



Montrose and Del Amo Superfund Sites Update

December 5, 2024 5:00 to 7:00 pm PST

Reminders:

- Join audio if you have not already.
- Live Spanish language translation is available.
- You are automatically muted.
- You will be able to ask questions verbally and in writing.
- This meeting will not be recorded.

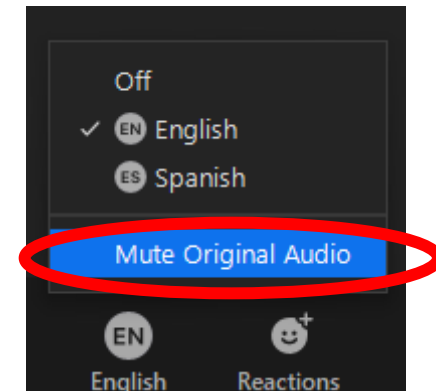
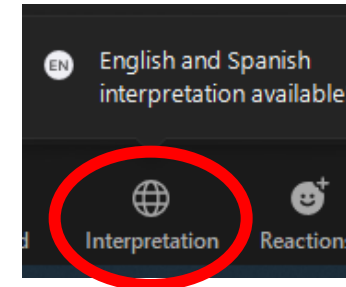
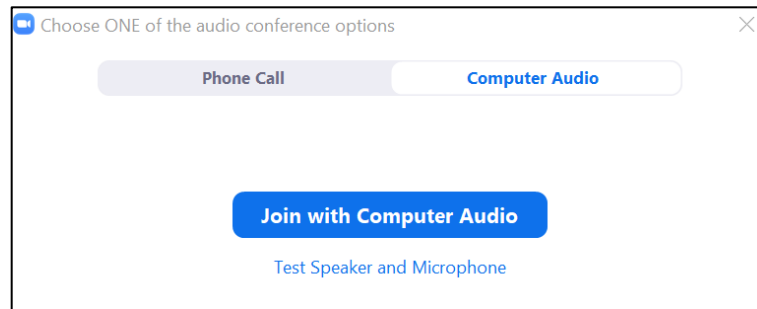
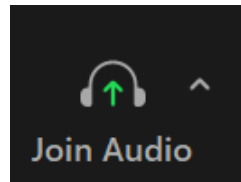
Welcome! The live event will start shortly.

¡Bienvenido! El evento en vivo comenzará en breve.

Audio and Interpretation Instructions

Please use controls to connect to audio as desired.

Utilice los controles para conectarse al audio como desee.

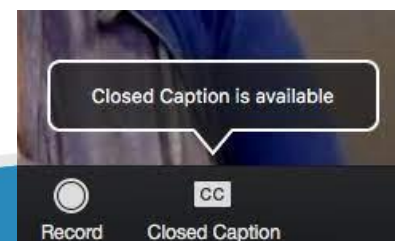
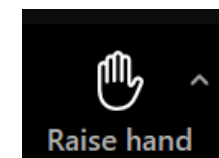
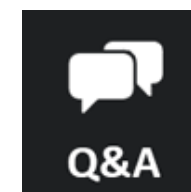
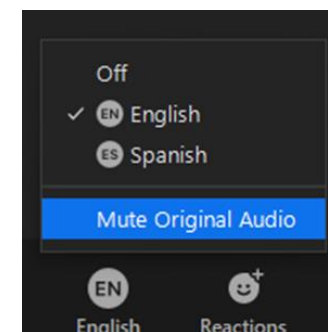
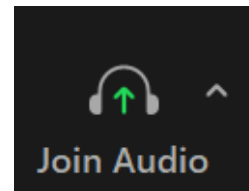


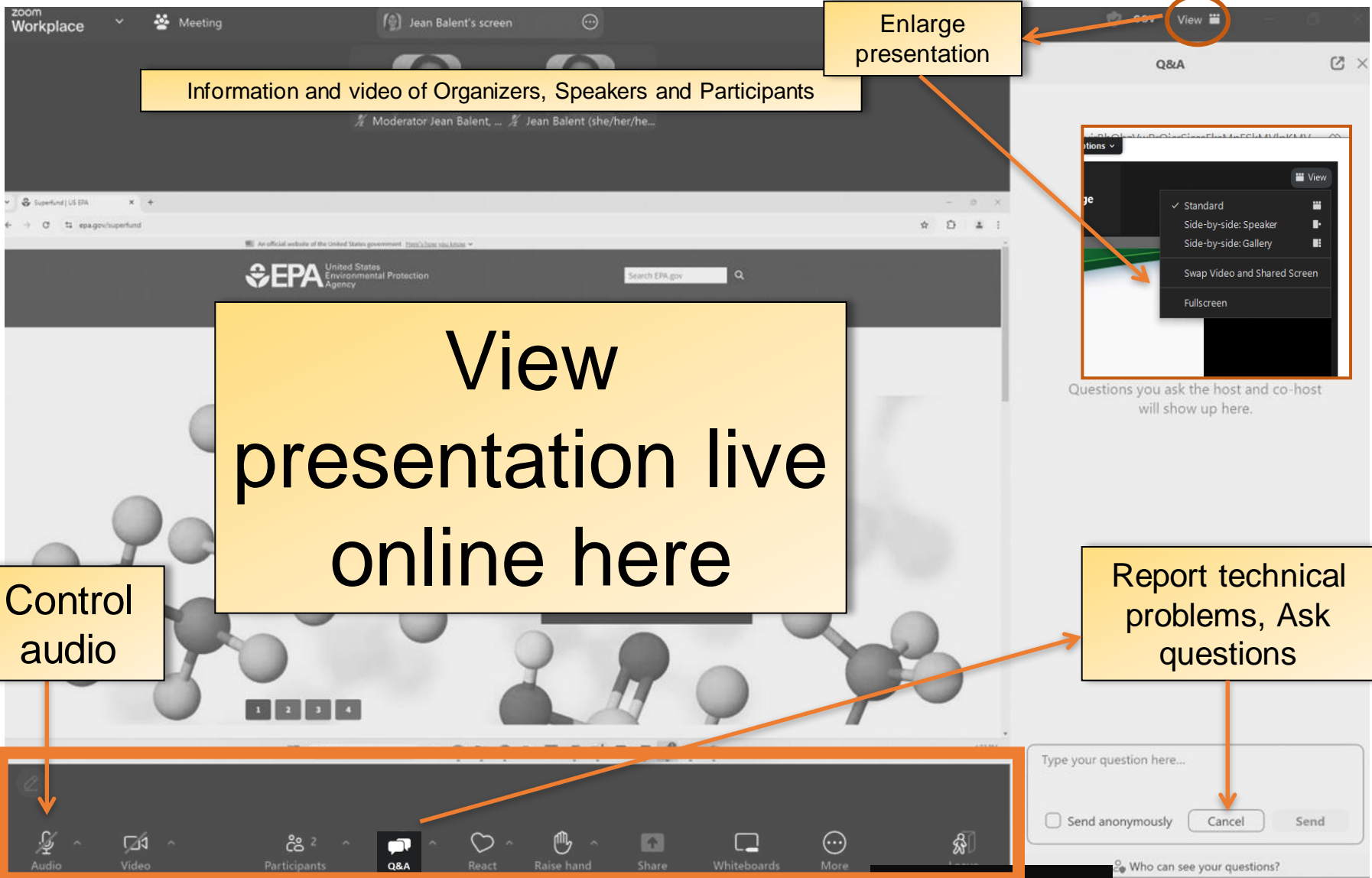
You **MUST** select your preferred language under “Interpretation”.
For Spanish listeners, it is recommended to “Mute Original Audio”.

Debe seleccionar su idioma preferido en "Interpretación". Se recomienda "Silenciar audio original".

Participation Instructions

- Join us live via Zoom (use Zoom app or browser)
- Audio is available online with your device or by telephone.
 - **Interpretation** available in Spanish for those listening via online audio in Zoom
 - Hay **interpretación** en Español disponible.
- Optional dial in **669-254-5252** Meeting ID **160 381 9552**
- Use **Q&A** to report technical problems or ask questions.
Later in session attendees may verbally share questions with device mic or telephone by raising your hand in Zoom when instructed
- **Closed captioning/Live transcription** is available.





Information and video of Organizers, Speakers and Participants

Enlarge presentation

View presentation live online here

Control audio

Report technical problems, Ask questions

Enable live computer-generated closed captions

Select language to listen (English or Spanish)

Agenda

1. Site Overview – *Russell Mechem*
2. Montrose and Del Amo dual site groundwater – *Sarah Kell*
3. Montrose dense non-aqueous phase liquids (DNAPL) – *Sarah Kell*
4. Montrose historical stormwater pathway – *Sasha Vanley*
5. Montrose Jones Chemical, Inc. – *David Britt*
6. Del Amo soils and non-aqueous phase liquids (NAPL) – *Tu Nguyen*
7. Moderated Q&A

Montrose / Del Amo Superfund Sites Overview

Russell Mechem

Montrose/Del Amo Overview

Layout

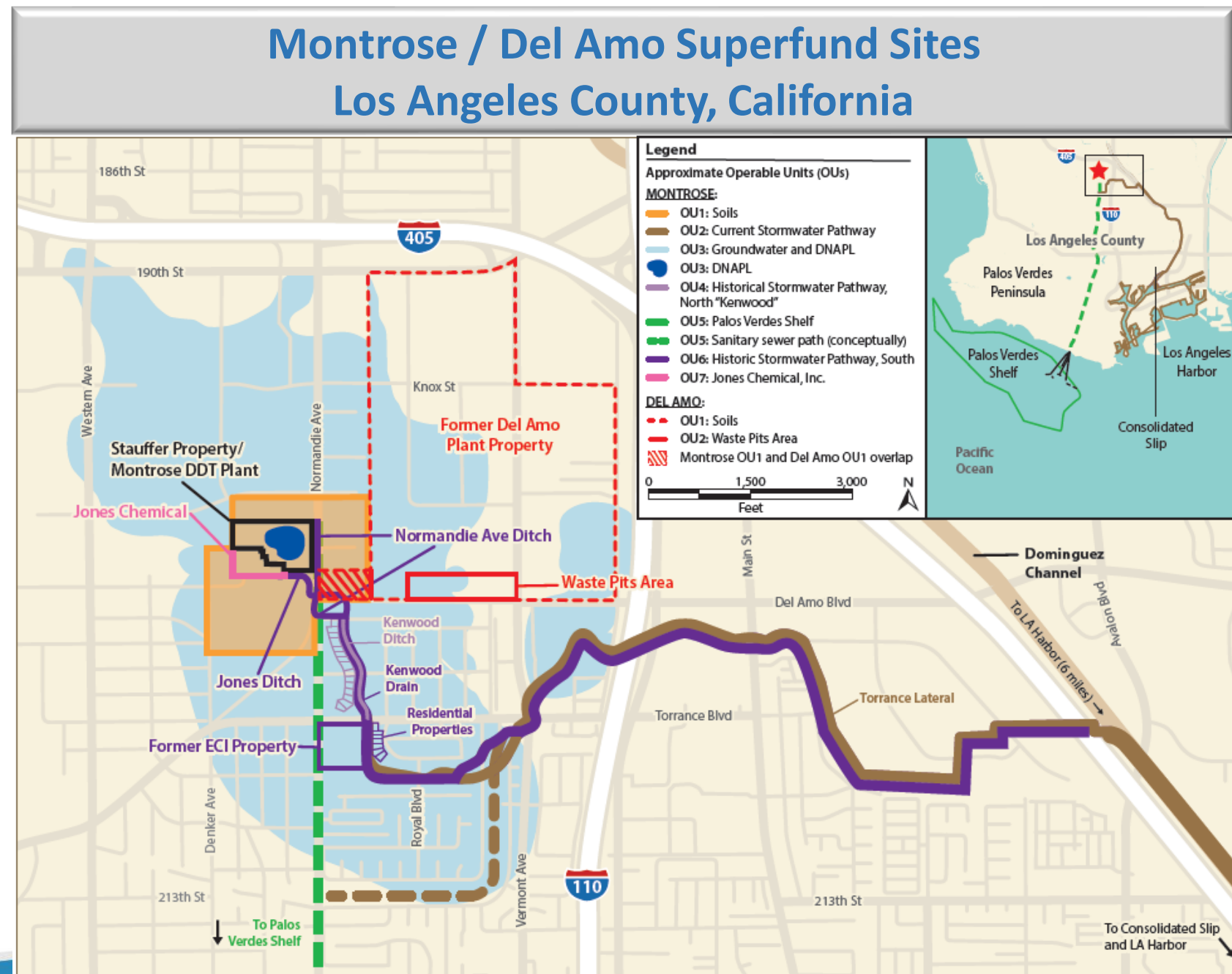
Background

Superfund
Process

20201 Normande Ave

Complex Site

- Large site
- Technically very complex
- Multiple operable units (OUs)
- Multiple contaminants
 - Pesticides (e.g., DDT)
 - VOCs
- Multiple contaminated media
 - Soils
 - Groundwater
 - DNAPL
- Multiple land uses
 - Industrial
 - Residential
- Active community engagement
- Multiple enforcement actions
- Ongoing work in different areas



