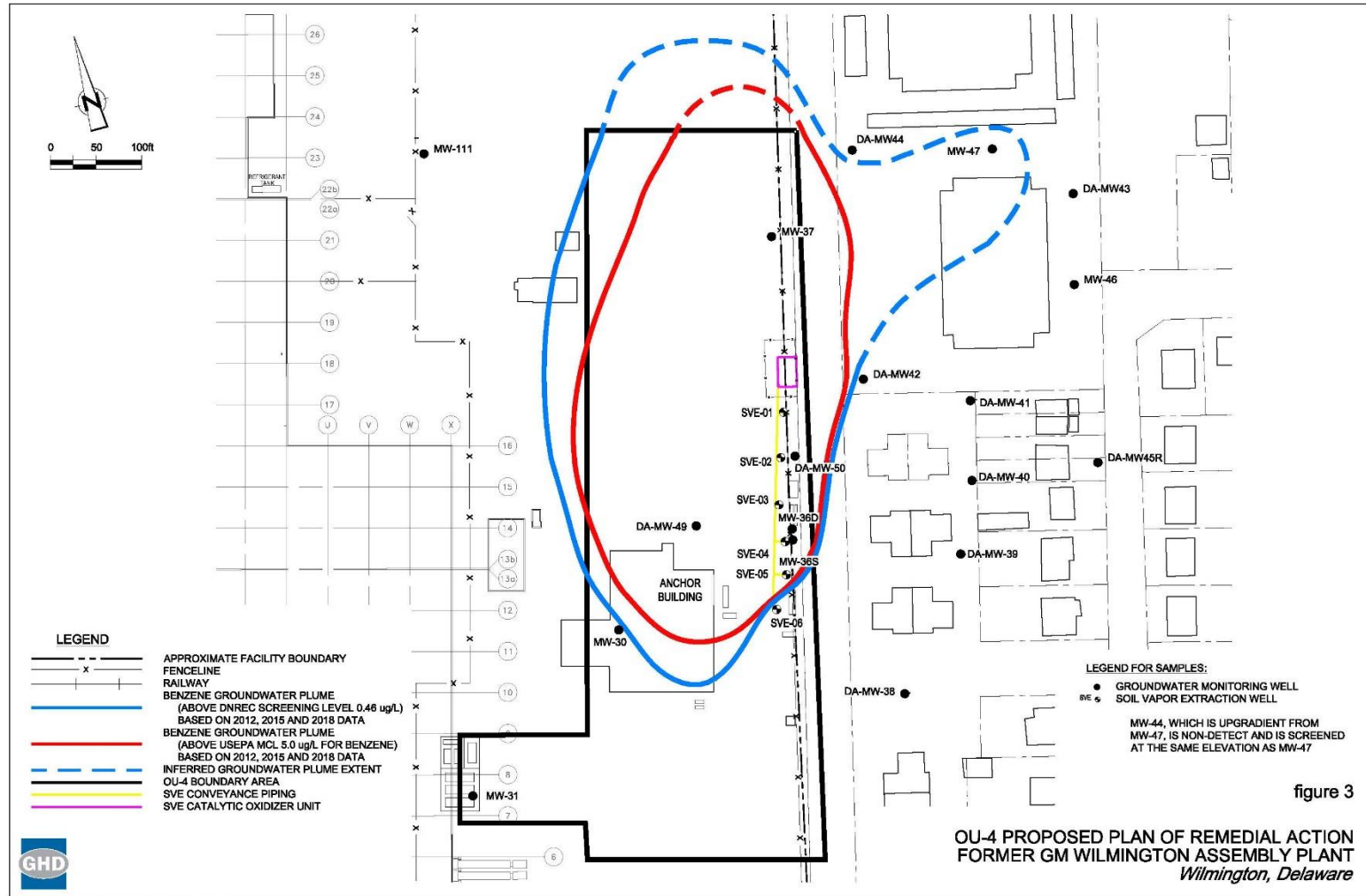


# Site Operable Units (OUs) Map



# GM OU-4 Public Hearing Presentation

## Impacted Groundwater Map in OU-4



17338-00(PRES010)-FIGURE 3 FEB 21/2020

