

**Fifth Ward/Kashmere Gardens UPRR Site  
(former Houston Wood Preserving Works)**

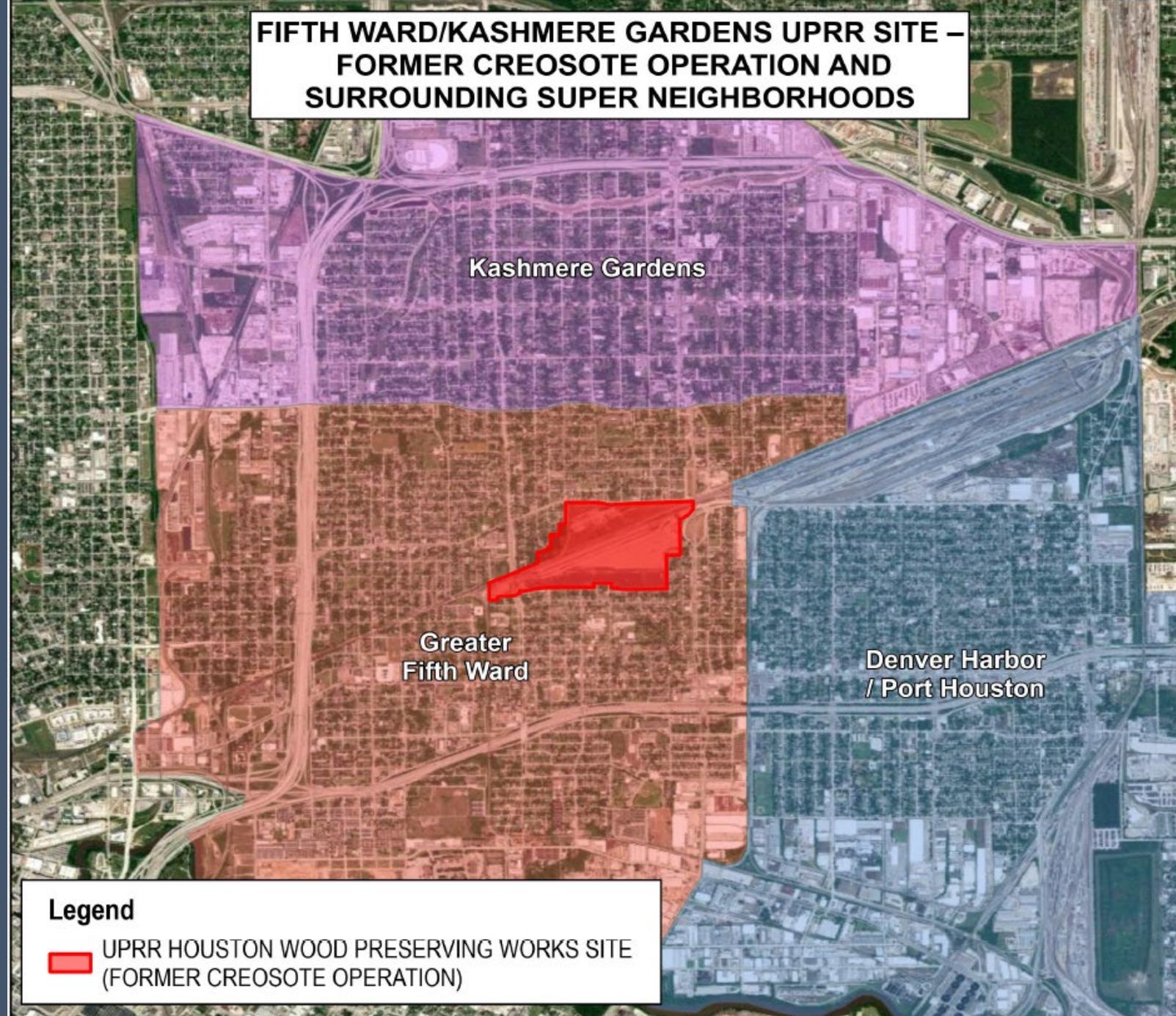
**Community Meeting**

**March 7, 2024**

# AGENDA

- **Why is EPA involved?**
- **Site Update**
  - **Vapor Intrusion Investigation**
  - **Background Sampling**
  - **Access Agreements**
- **Anticipated Schedule**
- **Ongoing Community Engagement**
- **Informal Q&A**