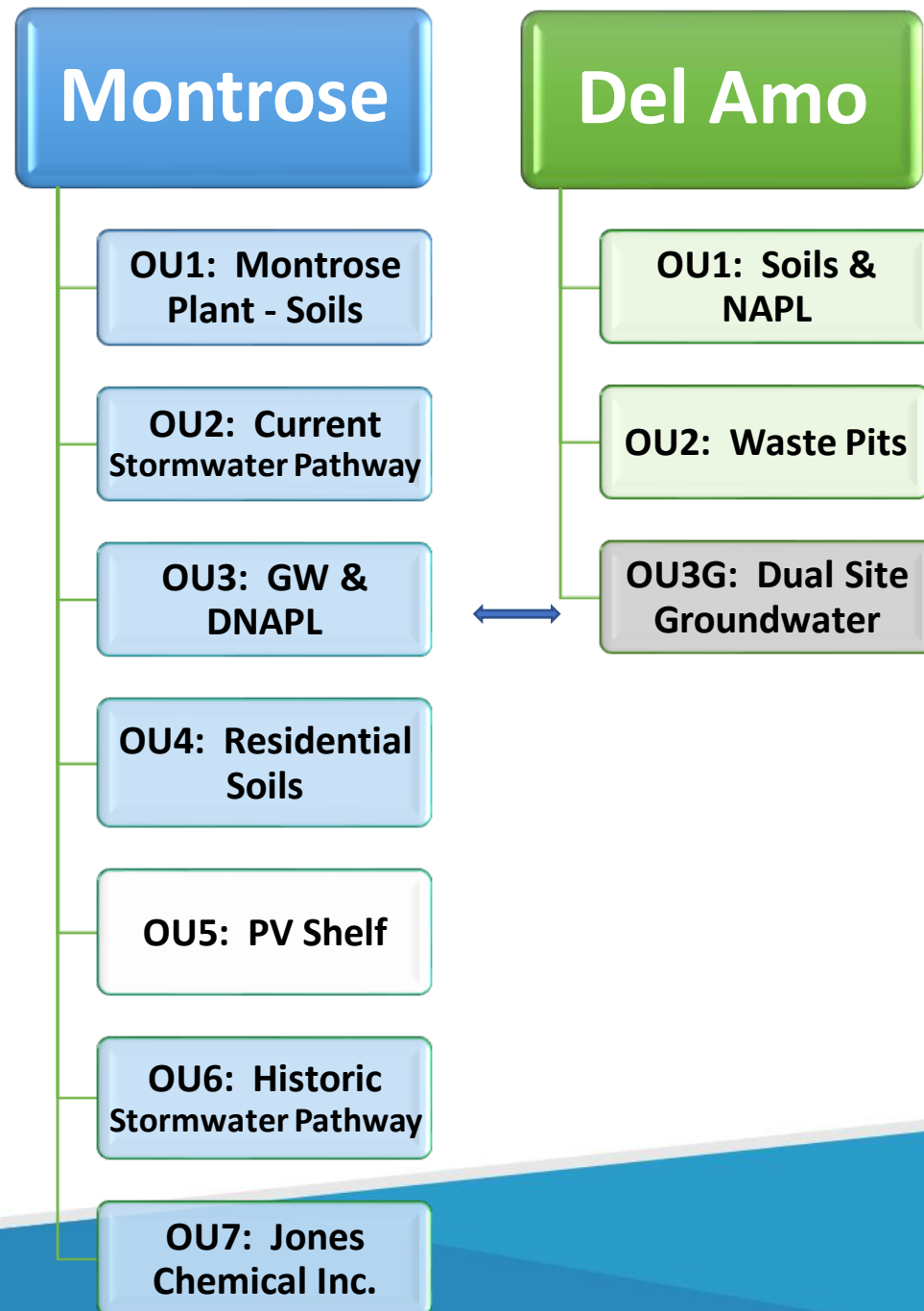
Operable Units (OUs)

Divide sites into manageable areas

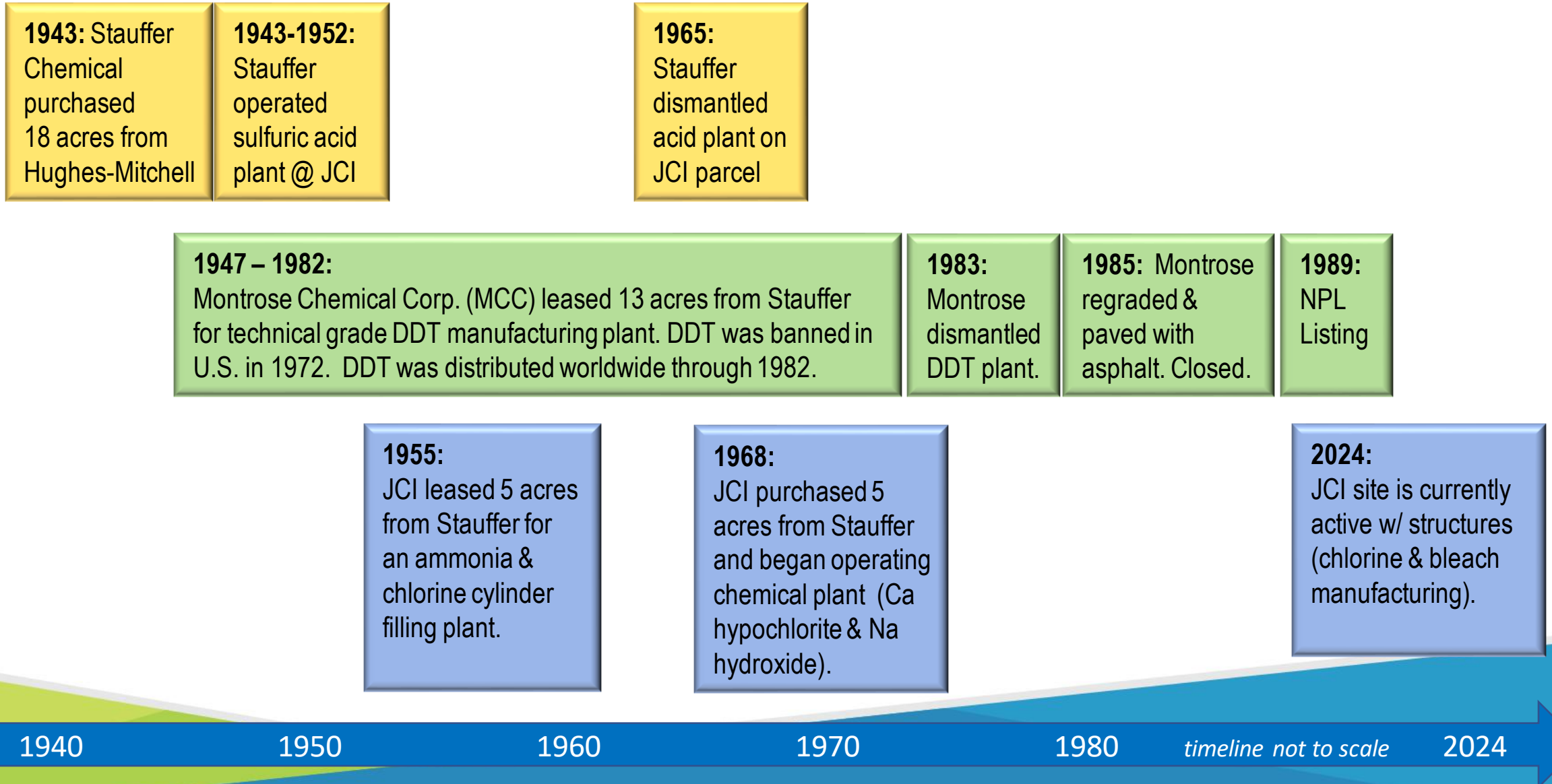
- Location (geographic area)
- Property ownership
- Media (e.g., soils, GW, DNAPL)
- Technology

Regulatory Approach

- RPs fund & perform cleanup
- EPA regulates & performs oversight

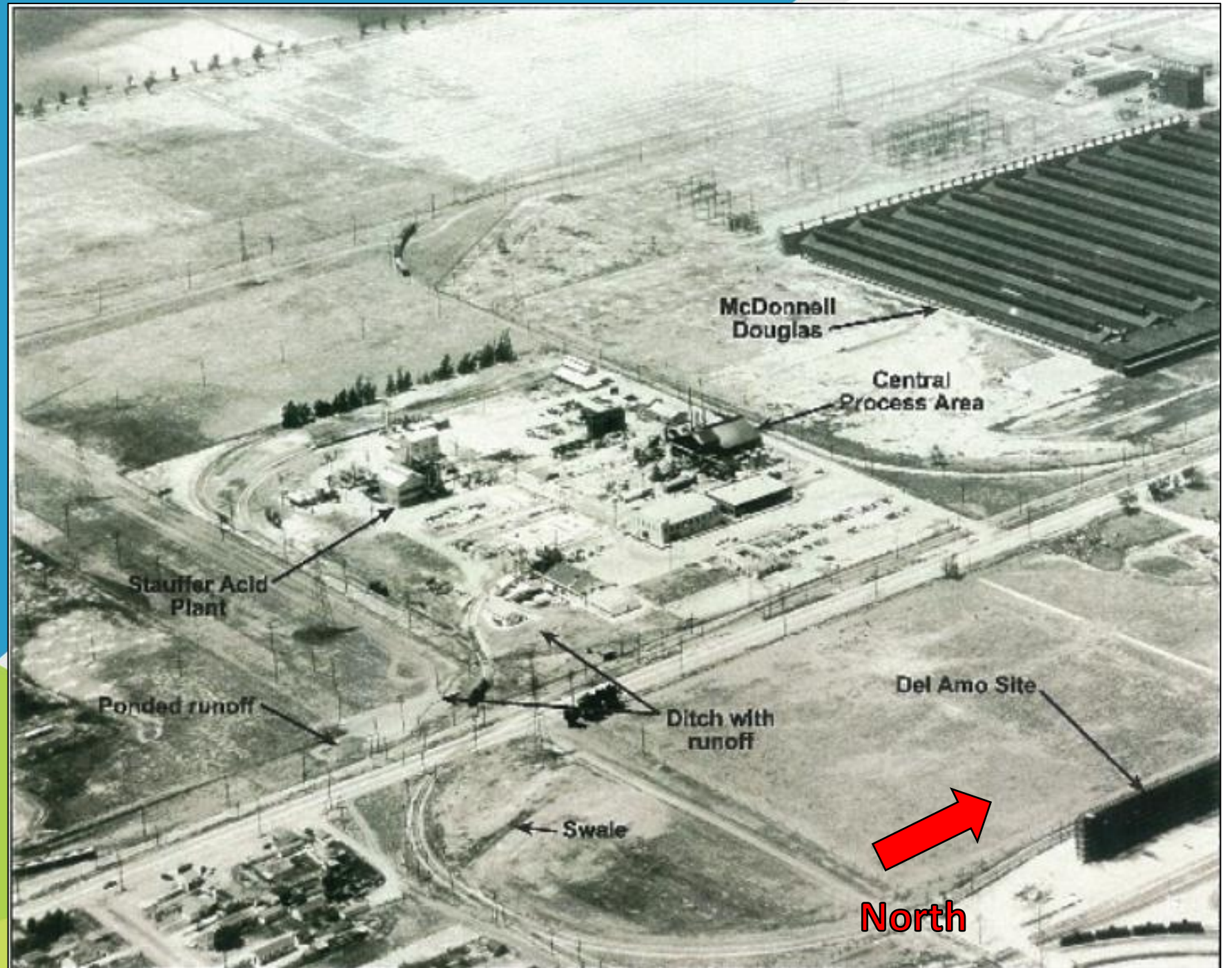


Montrose Site History





Montrose Plant Property (1952)