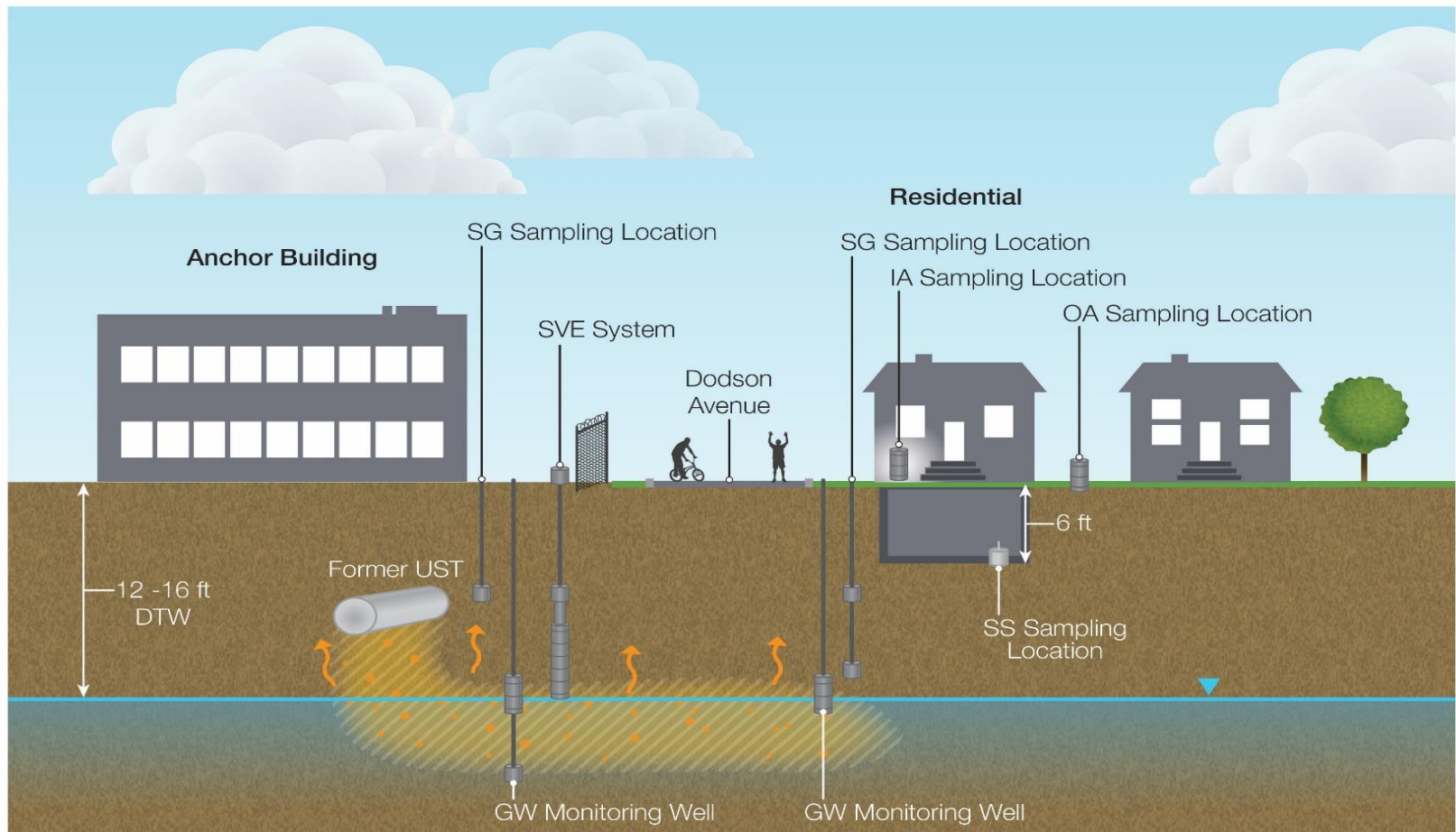




# Types of Sampling Conducted

- This image depicts the types of samples collected to evaluate impacts from groundwater contamination and vapor intrusion (VI).

