

Jones Road Ground Water Plume Superfund Site February 27, 2023

Raji Josiam

Remedial Project Manager

Jason McKinney

Community Involvement Coordinator

Environmental Protection Agency

Site Update

- Superfund Authority and Cleanup Process
- Background and Response Actions
- Sampling results
- BIL Funding and Next Steps
- Sign up to be connected to the waterline/public water supply

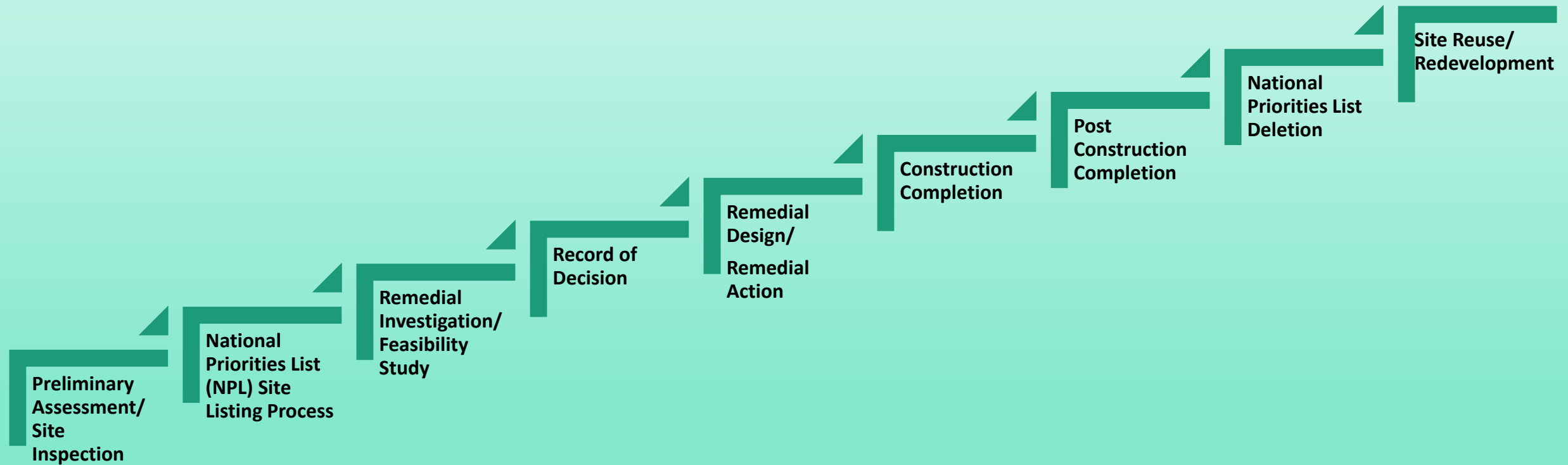
Jones Road Ground Water Plume Superfund Site Cypress (Harris County), TX



Superfund Authority

- In 1980, Congress established Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- CERCLA is informally called Superfund.
- The Superfund program is administered by EPA in cooperation with state and tribal governments.
- It allows EPA to clean up hazardous waste sites and to force responsible parties to perform cleanups or reimburse the government for cleanups led by EPA.

Superfund Cleanup Process



Jones Road Ground Water Plume Superfund Site Source of Contamination

- Former Bell Dry Cleaners
- Operated between 1988-2002

Affected Media

- Soil
- Indoor Air
- Groundwater

Impacted Zones

1. Shallow Soil
2. Shallow water bearing zone
3. Deep unsaturated zone
4. Deep water bearing zone

Contaminants of Concern

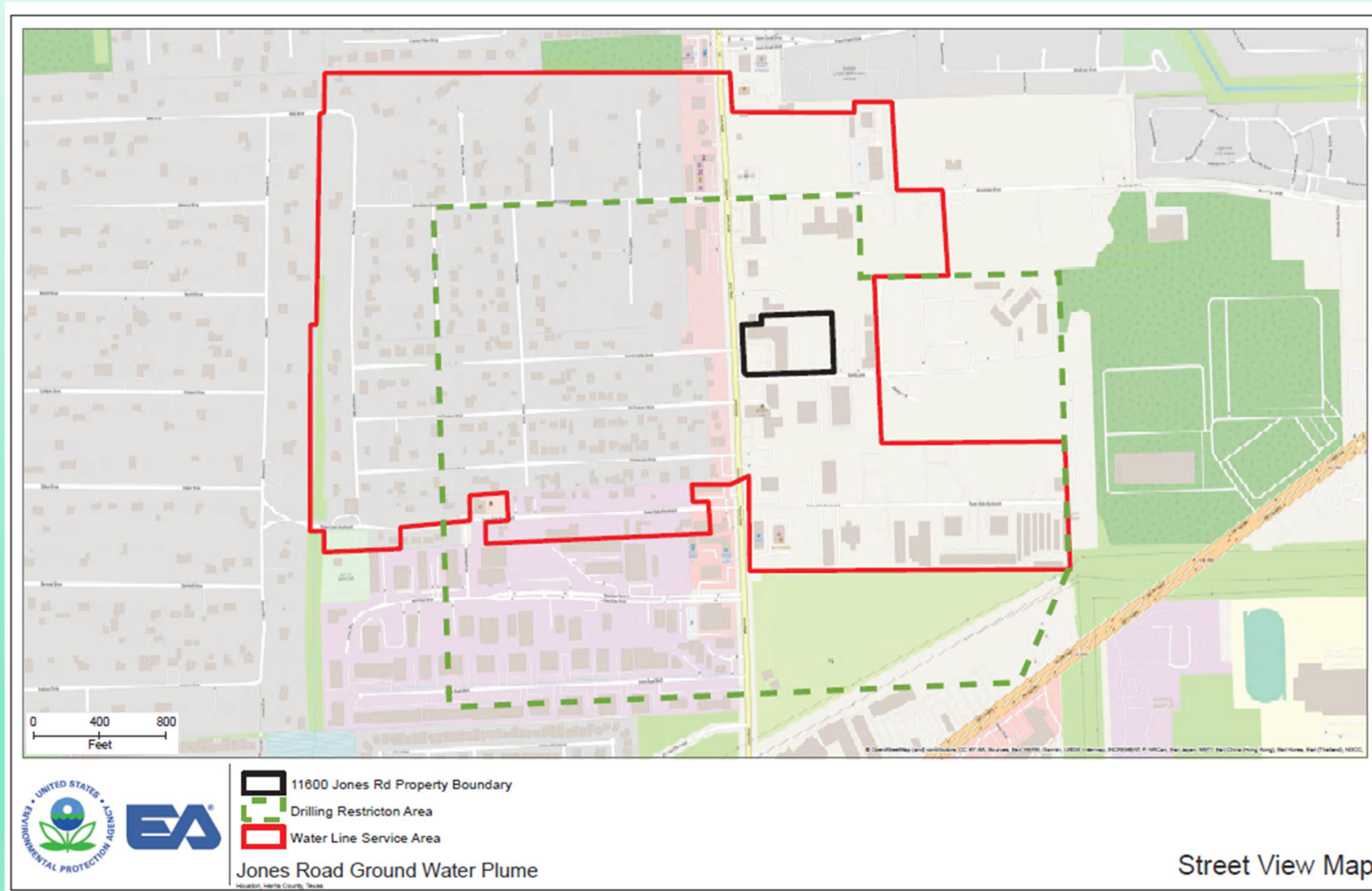
Tetrachloroethene (PCE)