McDONNELL DOUGLAS CORPORATION
(CURRENTLY FORMER BOEING COMPANY)

PROCESSING EQUIPMENT

CENTRAL PROCESSING
AREA

ABOVE GROUND
RAW MATERIAL
STORAGE

WAREHOUSE
#1 AND #2

LABORATORY

RAW MATERIAL
STORAGE

FORMULATING AND
GRINDING PLANT

WASTE WATER
RECYCLING POND

MAINTAINANCE
SHOP

MACHINE
SHOP

OIL
STORAGE

FORMER ACID
RECOVERY
STORAGE TANKS

SULFUR
BURNER

STAUFFER
(CURRENTLY
JONES CHEMICAL)

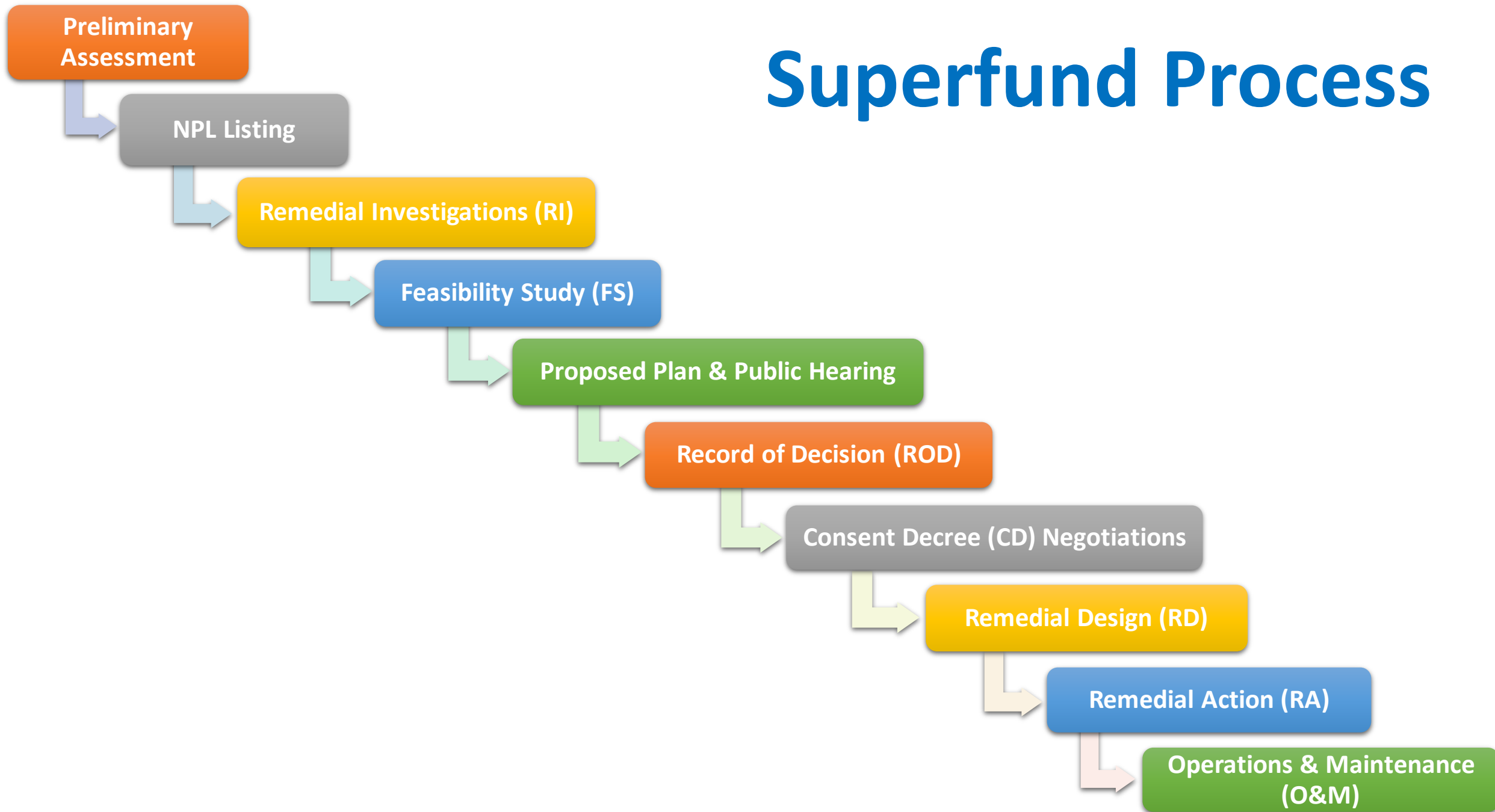
SULFURIC
ACID PLANT

- LADWP -



Montrose Site, Mid-1960s

Superfund Process



Five-Year Reviews 2025

- EPA will conduct Five-Year Reviews in 2025
 - Del Amo: OU1 and OU2
 - Groundwater: Dual Site, Montrose OU3D
- Required by Superfund law for sites:
 - More than 5 years to complete
 - Waste left in place
- Goal: To assess cleanup protectiveness
- Target: September 2025
- Process:
 - Review of site documents & data
 - Inspections
 - Interviews with stakeholders & community
 - Preparation of 5YR reports



EPA Wants to Hear from You!

In late 2024, early 2025 EPA will seek input from the community and stakeholders while doing the Five-Year reviews.

If you are interested in receiving a questionnaire, please contact either:

Hiruni Jayasekera

Community Involvement Coordinator

jayasekera.hiruni@epa.gov

Sarah Kell

Remedial Project Manager

kell.sarah@epa.gov

Questions?

3:00

CONTACT INFORMATION:
Russell Mechem
mechem.russell@epa.gov

415-972-3192

We will have additional question breaks later in the session.

You may continue to submit questions in the Q&A throughout the session.

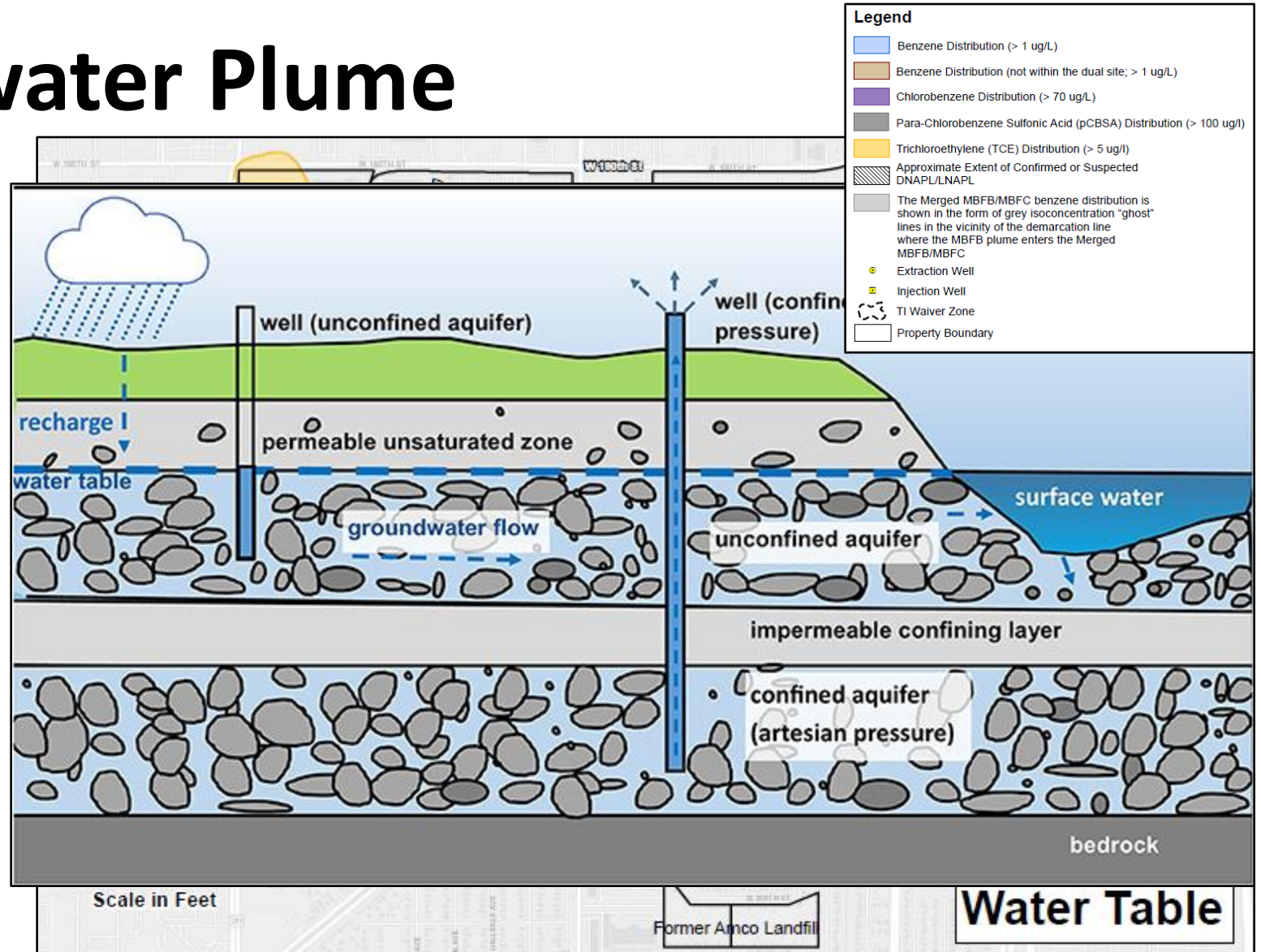


Dual Site Groundwater Operable Unit 3

Sarah Kell

Dual Site Groundwater Plume

- Plume >1.5 miles in length
- Contaminants of concern
 - Chlorobenzene
 - Benzene
 - Trichloroethylene (TCE)
- Commingled contamination



Groundwater Aquifers

Water Bearing Units Below the Site

Bellflower
45 to 140 feet

Gage
175 to 240 feet

Lynwood
250 to 325 feet

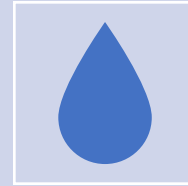
Silverado
530 to
730 feet

Sunnyside
730 to
1,200 feet



Contamination

Water Table,
Bellflower,
Gage Aquifer



**Very Little
Contamination**

Lynwood
Aquifer



No Contamination
used for drinking
water

Silverado
Aquifer

Where in the Superfund Process is OU3?