## RACER Wilmington Assembly Plant - OU 4





## Table Showing Types & Number of Samples Collected for all OU-4 Investigations

Summary Table of Samples Collected		
Soil	Groundwater	Air
15 soil borings	7 <b>Onsite</b> monitoring wells	13 <b>onsite</b> soil gas locations
	10 <b>onsite</b> vertical aquifer samples (VAS)	19 <b>offsite</b> soil gas locations
	10 <b>offsite</b> monitoring wells.	8 <b>offsite</b> sub-slab soil gas locations
	4 <b>offsite</b> VAS	8 <b>offsite</b> indoor air locations
		6 <b>offsite</b> ambient air locations
		35 <b>offsite</b> passive soil gas locations



# Environmental History Timeline

- **November 28, 1990**- No further action (NFA) letter from DNREC Tanks Section.
- **July 2014**- Vapor Intrusion and Groundwater Delineation Investigation Report-Dodson Avenue Offsite Investigation (OU-4). (The full report can be found in Appendix B of the July 17, 2015 Remedial Investigation Report.)
- **July 18, 2014**- Focused Feasibility Study-Interim Vapor Phase Remediation
- **July 17, 2015** - Remedial Investigation Report
- **July 27, 2019**- Supplemental Vapor Intrusion Risk Evaluation OU-4
- **August 5, 2019**- Soil Vapor Extraction System Report OU-4
- **January 16, 2020**- Feasibility Study for OU-4



# Investigation History

## Underground Storage Tank Removal

- On March 1990, 12 Underground Storage Tanks (USTs) were removed which were adjacent to Anchor Motor Freight building.
- The USTs contained gasoline, diesel, waste oil, heating oil and engine oil.
- Contaminated soil was reportedly land-farmed and then disposed offsite.
- Tank management section issued a No Further Action under tank regulations on November 1990.





# Investigation Results-

## Groundwater Contamination Results:

- Volatile Organic Compounds (VOCs): 1,2,4-trimethylbenzene (1,2,4-TMB), ethylbenzene, benzene and xylene
- Semi-volatile Organic Compounds (SVOC): naphthalene
- Non-Aqueous Phase Liquid (NAPL) on-site only
- Dissolved Contaminants over drinking water standards has migrated a few hundred feet offsite along the northeast groundwater flow direction.
- However, there are no drinking water wells within 1 mile of the former GM facility.
- Groundwater presents potential drinking water risk to onsite commercial and offsite residential users above cancer risk of  $1 \times 10^{-5}$  (1 in 100,000) and/or non-cancer risk Hazard Index (HI) of 1. These are Hazardous Site Cleanup Act (HSCA) risk standards.



# Investigation Results (continued)

## Vapor Intrusion Results

- 1,2,4-TMB, Benzene, ethylbenzene in indoor air
- Results from 4 monitoring events at the townhouse show one of the following conditions in the townhouses:
  - No indoor Air Exceedances
  - No paired sub-slab/indoor air exceedances
  - Indoor air exceedances but also ambient air exceedance of the same chemicals
- As a result, no risk to the townhouses from vapor intrusion.
- Vapors potentially migrating toward townhouses.
- Supplemental Vapor Intrusion Risk Evaluation at OU-4 was performed included evaluation of existing data, and use of multiple lines of evidence including evaluation of vertical separation, calculations of indoor air concentrations, and collected data.
- As a result, no risk to the townhouses from vapor intrusion.



# Sources of Pollution to Indoor Air

## Sources Include:

- Paint and lacquers
- Paint strippers
- Cleaning supplies
- Moth repellents
- Air fresheners
- Candles

## List of Resources about Indoor Air Pollution

**USEPA Website: Care for Your Air: A Guide to Indoor Air Quality**

**<https://www.epa.gov/indoor-air-quality-iaq/care-your-air-guide-indoor-air-quality>**

**Delaware Department of Health and Social Services (DHSS) Website-**

**<https://www.dhss.delaware.gov/dph/dpc/housechems.html>**



## Interim Action

- In order to prevent any potential migration of vapor towards the townhouses, a decision was taken to perform Interim Action.
- In an abundance of protectiveness passive sub-slab venting were installed in the townhouses, Units 44 and 46, as they were being built. Other townhouses already constructed.
- Focused Feasibility Study (FFS) to select a remedy for Interim Action was conducted to address this potential vapor migration
- Soil Vapor Extraction (SVE) was selected for the Interim Action and it started in March 2015.
- Weekly monitoring and maintenance of the SVE system performed during the operation.