Trichloroethene (TCE)

cis- and trans Dichloroethene (DCE)

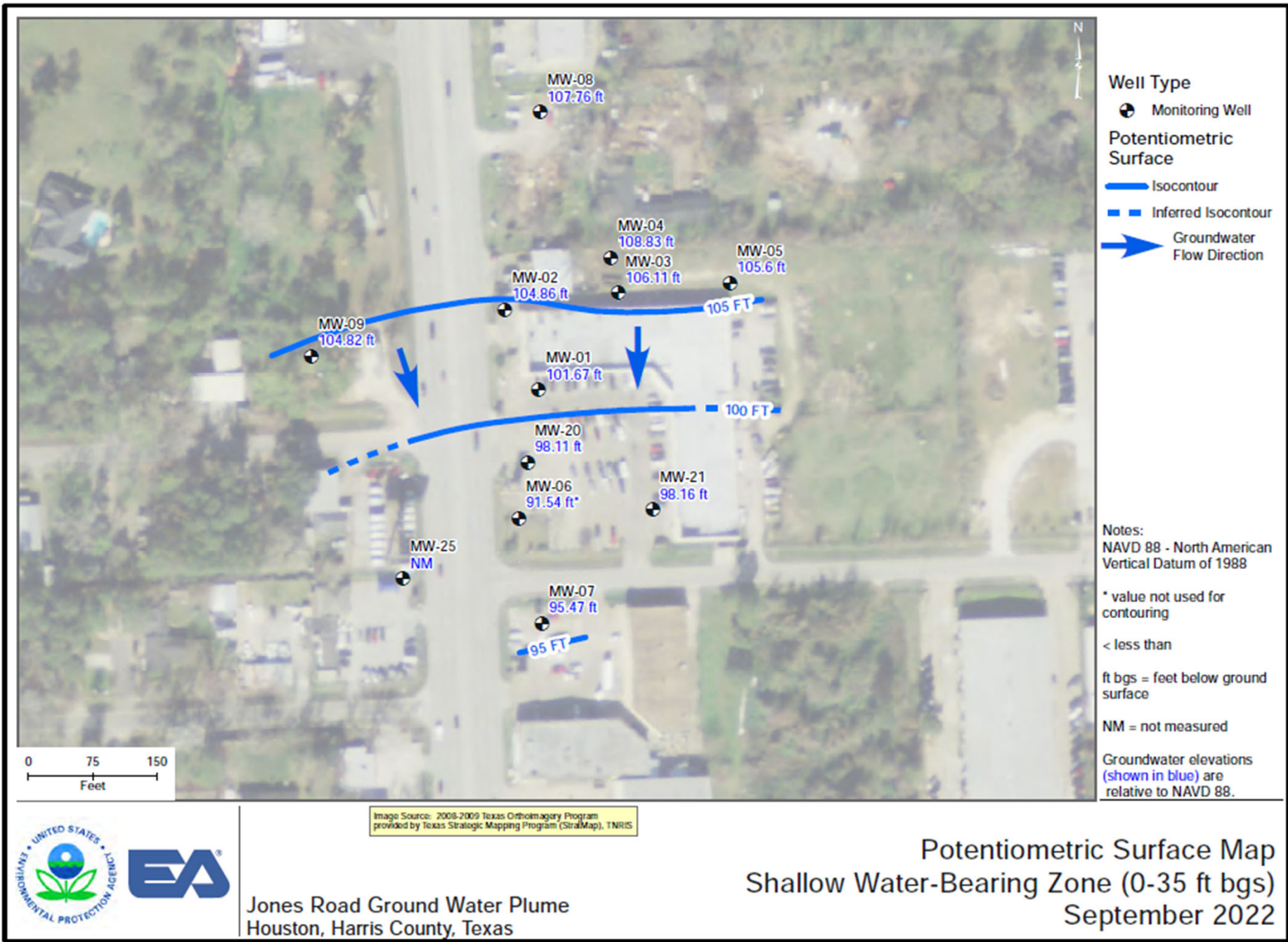
Vinyl Chloride (VC)

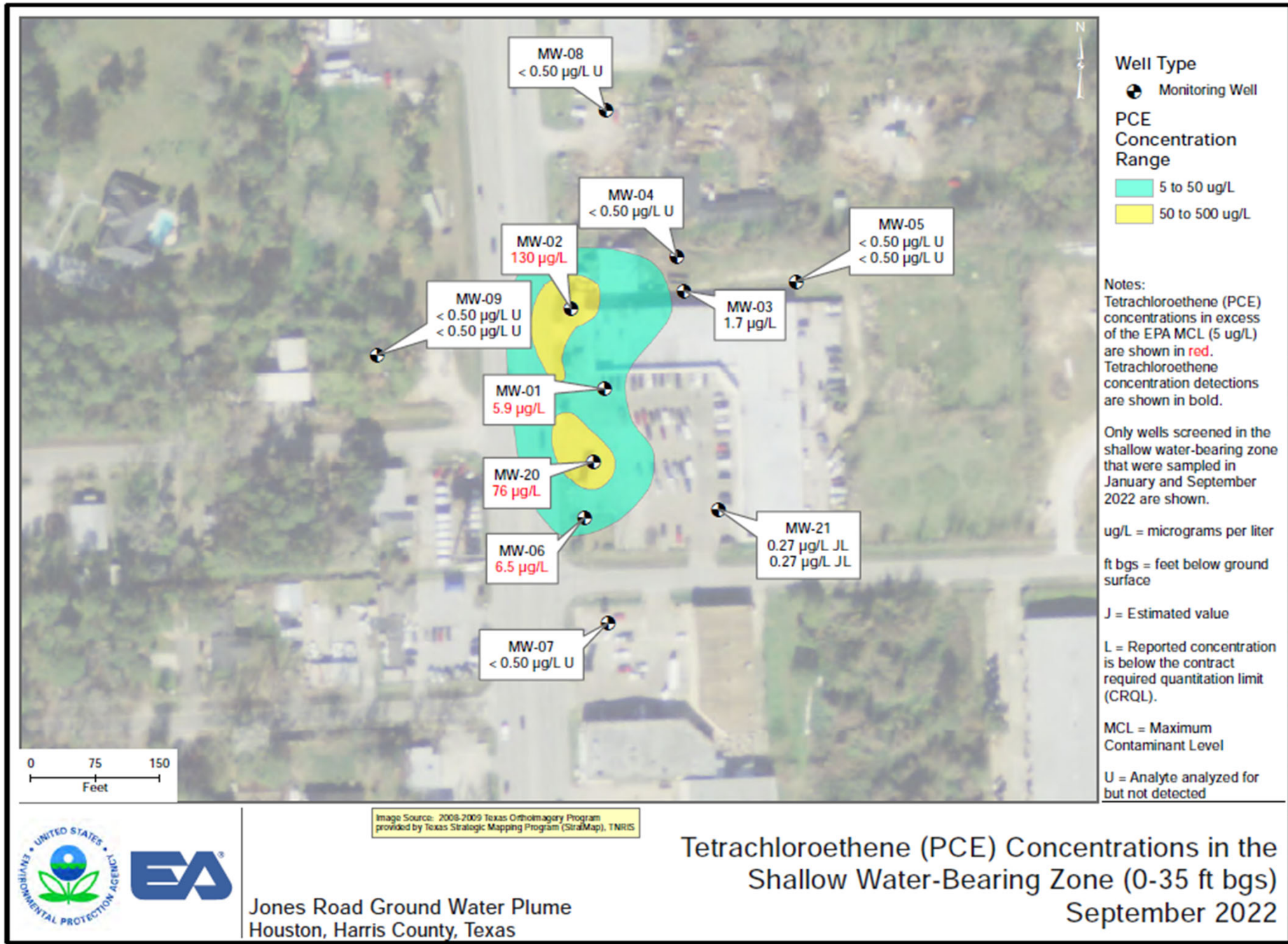
Jones Road Ground Water Plume Superfund Site Cypress (Harris County), TX