THE SUPERFUND REMEDIAL PROCESS

Assessment



Discovery of Contamination



Preliminary Assessment



Site Inspection



National Priorities List (NPL) Site Listing

Characterization



Remedial Investigation/ Feasibility Study & Proposed Plan

Selection of Remedy



Record of Decision



Legal Agreement

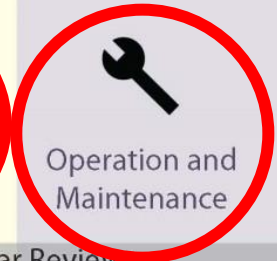


Remedial Design

Cleanup



Remedial Action



Operation and Maintenance

Post-Construction



NPL Deletion

Five-Year Reviews

Community involvement and planning for a site's redevelopment are integral to the entire process

Groundwater Plume Remedies

Chlorobenzene Plume

- Pump and treat, injection
 - Removes chlorobenzene, pCBSA (by-product of DDT), TCE, and benzene



MONTROSE TREATMENT SYSTEM – CHLOROBENZENE PLUME



Contaminated
Groundwater
from Wells

Treated
Water
Returned
to
Aquifer

Non-hazardous
solids
transported
offsite for
disposal

To
Outside
Air



Montrose Treatment System Summary

Working as intended

- Meets groundwater &/or drinking water standards
- 372 million gallons extracted & treated
- Total mass removed = 95,342 lbs.



Groundwater Plume Remedies

TCE Plume – Pump and treat, injection/discharge

- System – remove TCE, prevent plume from spreading
- Cleanup Agreement – in progress

Benzene Plume – Hybrid

- Monitoring - natural breakdown
- Pump and treat, discharge - if needed

Groundwater Plume Remedies

Monitoring

- Over 500 wells
- Annual gauging and sampling → Report
- 2024 Event
 - ~ 350 wells sampled
- Five Year Review
 - Well survey
 - Production well sampling



Looking Ahead

Chlorobenzene Plume

- Operations and Maintenance ➡ 2039 (15-year milestone)

TCE Plume

- 2025 – data collection to support design

Benzene Plume

- Continue monitoring
- Evaluate need for pump and treat



Questions about OU3?

3:00

CONTACT INFORMATION:

Sarah Kell

kell.sarah@epa.gov

(213) 244-1873

We will have additional question breaks later in the session.

You may continue to submit questions in the Q&A throughout the session.

Montrose Dense Non- Aqueous Phase Liquid (DNAPL) Operable Unit 3D

Sarah Kell

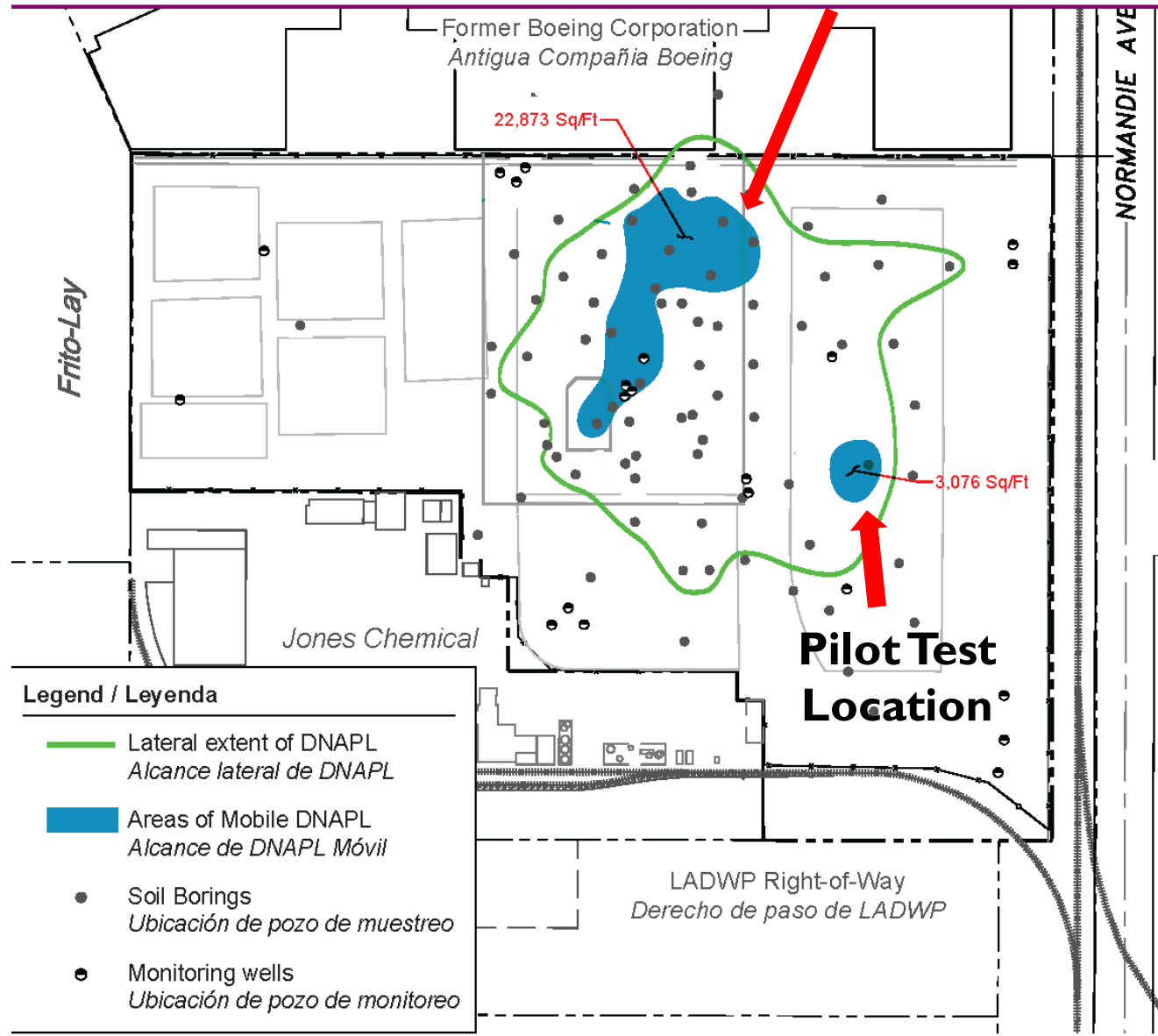
What is DNAPL?

Dense Non-Aqueous Phase Liquids

- Heavier than water
- Seeps into cracks in soil and rock
- Difficult to study- requires special technologies to remove/treat
- Montrose DNAPL – ~50% DDT, 50% chlorobenzene



Focused Treatment Area



Mobile DNAPL

- 2 areas of mobile DNAPL
- Max. depth ~90 ft

Main Remedial Action Objectives:

- Limit uncontrolled lateral and vertical migration
- Reduce mobile NAPL mass to the extent practicable

DNAPL Remedy

3 Components

- Electrical Resistance Heating (ERH)
- Soil Vapor Extraction (SVE)
- Institutional Controls
 - Land Use Covenant (aka deed restriction)

Where in the Superfund Process is OU3D?

THE SUPERFUND REMEDIAL PROCESS

Assessment



Discovery of Contamination



Preliminary Assessment



Site Inspection



National Priorities List (NPL) Site Listing

Characterization



Remedial Investigation/ Feasibility Study & Proposed Plan

Selection of Remedy



Record of Decision

Cleanup



Remedial Design



Remedial Action

Post-Construction



Operation and Maintenance

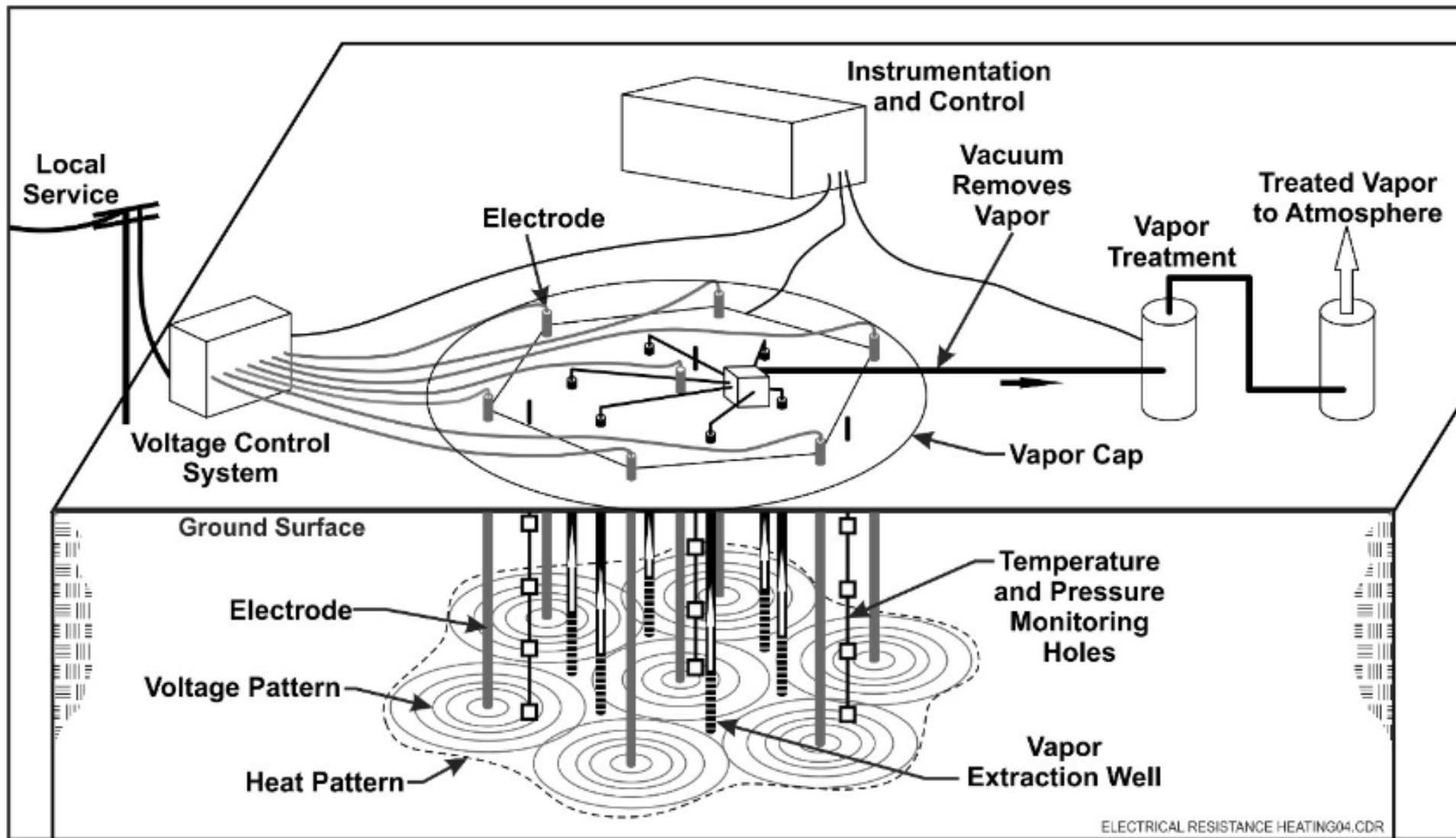


NPL Deletion

Five-Year Reviews

Community involvement and planning for a site's redevelopment are integral to the entire process