**FIFTH WARD/KASHMERE GARDENS UPRR SITE –  
FORMER CREOSOTE OPERATION AND  
SURROUNDING SUPER NEIGHBORHOODS**



**US EPA  
REGION 6**



SOURCE: WORLD IMAGERY; ESRI

**Legend**

 UPRR HOUSTON WOOD PRESERVING WORKS SITE  
(FORMER CREOSOTE OPERATION)

DATE	PROJECT NO	SCALE
OCTOBER 2023	20600.012.001.1526	AS SHOWN

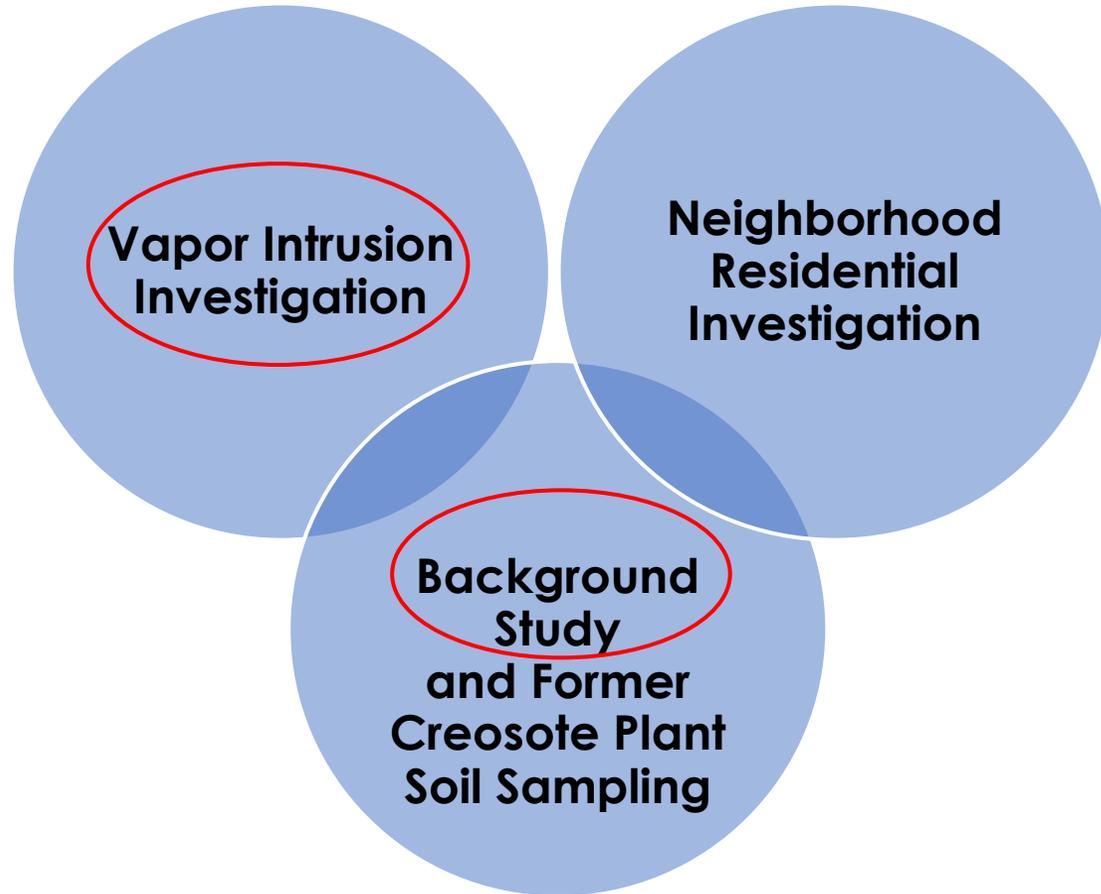
# Why is EPA involved?

- **Your Voice**
  - Elected officials, public health agencies, community organizations
- **Community Health**
  - Texas Occurrence of Cancer Assessment
  - City of Houston Sampling
- **EPA's Commitment to this Community**
  - Community Engagement
  - Environmental Justice
  - EPA Authority: CERCLA and RCRA

# EPA's Role

- 1) Direct and oversee the investigation;
- 2) Track contamination from the former creosote operation and determine its extent in the neighborhood;
- 3) Determine if there is a risk to people's health and if cleanup is needed;
- 4) Ensure meaningful community engagement