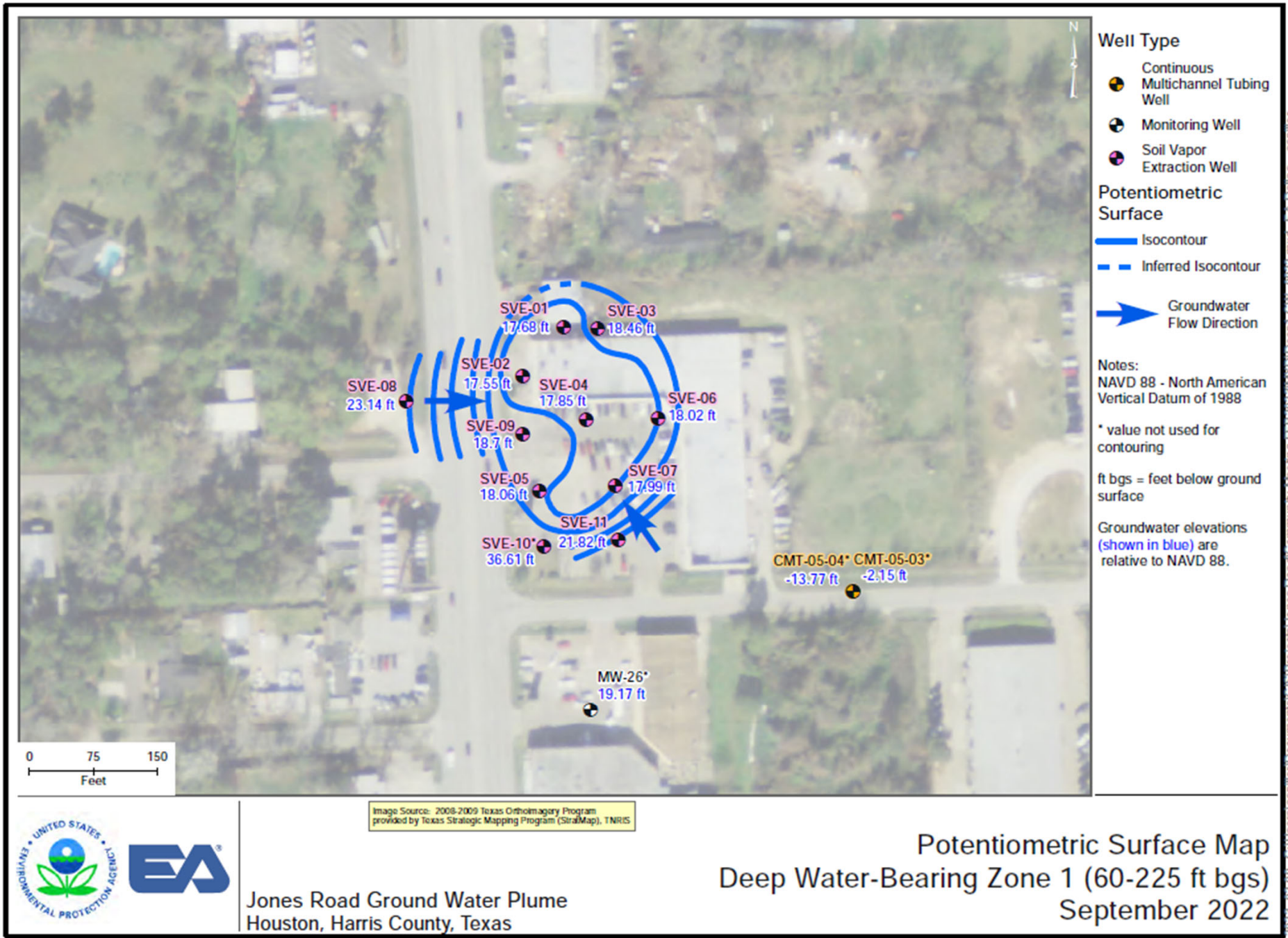


Response Actions Taken at the Site by EPA

Year	Response Actions	Outcome/ Contaminant Reduction
2008	Waterline/public water supply connections (another attempt in 2023)	51% connected
2016, 2018	Bio-remediation injections (hot-spot treatment in 2023)	Source area well: 99% Downgradient well: 97%
2018	Indoor Vapor Mitigation System (shopping center)	Indoor air returned to safe levels
2019	Soil Vapor Extraction (SVE) system (ongoing)	99.9% reduction in source area sample Indoor air at safe levels (industrial and residential)