ERH and SVE

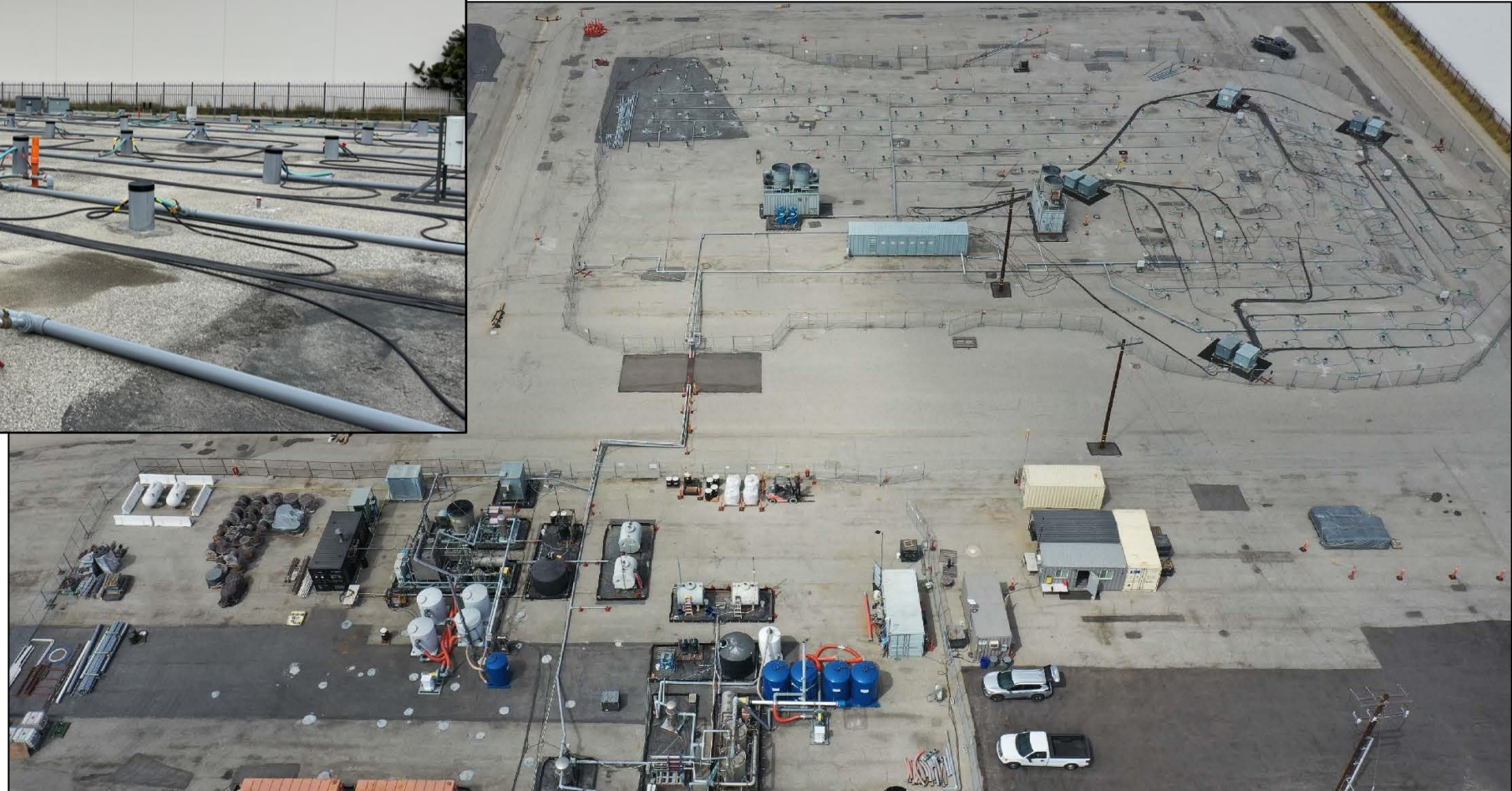


ERH and SVE



Pipes to Vapor Treatment

Electrodes



Summary

Electrical Resistance Heating (ERH)

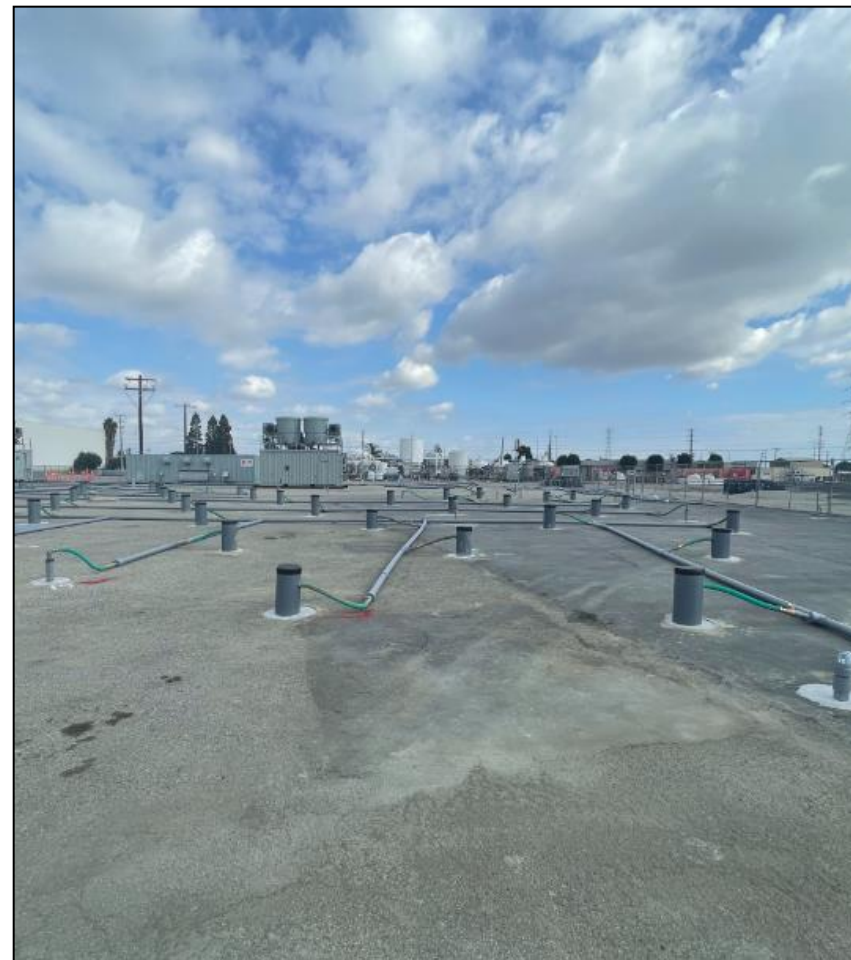
- Below-ground components installed
 - 4.5 miles drilled
 - 183 electrodes, 60 monitoring points
- To complete – Electrical meter & wiring

Soil Vapor Extraction (SVE)

- Operating full time

Project Cleanup Totals (Nov. 2024)

- 465,487 lb total VOC
- 49,452 gallons DNAPL



Land Use Covenant

- Type of Institutional Control
- Restricts use of property
- Limits human exposure



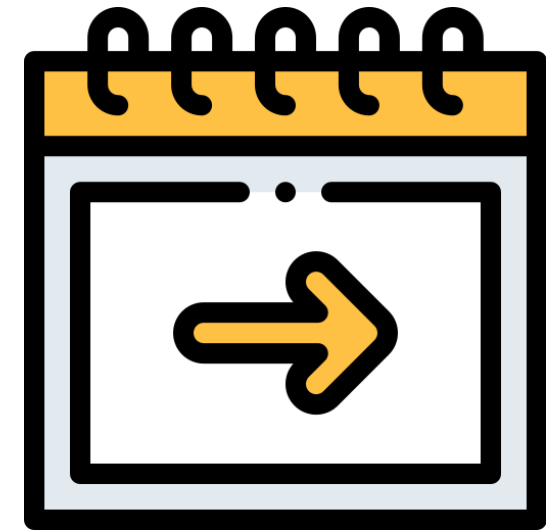
Looking Ahead

Electrical Resistance Heating (ERH)

- Early 2025: LA Dept. of Water and Power will distribute power to system
- System will run for 8-12 months

Soil Vapor Extraction (SVE)

- Operations will continue



Questions about OU3D?

3:00

We will have additional question breaks later in the session.

You may continue to submit questions in the Q&A throughout the session.

CONTACT INFORMATION:

Sarah Kell

kell.sarah@epa.gov

(213) 244-1873



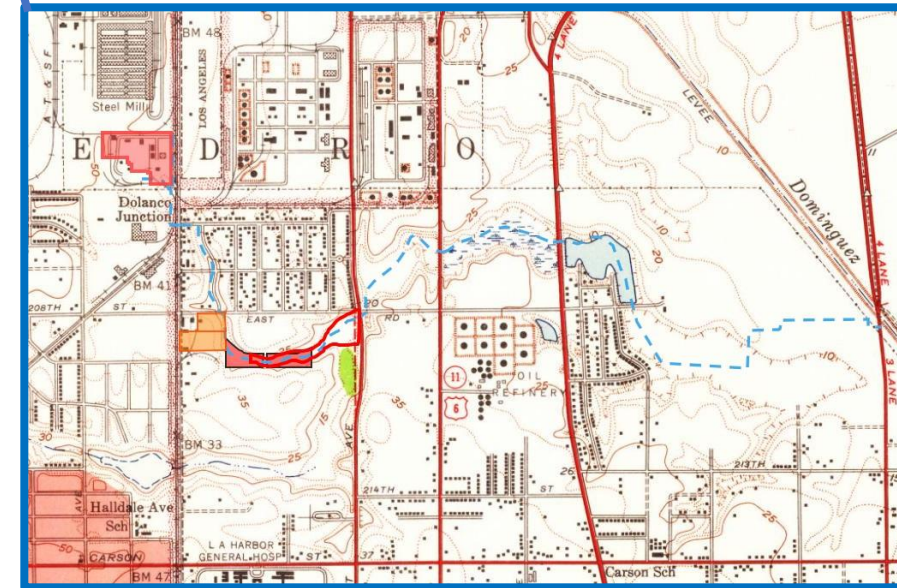
Montrose Historical Stormwater Pathway Operable Unit 6