# Site Update –Main Investigation Activities





# Vapor Intrusion Investigation: Update

# What is vapor intrusion?



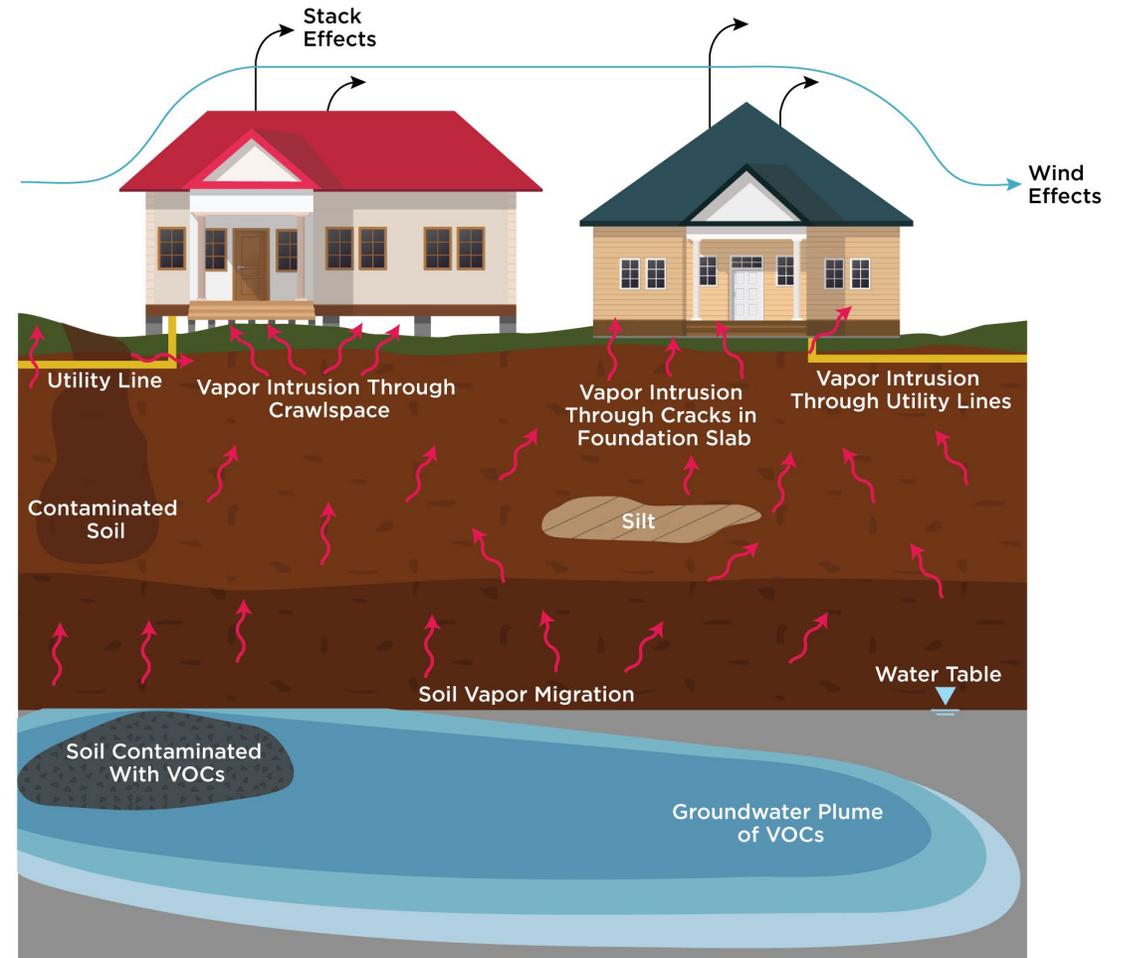
## What is vapor intrusion?

Vapor intrusion (VI) occurs when volatile chemicals in soil and groundwater enter and build-up inside buildings.

Volatile chemicals are a class of chemicals that evaporate easily and form a vapor in the air. Example: Gasoline

## What is a vapor pathway?

The underground route that volatile chemicals follow to enter buildings.