Jones Road Ground Water Plume
 Houston, Harris County, Texas

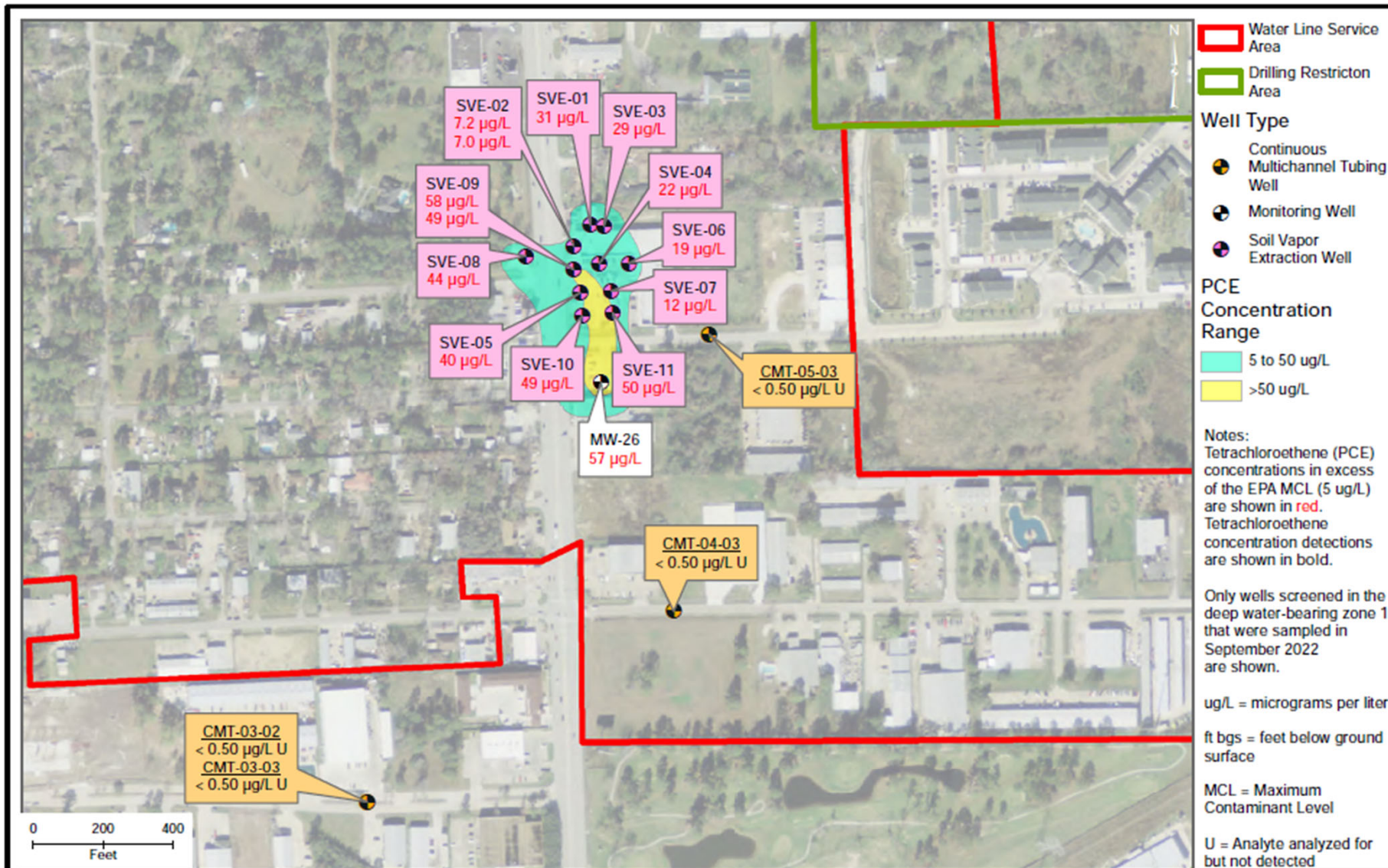


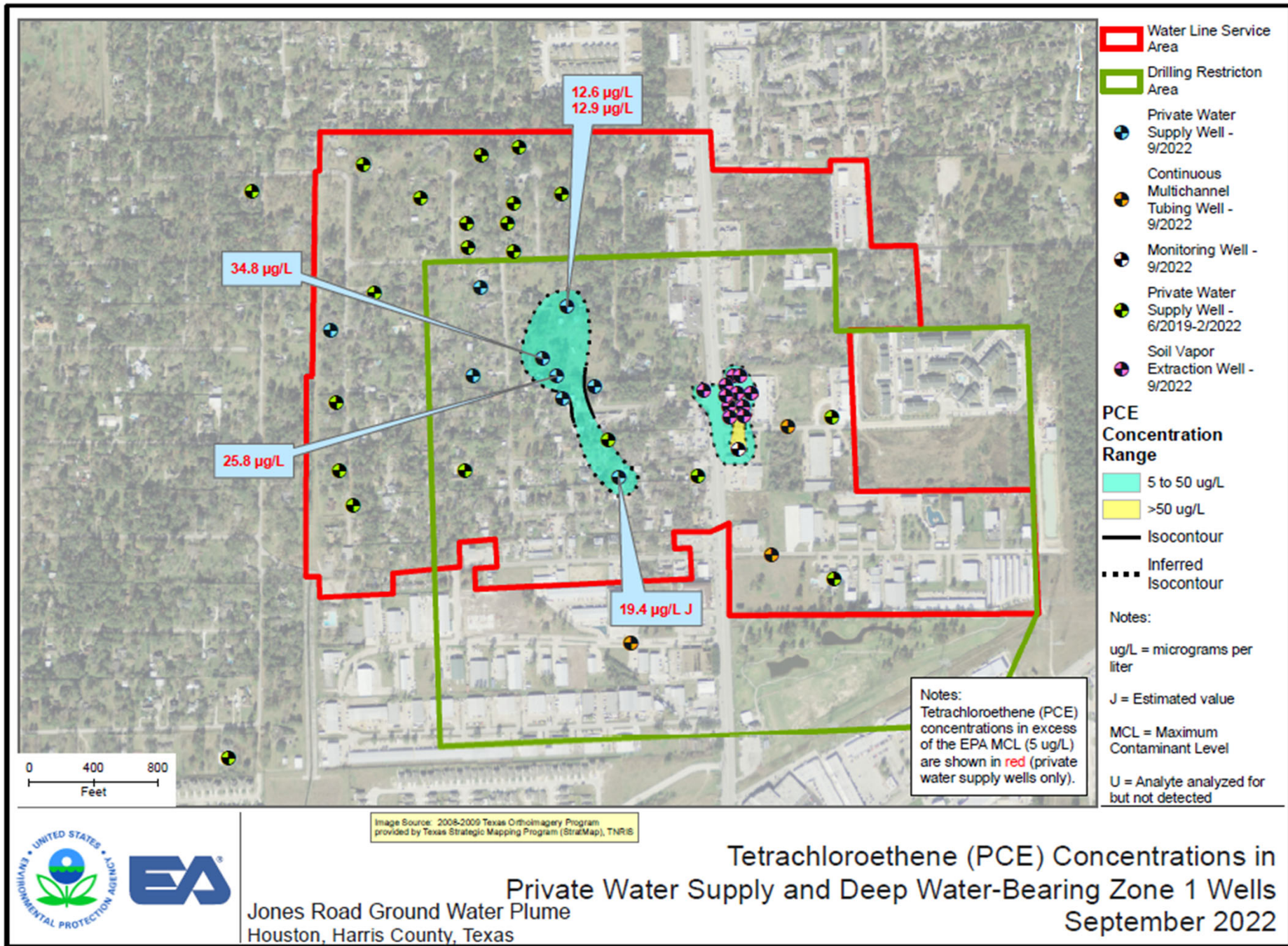
Image Source: 2008-2009 Texas Orthoregistry Program provided by Texas Strategic Mapping Program (StraMap), TNRS