## Interim Action (Continued)

- The SVE operated from March 30, 2015 to June 15, 2018 then periodically until August 9, 2018.
- The SVE system removed 8,000 pounds of hydrocarbons from OU-4.
- SVE system was effective and decreased NAPL from 4 inches to not observed on groundwater.
- Recovery of product stalled over time.
- Results were that SVE had recovered as much as was possible.
- Details of the SVE system operation can be found in August 5, 2019- Soil Vapor Extraction System Report OU-4





## Feasibility Study for OU-4 to Select Final Remedy-

- The FS Included re-sampling of offsite sub-slab, indoor air, ambient (outdoor air) and soil gas for VOCs.
- The resampling only showed benzene in the indoor air of two of the townhouses. However, benzene not in sub-slab and within background range for US. As a result, there is no risk above standards from Vapor Intrusion for the offsite residents.
- The FS evaluated five remedial actions
  - 1) Excavation/Disposal 2) SVE 3) Chemical Treatment 4) Thermal Treatment 5) Passive Wall
- SVE was determined to be most effective remedy.
- However, since SVE removal was complete, no vapor intrusion risk is present and , groundwater is not impacting drinking water wells and is degrading within several hundred feet, no **active** remedy is required.
- The Remedy Selected are:
  - restrict onsite groundwater use and future use of Site to non-residential
  - Implement Contaminated Material Management Plan (CMMP) to protect workers
  - Long-Term Stewardship Plan (LTS) to monitor groundwater
- SVE to remain in place in the event that monitoring of groundwater conditions identifies a potential risk for onsite or offsite receptors.



# Proposed Plan- Proposed Remedy-

**1)** 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 90 days of the issuance of the Final Plan of Remedial Action. The environmental covenant will cover New Castle County tax parcel 07-042.10-144. The restrictions will cover OU-1 to OU-5 even if the restrictions are not necessary for every OU. 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.] 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;

[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.] Compliance with the Long Term Stewardship Plan. For OU-2 and OU-3 and OU-5, all work required by the Long Term Stewardship Plan must be performed to DNREC's satisfaction in accordance with the Plan.



## Proposed Plan- Proposed Remedy (Cont.)-

- 2) **A Long-Term Stewardship Plan (LTS)** updated with OU-4 requirements shall be submitted to DNREC for approval within 60 days of the end of the Final Plan of Remedial Action appeal period. The LTS plan will detail the groundwater monitoring program to ensure that groundwater concentrations in OU-4 are not increasing to a level that would present a risk to offsite receptors.
- 3) **A Contaminated Materials Management Plan (CMMP)** updated with OU-4 requirements shall be submitted to DNREC within 60 days of the issuance of the Final Plan of Remedial Action appeal period. The CMMP will provide guidance to enable construction workers to safely handle any potential contaminated soil, prevent soil migration (soil and air borne dust) and groundwater at the Site.
- 4) **Remedial Action Completion Report** must be submitted to DNREC within 60 days of the completion of the remedial actions required in this Proposed Plan.
- 5) **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.



# Contact Information

[Rick.Galloway@delaware.gov](mailto:Rick.Galloway@delaware.gov)

302-395-2614



# **DNREC Virtual Public Hearing**

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(Docket #2020-R-WH-0008)**

Thank you for joining us. We will accept comments on this matter through April 24, 2020.

You can submit your comments using the DNREC comment form,  
via email, or by USPS mail, as noted on the hearing event page.

A recording of this hearing as well as a full, verbatim transcript, will be posted as they  
become available.

For more information, find the event page for this hearing on the DNREC Public  
Hearings page ([de.gov/dnrechearings](https://de.gov/dnrechearings)).