# What are the phases of vapor intrusion samples?



- **Phase 1 Samples (recently complete):**

- Groundwater Samples
- Soil Gas Samples
- Sewer Samples

- **Phase 2 Samples (if needed):**

- Sub slab and/ or crawlspace

- **Phase 3 (if needed):**

- Indoor air



# How does EPA evaluate VI data?

- EPA uses **Vapor Intrusion Screening Levels (VISLs)** to evaluate volatile chemicals in groundwater, sewers and soil gas
- EPA VISLs help EPA know when further investigation might be needed
- EPA VISLs are very LOW numbers
- EPA VISLs are not cleanup levels

# Example: VI Soil Gas Sample Data

Chemical in Soil Gas	Lab Detection Limit ( $\mu\text{g}/\text{m}^3$ )	EPA Vapor Screening Level ( $\mu\text{g}/\text{m}^3$ )	Sample Results ( $\mu\text{g}/\text{m}^3$ )
<b>Benzene</b>	0.319	12	14.8
<b>Toluene</b>	0.377	17,400	2.48
<b>Ethylbenzene</b>	0.109	37	7.77
<b>Xylene</b>	0.109	348	79.5

# Example: VI Groundwater Sample Data

Chemical in Groundwater	Lab Detection Limit (µg/L)	EPA Vapor Screening Level (µg/L)	Sample Results (µg/L)
<b>Benzene</b>	0.04	1.59	6
<b>Toluene</b>	0.02	19,200	ND
<b>Ethylbenzene</b>	0.1	3.49	36
<b>Xylene</b>	0.19	38.5	0.28

# Deciding Next Steps

- If samples DO NOT have creosote related chemicals above the EPA screening levels (VISLs), then a second round of samples will be taken during the summer at select locations.
- If samples DO have creosote related chemicals that are above the EPA screening levels (VISLs), then **EPA will determine if more sampling is needed.**

# What makes Vapor Intrusion COMPLICATED?

- ▶ Outdoor air has volatile chemicals found in creosote but caused by other sources, like vehicles, industrial pollution and fuel spills. This outside air gets into houses and even the soil.
- ▶ In Houston, several of those volatile chemicals are found at *higher levels* in the outside air than the Environmental Protection Agency's (EPA's) Vapor Intrusion Screening Levels.



# Vapor Intrusion Investigation – What's Next



- EPA will review and evaluate validated VI sample data
- EPA will decide if/where Phase 2 VI sampling is needed
- EPA will share vapor intrusion investigation results at a community mtg in April



Groundwater Monitoring Well Installation  
Liberty Rd



Soil Gas Probe Installation – Liberty Rd



Outdoor Air Sampling – Liberty Rd.



Groundwater Monitoring Well Sampling –  
Liberty St and Lavender St.



Sewer Sampling - Liberty Rd and Wylie St./Clementine St.



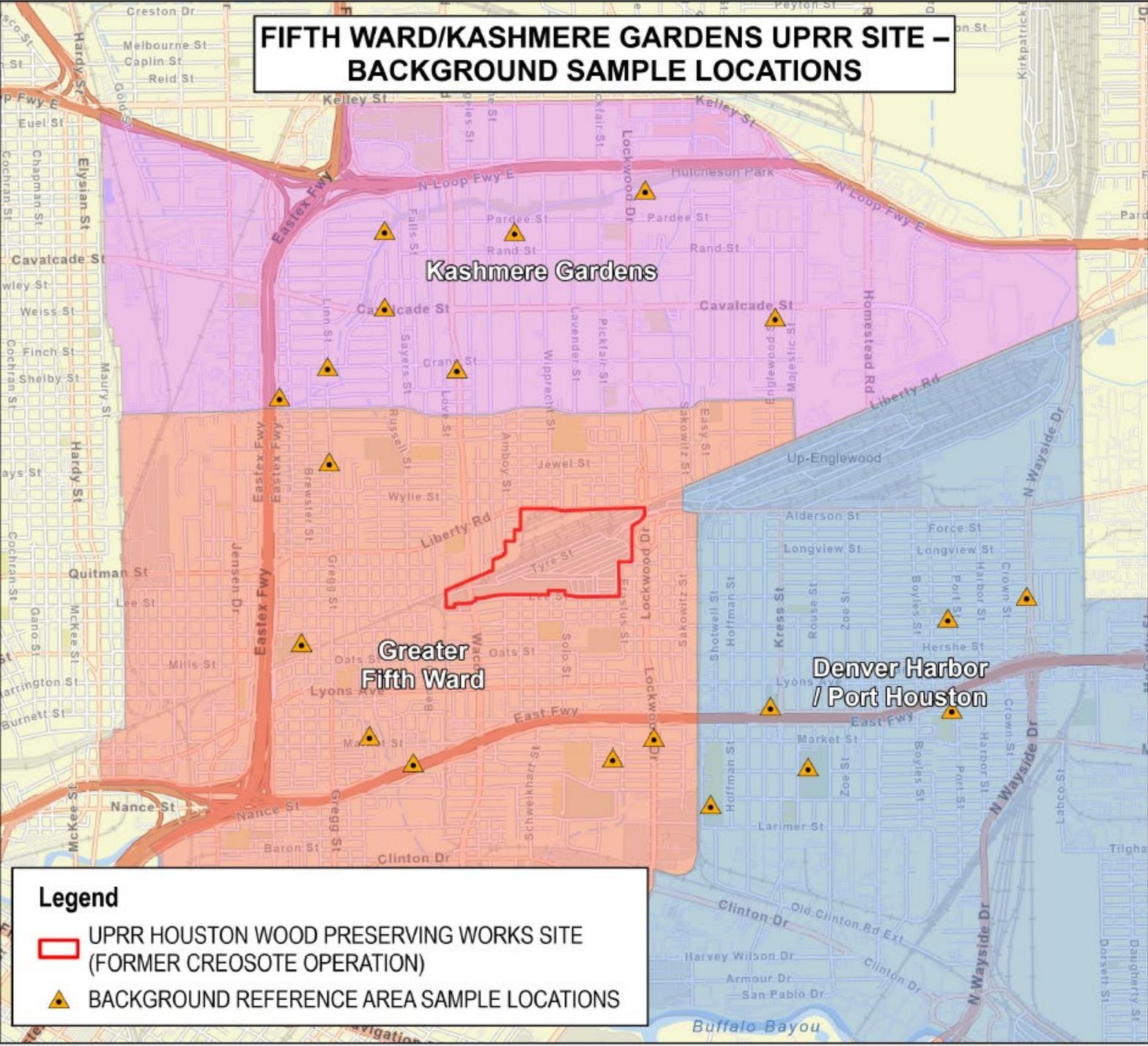
Soil Gas Sampling – Lelia St.