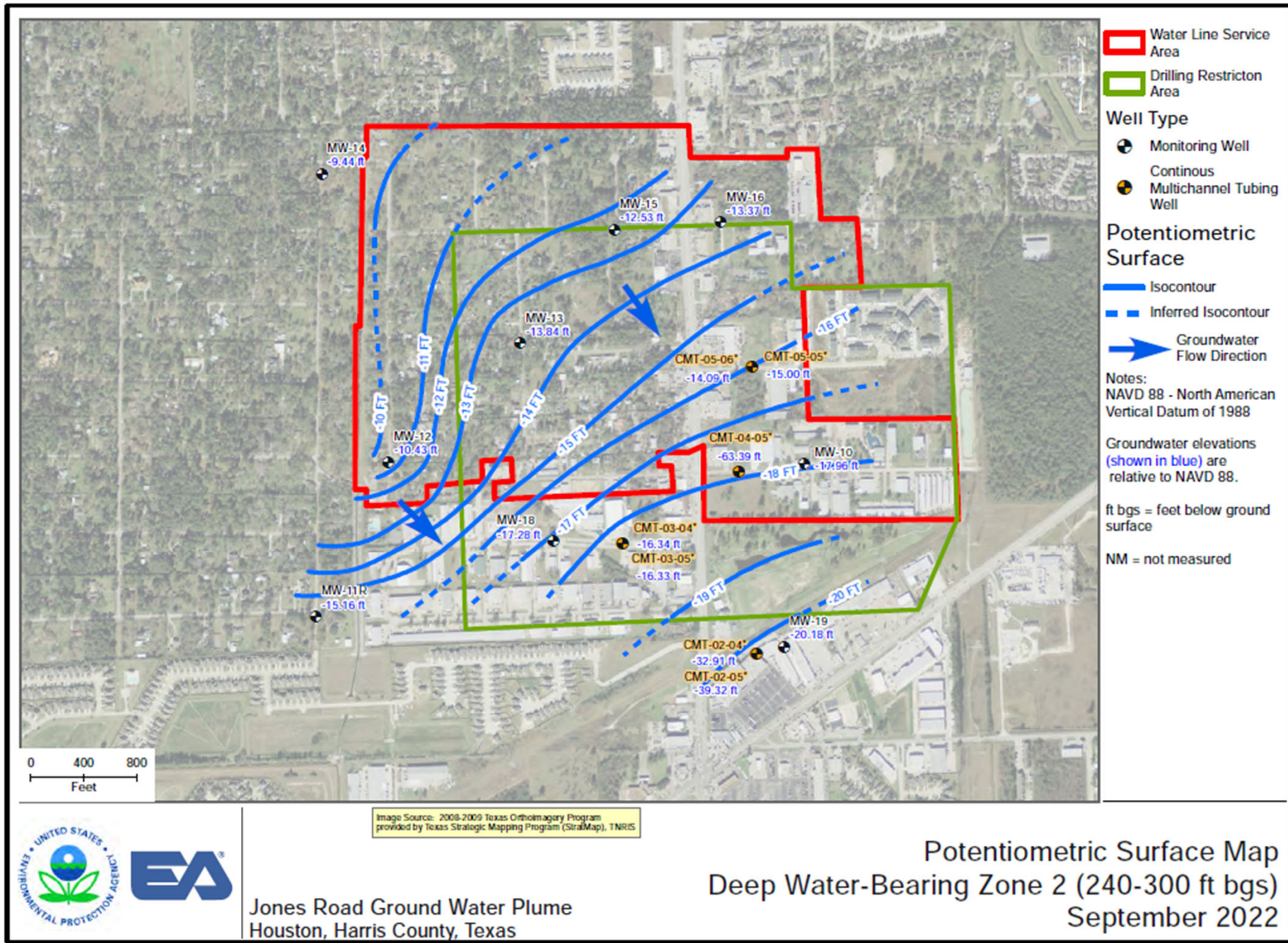


Jones Road Ground Water Plume
Houston, Harris County, Texas

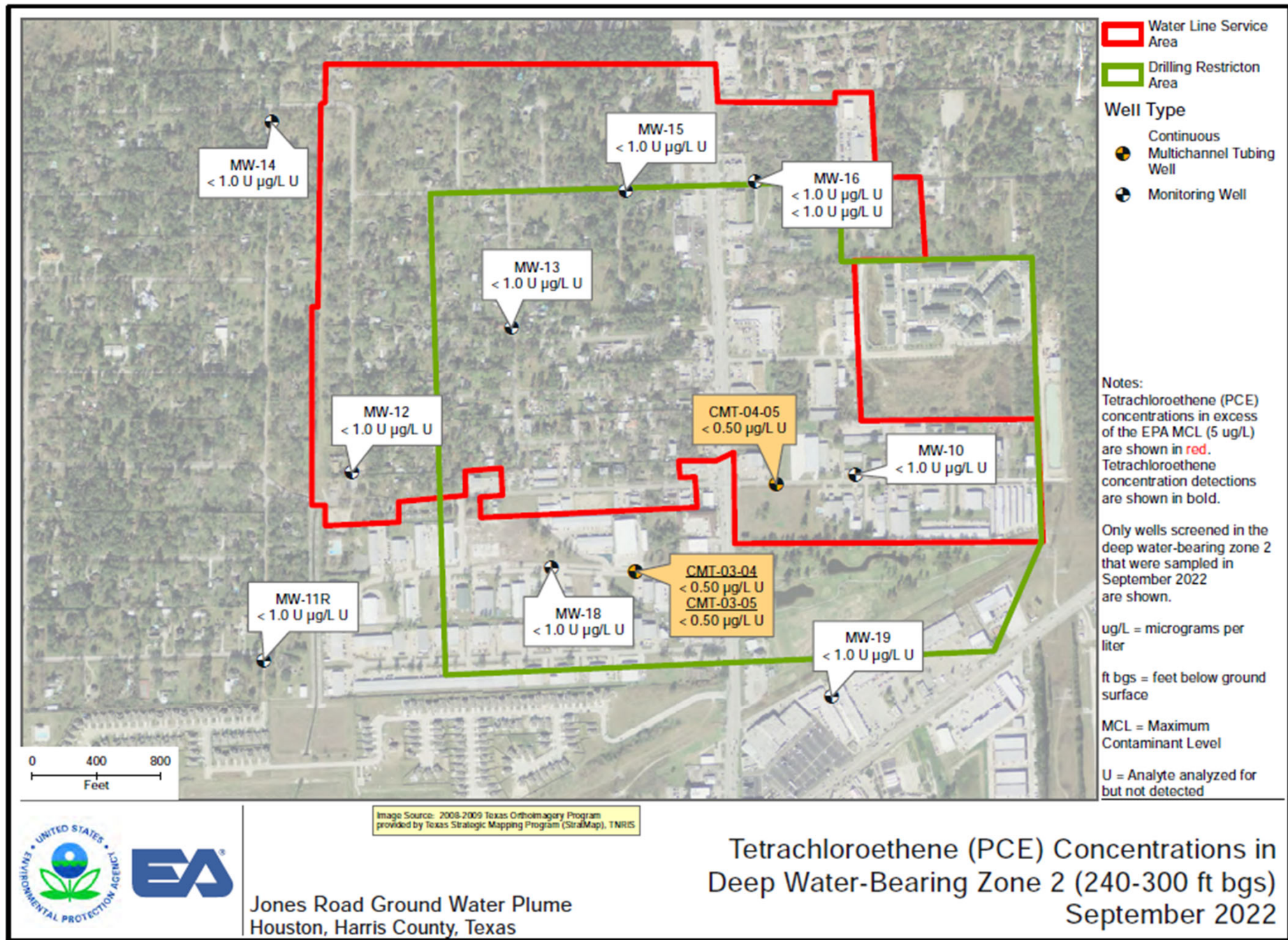
Tetrachloroethene (PCE) Concentrations in
Deep Water-Bearing Zone 1 (60-225 ft bgs)
September 2022