RPM: Michael Schulman

Presenter: Sasha Vanley

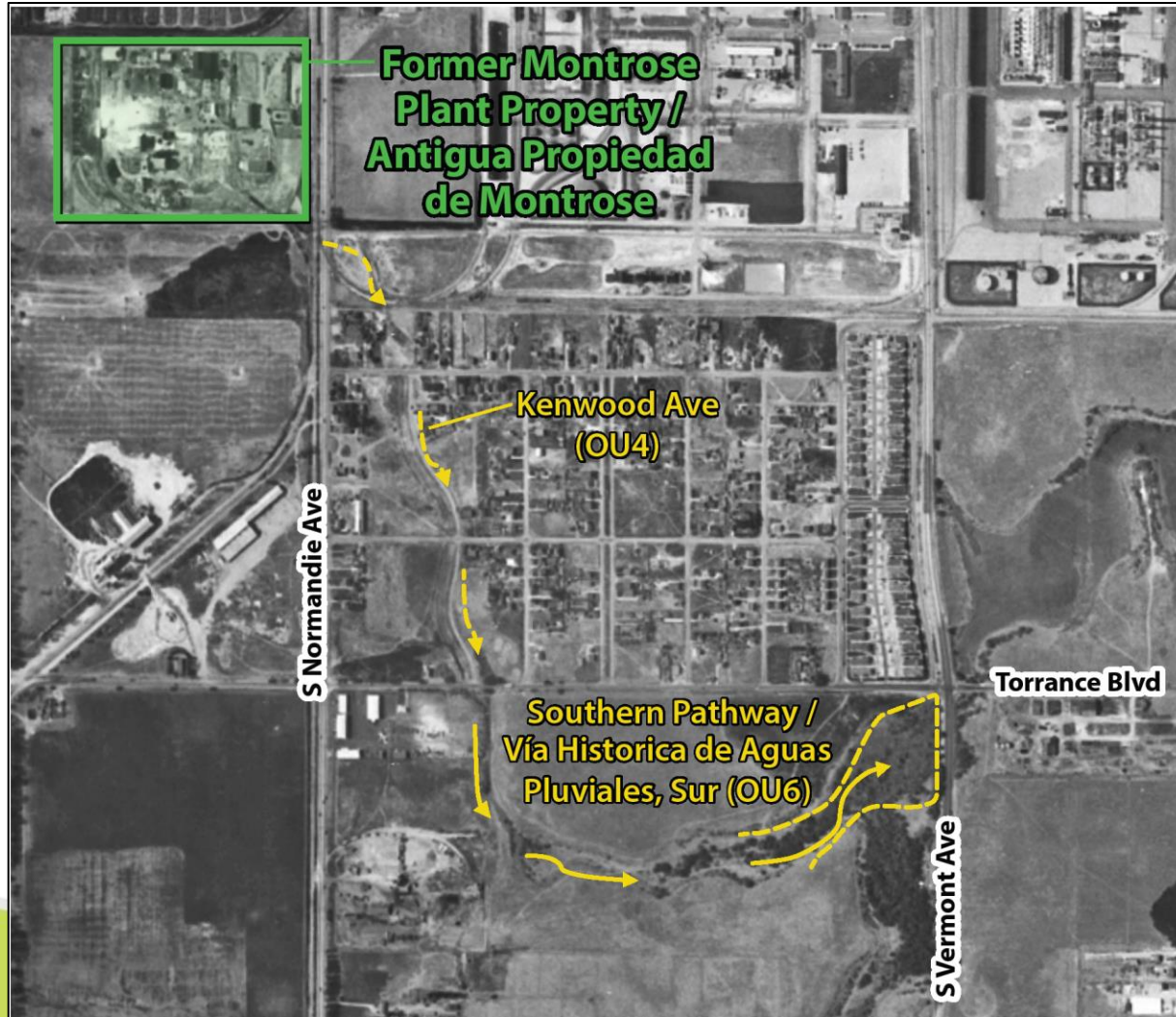
OU6 Southern Historic Stormwater Pathway