# Background Soil Sampling

# Background Soil Sampling

- Collected between Feb 28-March 8
- From 20 locations not impacted by the former creosote plant
- Background samples provide context:
  - How do samples results collected on and near the former creosote plant differ from those in the general environment?

# FIFTH WARD/KASHMERE GARDENS UPRR SITE – BACKGROUND SAMPLE LOCATIONS



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**Legend**

- UPRR HOUSTON WOOD PRESERVING WORKS SITE (FORMER CREOSOTE OPERATION)
- ▲ BACKGROUND REFERENCE AREA SAMPLE LOCATIONS



SCALE IN FEET

SOURCE: WORLD IMAGERY, ESRI

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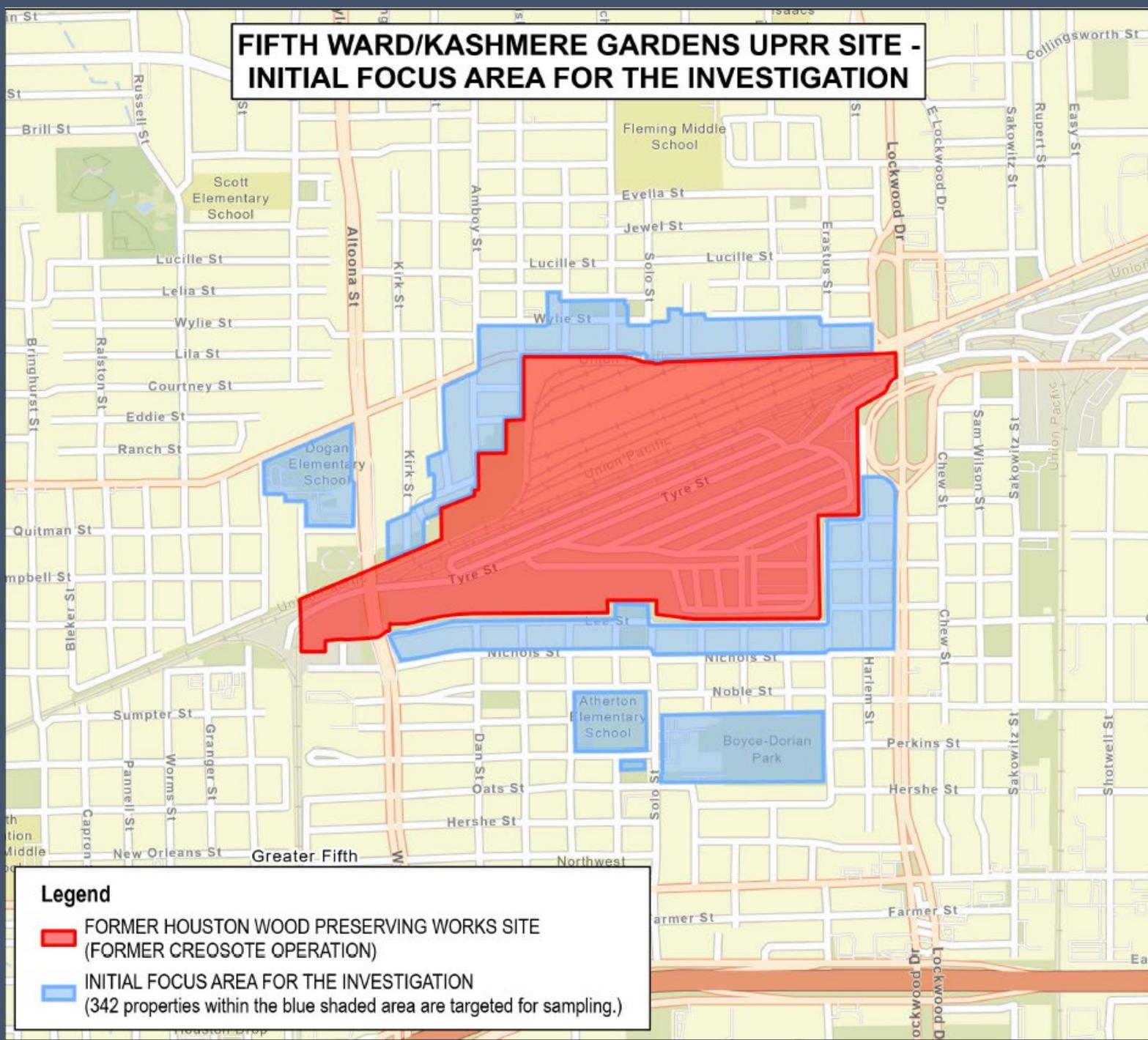
Background Soil Sampling - Nieto Park (BRA04)