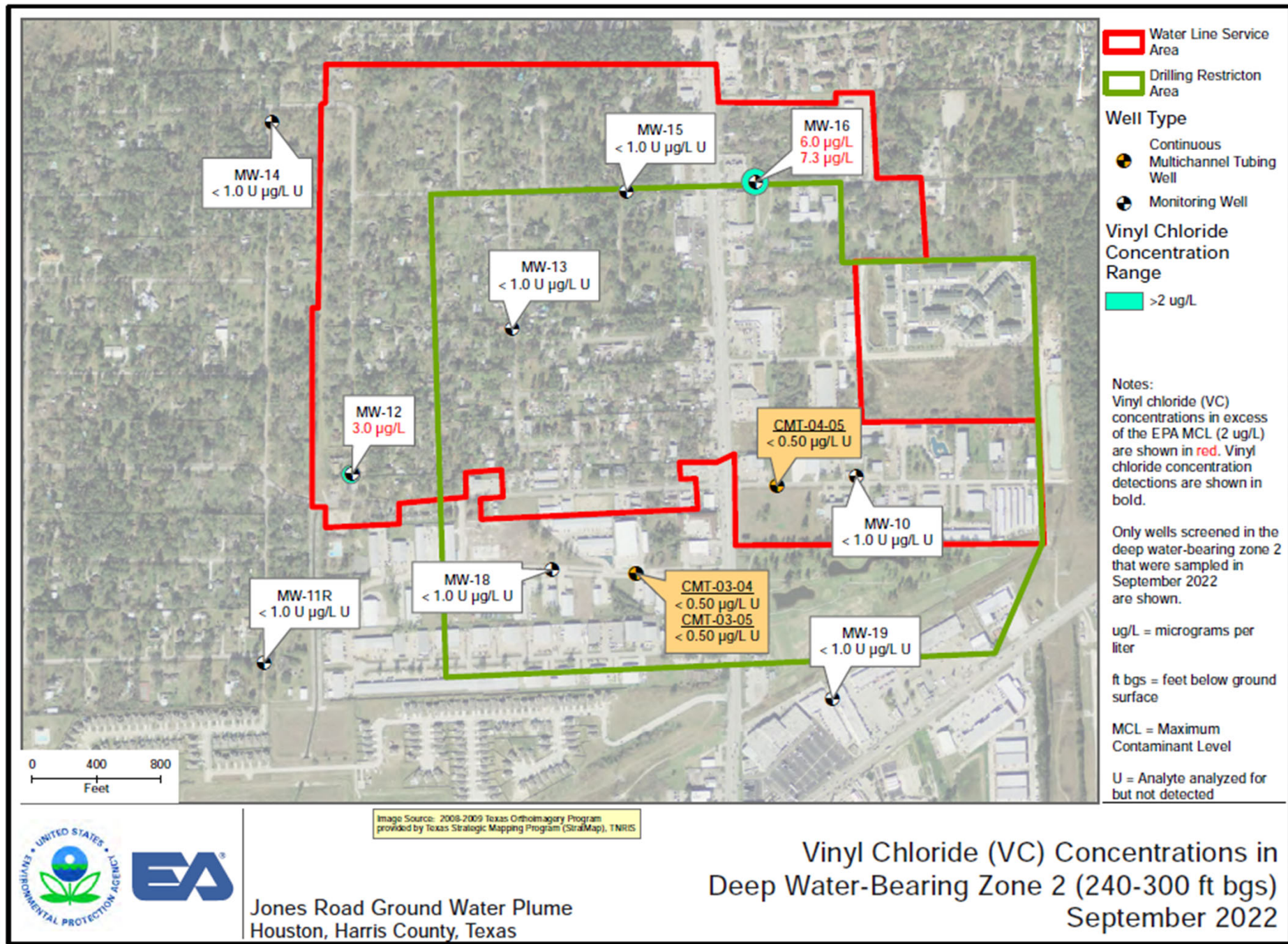
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2023-02-10 C:\Users\aspiller\Documents\GIS\Projects\Jones Road\Community Meeting\FEB2023\WMD\Deep2_GW_0922.mxd EA-Dallas aspillier





Bipartisan Infrastructure Law Funding

- Bipartisan Infrastructure Law - \$3.5 billion in environmental remediation at Superfund sites on the National Priorities List.
- The Bipartisan Infrastructure Law funding will be used to
 - Treat the remaining contamination in the source areas,
 - Provide public water supply connections to private well owners within the waterline area, and
 - Restore groundwater.

Next Steps

- Continue attempts to have private well owners to sign up to be on the waterline and work with White Oak Bend Municipal Utility District
- Continue to operate the SVE system
- Conduct a hot-spot bio-remediation injection in late spring
- Conduct post-injection sampling
- Evaluate effectiveness of bio-remediation
- Evaluate effectiveness of SVE system and determine when to stop the system
- Investigate groundwater further and determine next steps

Waterline / Public Water Supply

Sign up to be connected
to the waterline/public water supply
today!

EPA Site Contact Information

- Raji Josiam, Remedial Project Manager,
at 214.665.8529 or
at josiam.raji@epa.gov
- Jason McKinney, EPA Community Involvement Coordinator,
at 214.665.8132 or
at mckinney.Jason@epa.gov

Extra Slides Discussed at Meeting

Figure 7 – PCE Distribution in Groundwater
(less than 200 feet below ground surface)