- Starts south of Torrance Blvd
- Extends to Dominguez Channel

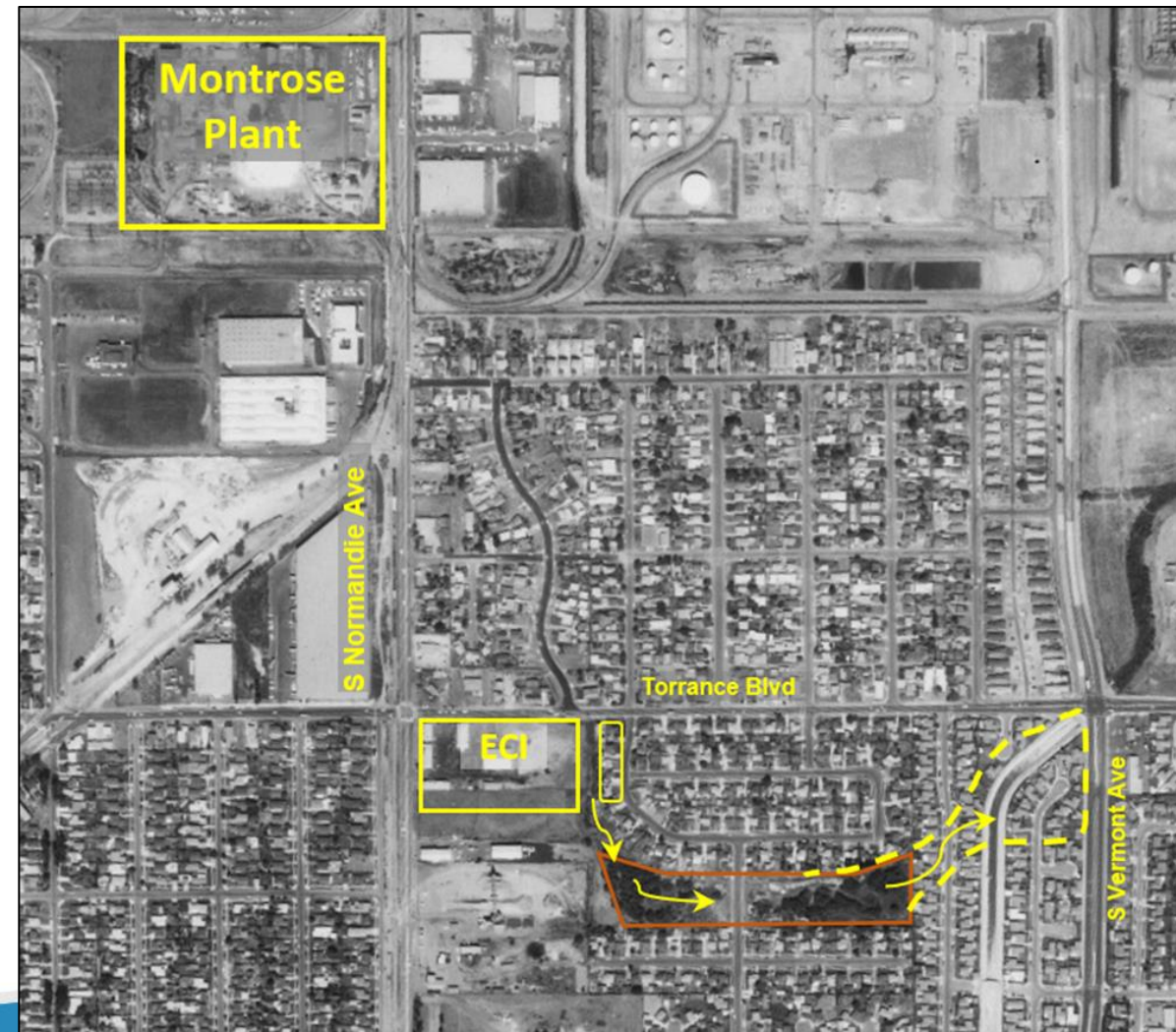


Southern Historic Stormwater Pathway

1947

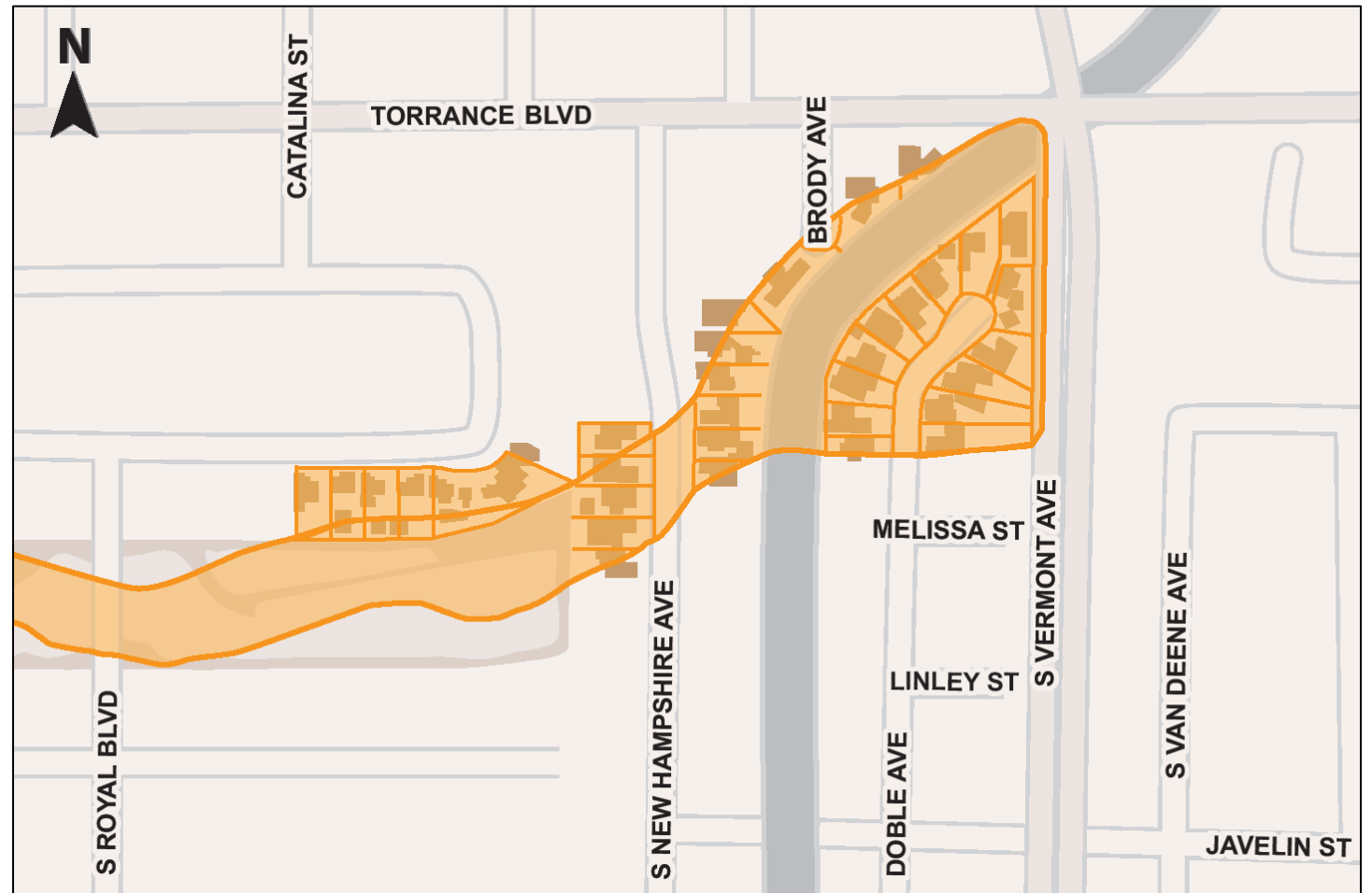


1965



Testing the Soils

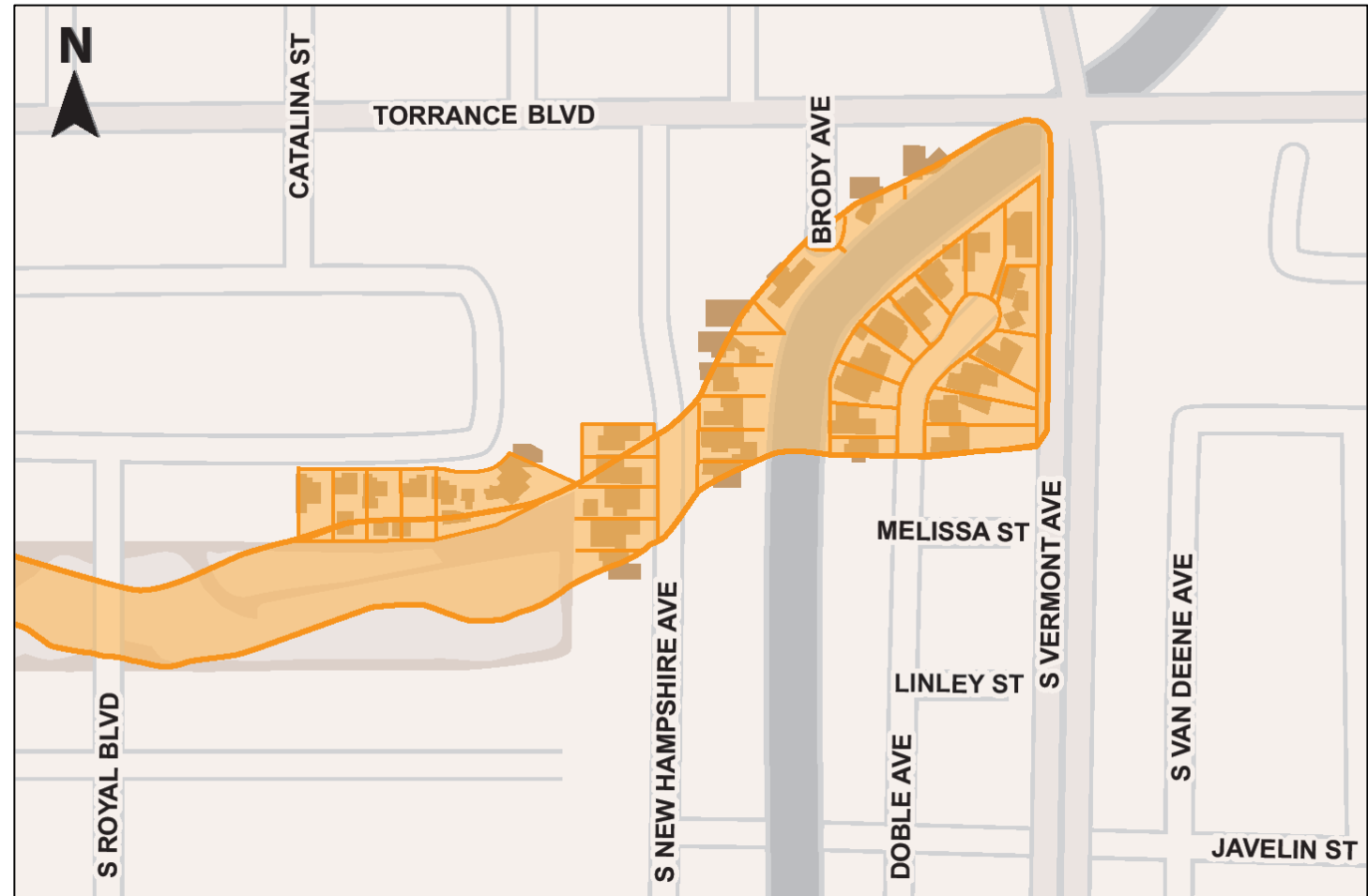
- Oct - Nov 2022 - Tested soil in the 7.5-acre area where DDT could have been deposited
- Testing to confirm no contamination or unacceptable risk
- Mix of property owner's voluntary participation with some sampling in streets



Soil Test Results

- No locations with high DDT
- Top 10 ft
 - Essentially no DDT found in the top 2 feet
 - DDT was less than the upper background range (10 mg/kg)
 - Overall, only low DDT values found

- 15 to 17 ft deep
 - 3 locations with DDT greater than 10 mg/kg
 - Soil is too deep for human exposure



Where in the Superfund Process is OU6?

THE SUPERFUND REMEDIAL PROCESS

Assessment



Discovery of Contamination



Preliminary Assessment



Site Inspection



National Priorities List (NPL) Site Listing

Characterization



Remedial Investigation/ Feasibility Study & Proposed Plan

Selection of Remedy



Record of Decision

Cleanup



Remedial Design



Remedial Action

Post-Construction



Operation and Maintenance



NPL Deletion

Five-Year Reviews

Community involvement and planning for a site's redevelopment are integral to the entire process

After the Investigation

- **Remedial Investigation Report** - formally document and summarize all result findings
- **Risk Assessment** - determine and formally document if contaminants detected are of concern
- **Feasibility Study Report** - if needed, to develop and screen remedies.



Questions about OU6?

3:00

CONTACT INFORMATION:

Michael Schulman

schulman.michael@epa.gov

(415) 972-3064

We will have additional question breaks later in the session.

You may continue to submit questions in the Q&A throughout the session.



Montrose JCI Jones Chemical, Inc. Operable Unit 7

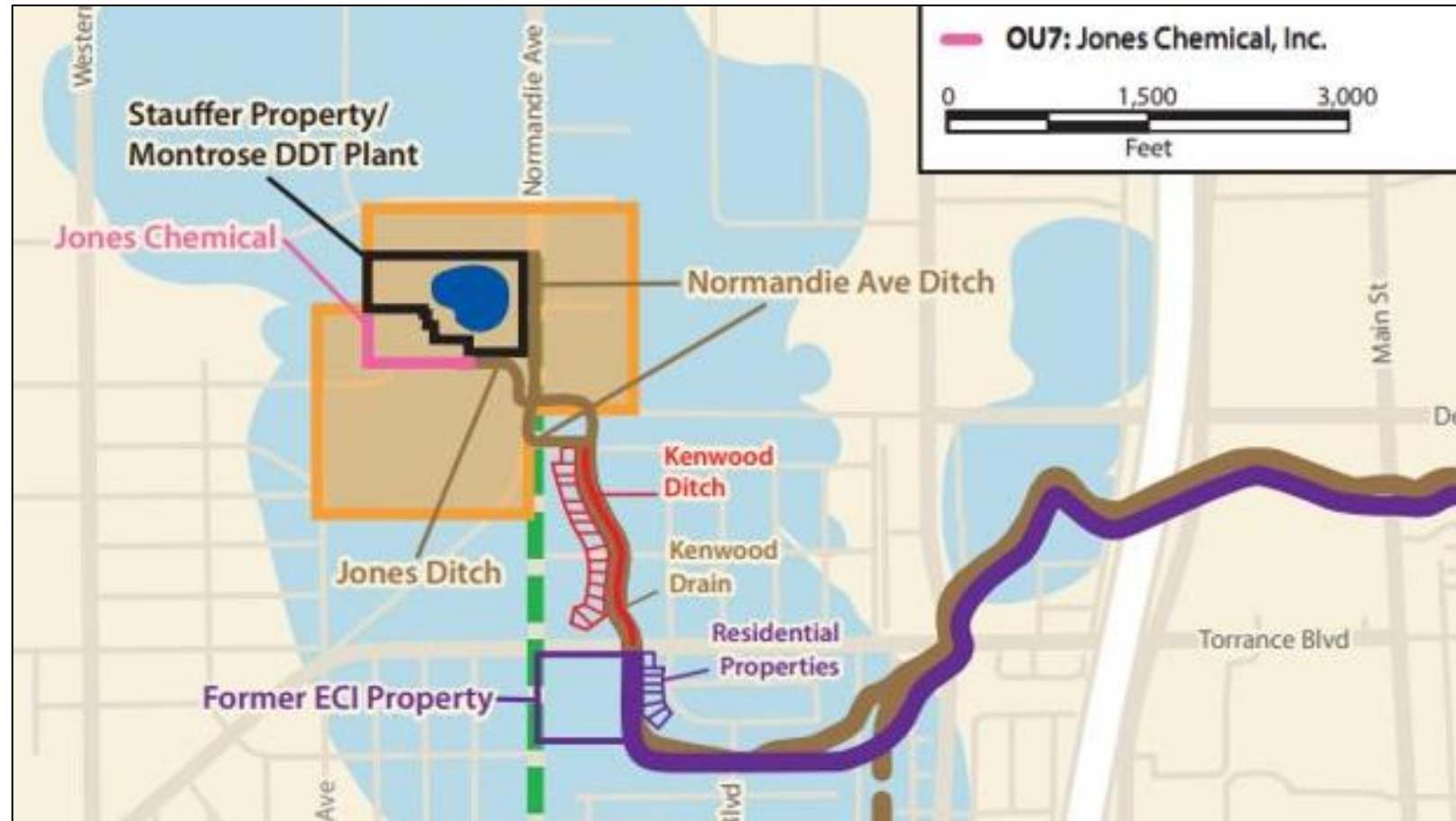
David Britt

Operable Unit 7 - Jones Chemical Inc. (Jones)

Located on the southern portion of the Montrose Superfund site

Historic contamination with chlorinated solvents

- Tetrachloroethylene (PCE)
- Trichloroethylene (TCE)



Where in the Superfund Process is OU7?

THE SUPERFUND REMEDIAL PROCESS

Assessment



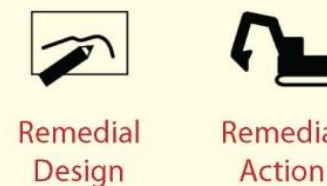
Characterization



Selection of Remedy



Cleanup



Post-Construction



Five-Year Reviews

Community involvement and planning for a site's redevelopment are integral to the entire process

Soil Vapor Extraction System

- Routine Operations and Maintenance started in November 2022
- Successfully removed approx. 380 lbs of cumulative mass



Recent Accomplishments – Last 6 months

Revised several work plans to support ongoing site activities, including:

- Remedial Investigation
- Health and Safety
- Operation and Maintenance
- Monitoring and Reporting
- Soil Gas Investigation Data Report

Looking Ahead

- Next 6 months: Collect and analyze data for soil gas and groundwater
- 2026: Conduct Human Health Risk Assessment
- 2027: Complete Remedial Investigation Report

Questions about OU7?

3:00

CONTACT INFORMATION:

David Britt

britt.david@epa.gov

(213) 244-1845

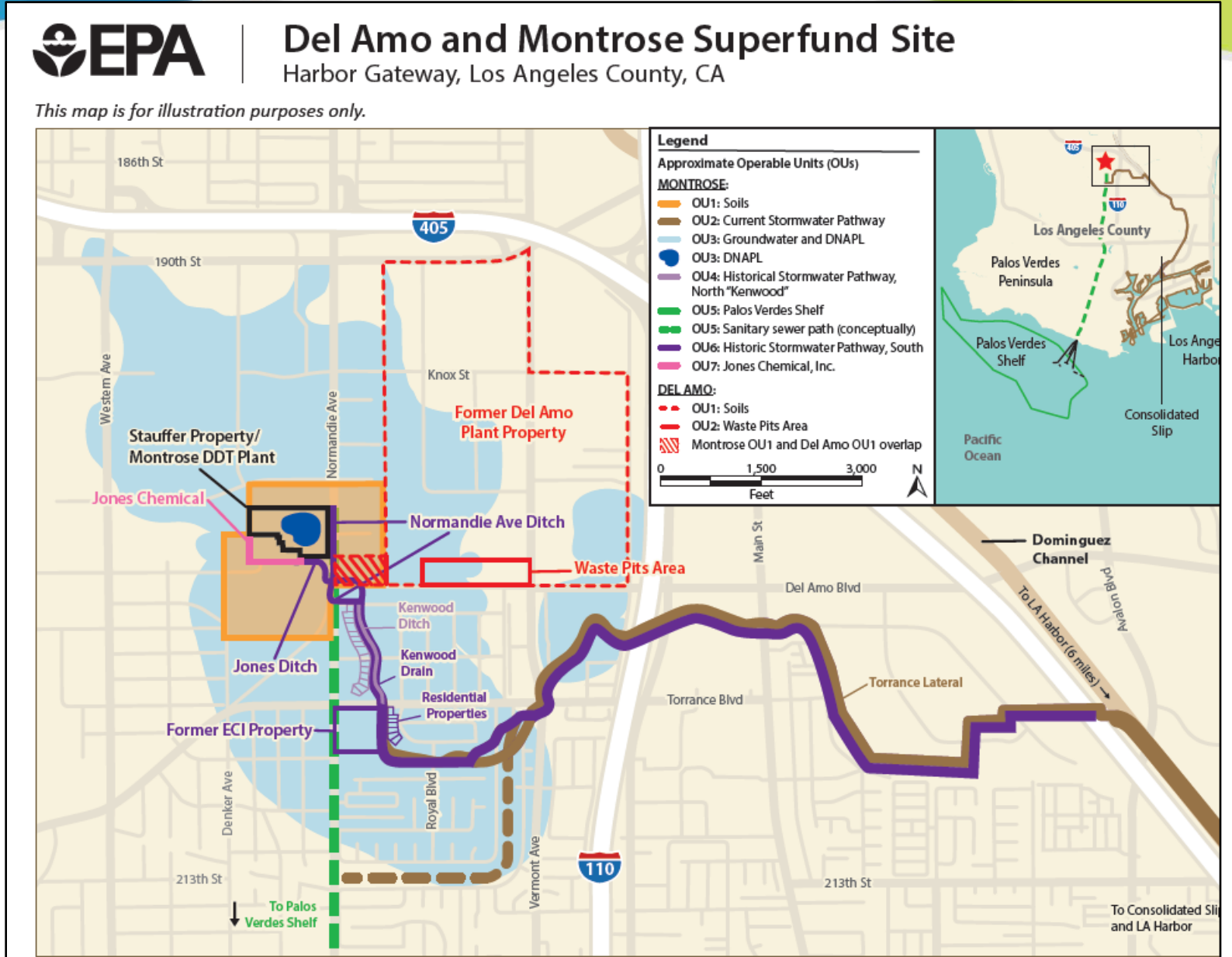
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Del Amo Operable Units 1 and 2