# Access Agreements for Private Property Sampling



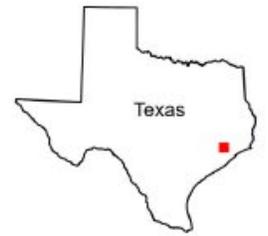
- Under EPA direction, UPRR is asking property owners to sign access agreements
- UPRR must have a signed access agreement to sample a property.
- Property owners will get sample results.

**FIFTH WARD/KASHMERE GARDENS UPRR SITE - INITIAL FOCUS AREA FOR THE INVESTIGATION**



**Legend**

- FORMER HOUSTON WOOD PRESERVING WORKS SITE (FORMER CREOSOTE OPERATION)
- INITIAL FOCUS AREA FOR THE INVESTIGATION (342 properties within the blue shaded area are targeted for sampling.)



**342 properties within the blue shaded area are targeted for sampling.**

For EPA verification of targeted properties, please contact:  
 Adam Weece  
[Weece.adam@epa.gov](mailto:Weece.adam@epa.gov)

214-665-2264

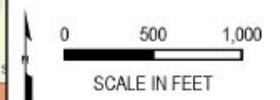
- Or -

Dan Zahner  
[Zahner.dan@epa.gov](mailto:Zahner.dan@epa.gov)

214-665-3123



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SOURCE: WORLD IMAGERY; ESRI

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# Anticipated Schedule

Timing	Activity
September 2023- Ongoing	UPRR obtains access agreements for private property sampling
Nov 2023-Aug 2024	Field investigation activities and sampling. Validated results will be provide to property owners for their property when available. <ul style="list-style-type: none"><li>➤ Vapor Sampling: Nov '23-Feb '24</li><li>➤ Background Sampling: Feb '24-March '24</li><li>➤ Neighborhood Soil Sampling and Onsite Sampling: April '24-Aug '24</li></ul>
Late Summer 2024	EPA uses sampling data to determine if there is a risk from HWPW site contamination EPA produces human health risk assessment UPRR produces Removal Site Evaluation report EPA determines if cleanup is necessary based on risk to people's health

# Ongoing Community Engagement

- Monthly “office hours” (EPA in the community to speak 1:1 with residents)
- Regular communication and updates via EPA's UPRR HUB Website
- Community meetings throughout the investigation

# EPA Contact Information

## **EPA Project Manager**

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## **EPA Community Involvement Coordinator**

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Site updates and information can be found at:

<https://fifth-ward-kashmere-gardens-uprr-epa.hub.arcgis.com/>



# Informal Q&A Session

Site updates and information can be found at:

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