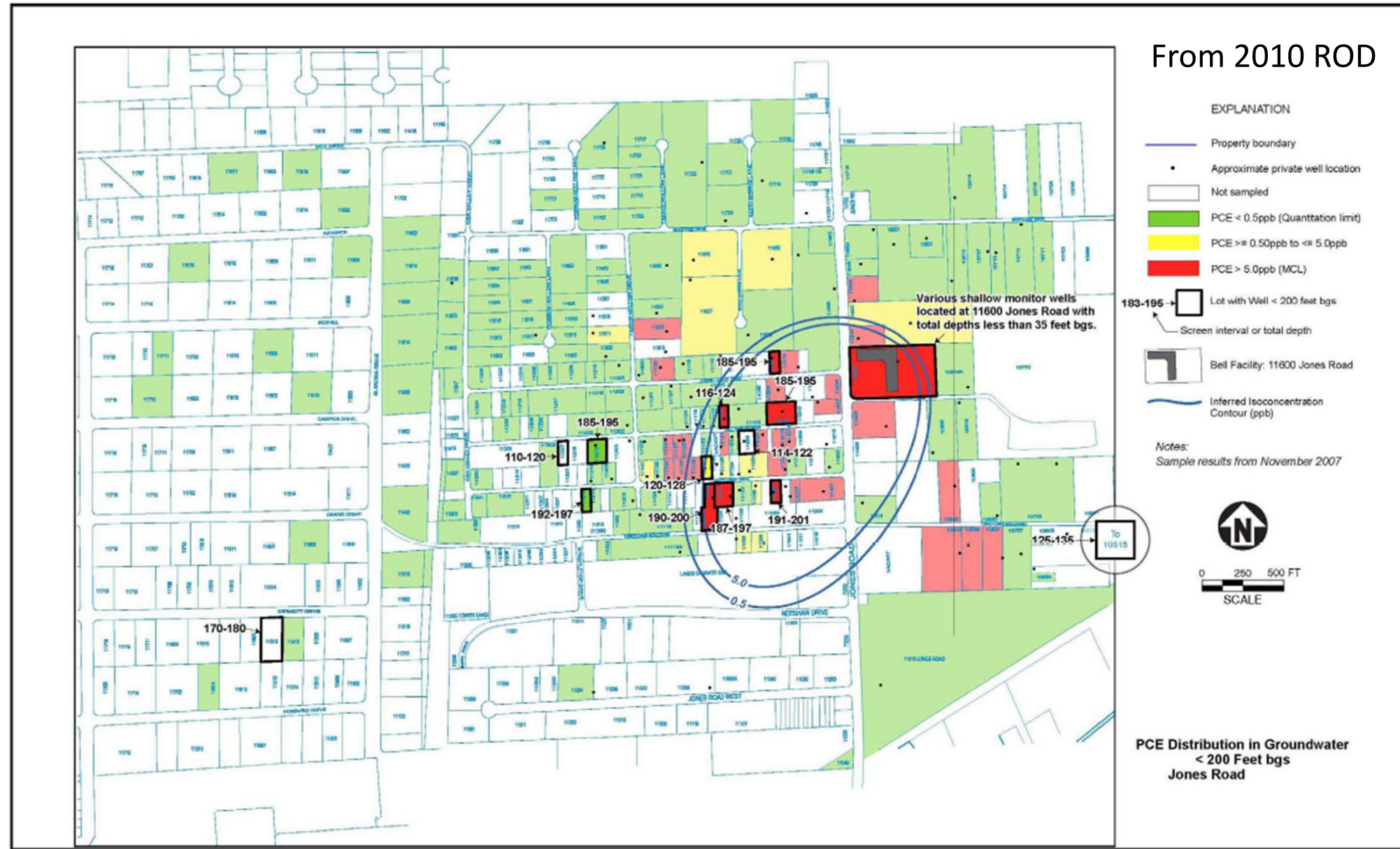


Figure 8 – PCE Distribution in Groundwater
(200 – 230 feet below ground surface)