Tu Nguyen

- Del Amo Operable Unit 1 - Soil and NAPL (non-aqueous phase liquid)
- Del Amo Operable Unit 2 - Waste Pits



Del Amo OU1 – Soil and NAPL: Soil Vapor Extraction System

- 31 Extraction Wells
- 12 vacuum monitoring wells
- As of October 2024:
operated for 9,500
hours.



Where in the Superfund Process is Del Amo OU1?

THE SUPERFUND REMEDIAL PROCESS

Assessment



Discovery of Contamination



Preliminary Assessment



Site Inspection



National Priorities List (NPL) Site Listing

Characterization



Remedial Investigation/ Feasibility Study & Proposed Plan

Selection of Remedy



Record of Decision

Cleanup



Remedial Design



Remedial Action

Post-Construction



Operation and Maintenance



NPL Deletion

Five-Year Reviews

Community involvement and planning for a site's redevelopment are integral to the entire process

Del Amo OU1 – Soil and NAPL: Proposed Partial Deletion

- Proposing a Partial Deletion of 46 acres, approximately 16%.
- All appropriate actions have been implemented and cleanup goals have been met.

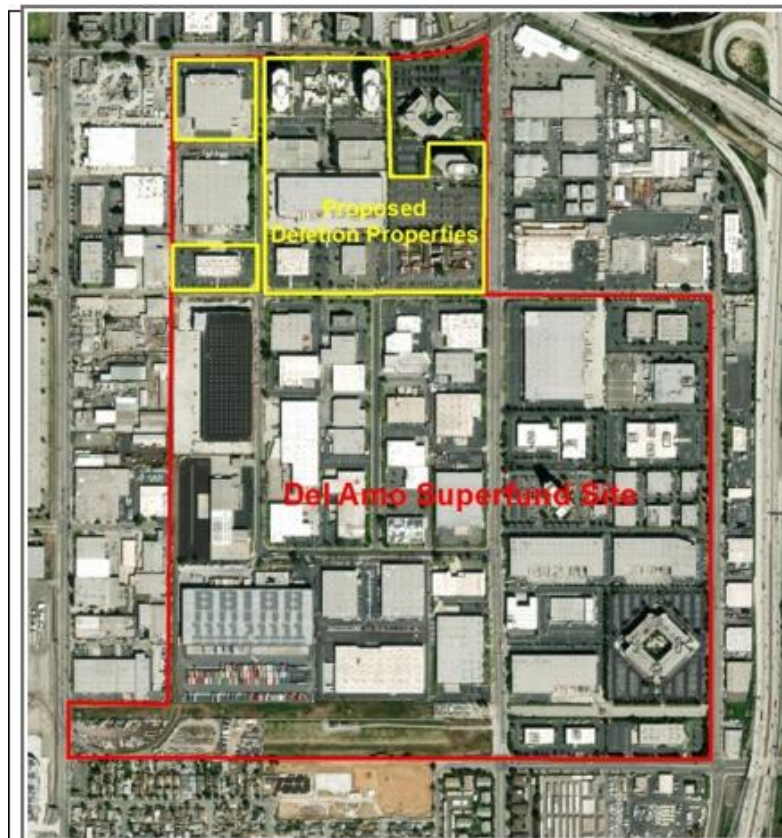


Figure 1 – Deletion Area

Property Address	Assessor Parcel Number	Land Size (Acres)
1111 Knox St.	7351-031-008	2.97
19401 S Vermont Ave.	7351-031-012	5.07
1001 Knox St.	7351-031-017	2.96
991 Knox St.	7351-031-018	2.30
19191 S Vermont Ave.	7351-031-021	6.50
990 W 190 th St.	7351-031-027	3.49
980 W 190 th St.	7351-031-028	4.58
970 W 190 th St.	7351-031-029	3.79
19310 Pacific Gateway Dr.	7351-031-030	6.89
1000 W 190 th St.	7351-031-031	5.70
Knox Street	N/A	1.79
Total		46.05
Percent Reduction (280 Acres)		16.4%

Table 1 – Deletion Property Summary

Where in the Superfund Process is Del Amo OU2?

THE SUPERFUND REMEDIAL PROCESS

Assessment



Discovery of Contamination



Preliminary Assessment



Site Inspection



National Priorities List (NPL) Site Listing

Characterization



Remedial Investigation/ Feasibility Study & Proposed Plan

Selection of Remedy



Record of Decision

Cleanup



Remedial Design



Remedial Action

Post-Construction



Operation and Maintenance



NPL Deletion

Five-Year Reviews

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Del Amo OU2 – Waste Pits

Former Pits, Cap, SVE-IBT System, and Monitoring Wells



1 inch = 150 feet

Legend

- Extraction Wells
- Injection Wells
- Soil Vapor Cluster Monitoring Well
- Vacuum Pressure Performance Monitoring Well
- Perimeter Monitoring Well
- Sub Areas
- Del Amo OU-2 Site
- Del Amo Site Boundary

Del Amo OU1 and OU2 Questions?

3:00

Contact Info: Tu Nguyen
Nguyen.Anhtu@epa.gov
415-972-3443

We will have additional question breaks later in the session.

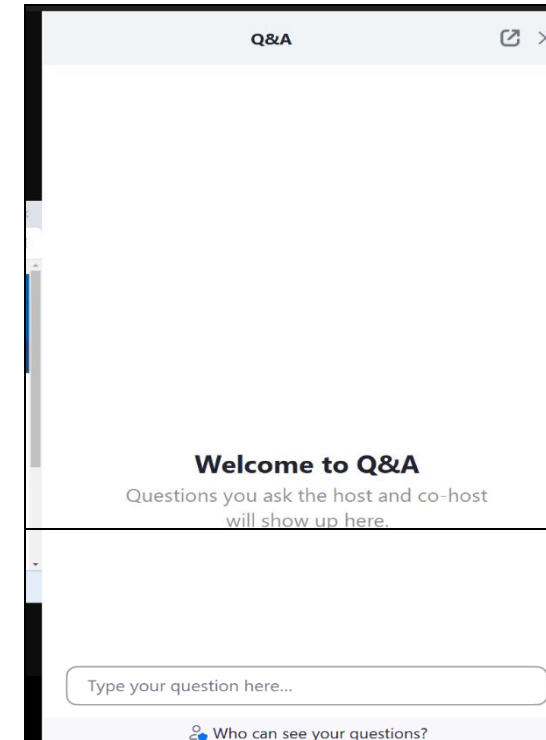
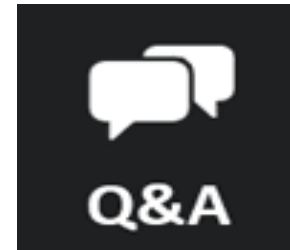
You may continue to submit questions in the Q&A throughout the session.



Time for Questions and Discussion

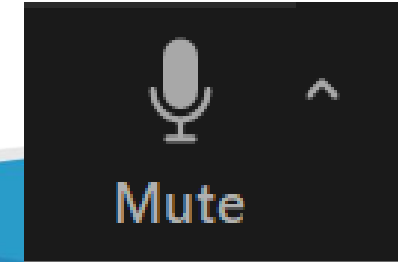
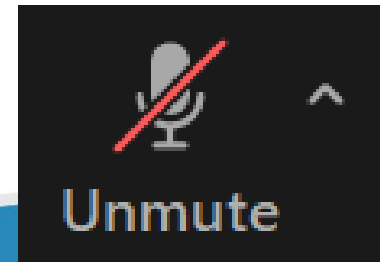
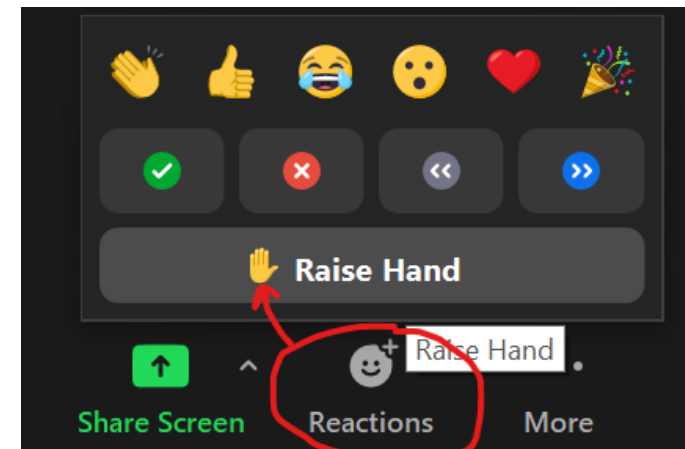
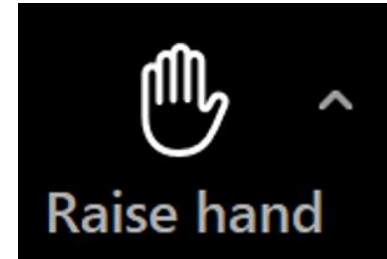
How to Ask **Written Questions** in Zoom

- Participants may enter questions in the Q&A at any time.
- All messages submitted will be visible to all participants.
- Questions will be read out loud to speakers during Q&A period.



How to Ask Verbal Questions in Zoom

- Participants should raise their hands via Zoom if they wish to share questions verbally.
- Please unmute when your name is called.
- Speak slowly and clearly to assist with interpretation.



For more information...

Site History – **Russell Mechem** mechem.russell@epa.gov

Dual Site groundwater OU3 – **Sarah Kell** kell.sarah@epa.gov

Montrose DNAPL OU3D – **Sarah Kell** kell.sarah@epa.gov

Montrose historical stormwater pathway OU6– **Michael Schulman**
schulman.michael@epa.gov

Montrose Jones Chemical, Inc. OU7 – **David Britt** britt.david@epa.gov

Del Amo Soils & NAPL, Waste Pits OU1 and OU2 – **Tu Nguyen**
nguyen.anhtu@epa.gov

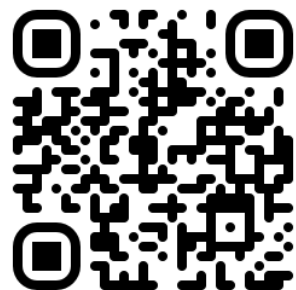
Community Involvement **Hiruni Jayasekera** jayasekera.hiruni@epa.gov

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