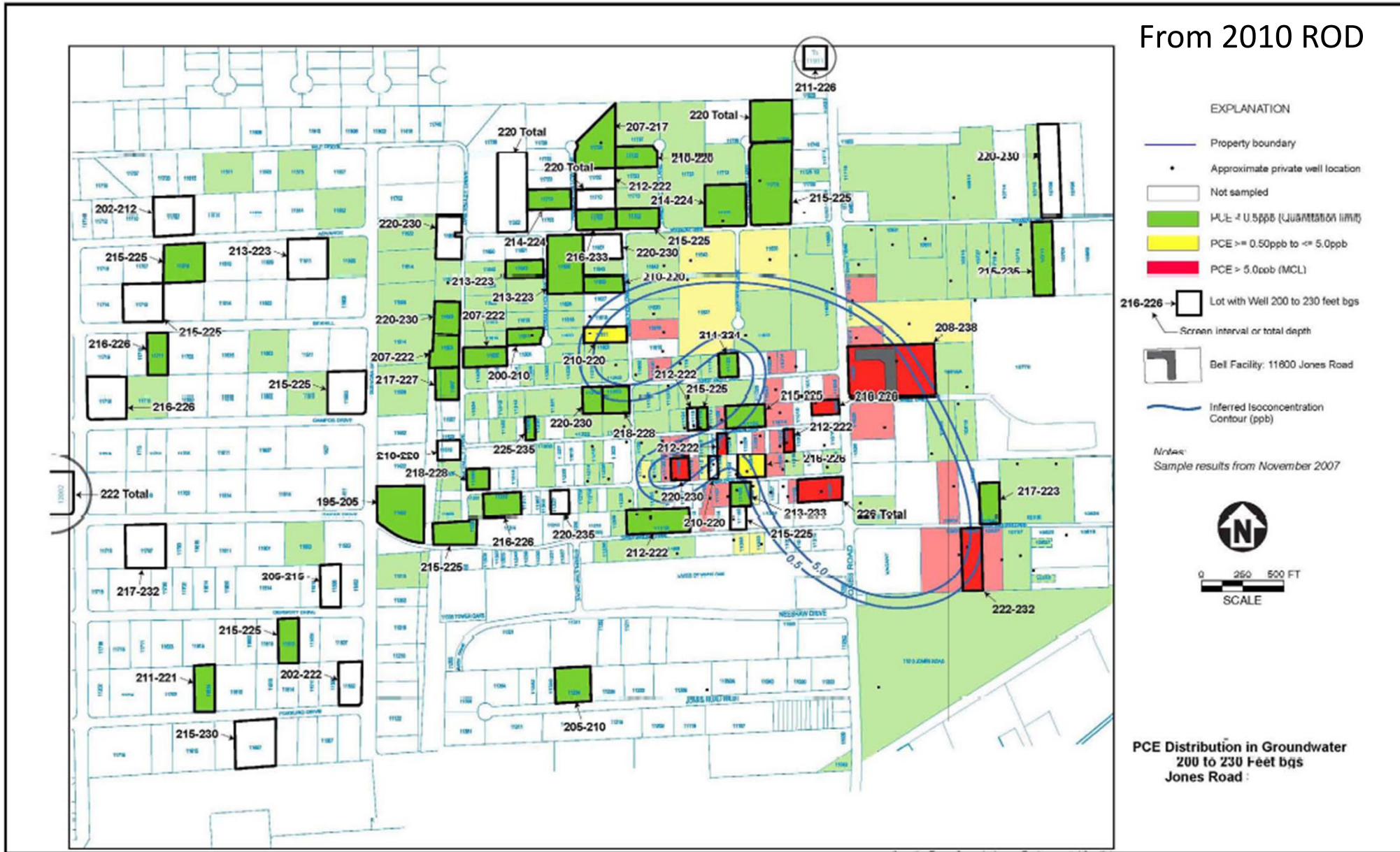
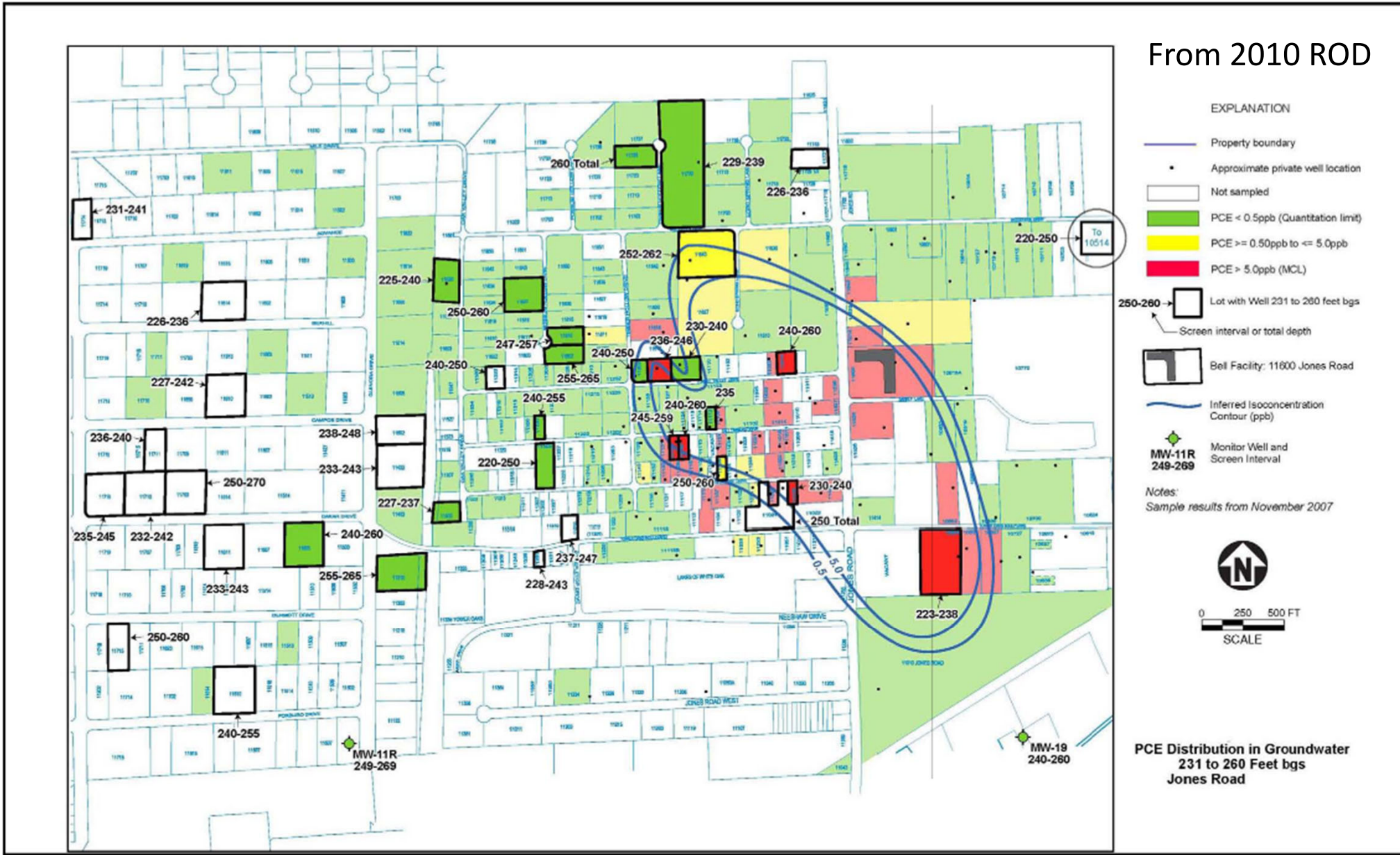
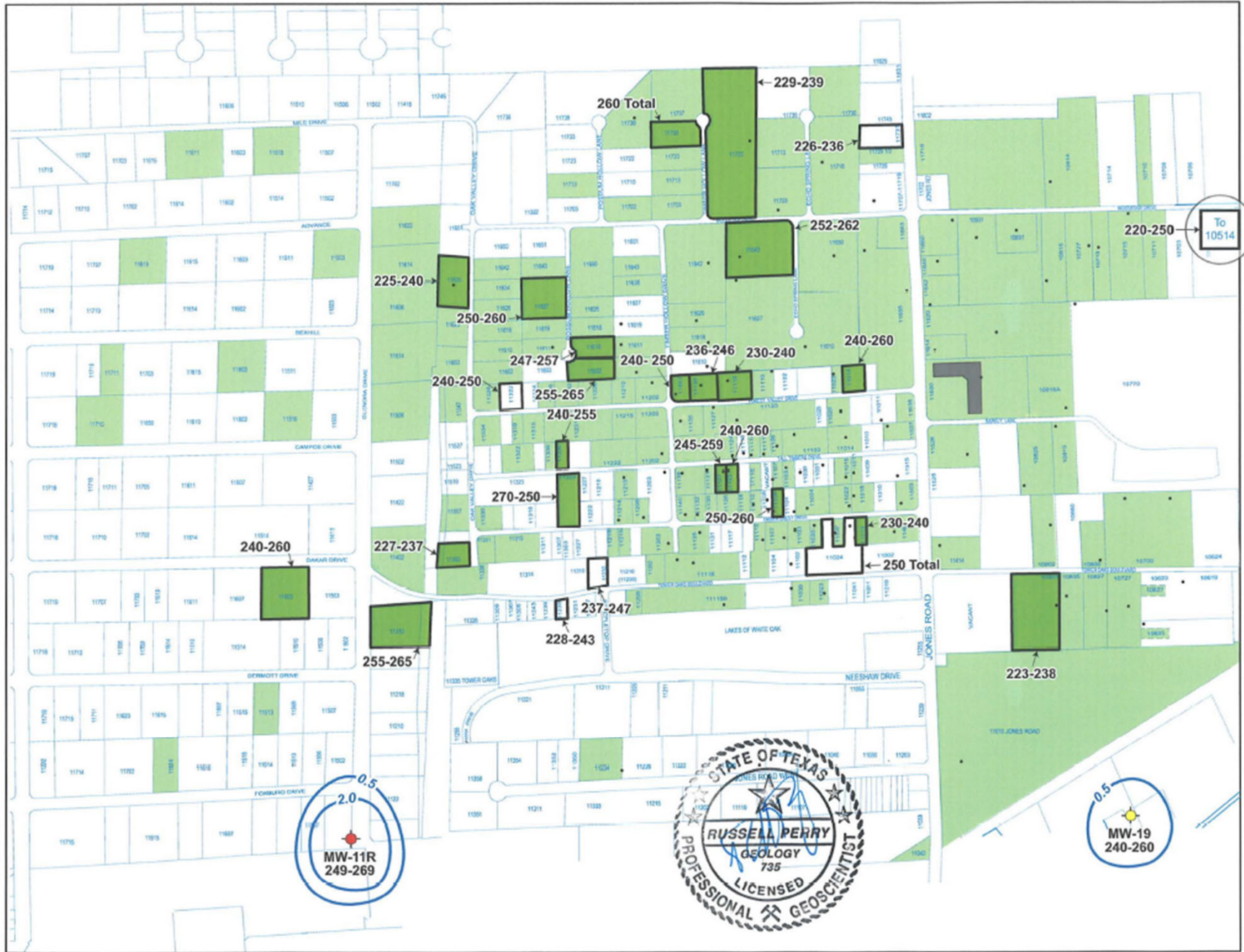


Figure 9 – PCE Distribution in Groundwater

(231 - 260 feet below ground surface)



From 2009 RI Report



EXPLANATION

- Property boundary
- Approximate private well location
- Not sampled
- VC < 0.5 ppb (CLP Quantitation Limit)
- VC >= 0.5 ppb to <= 2.0 ppb
- VC > 2.0 ppb (MCL)
- Lot with Well 231 to 260 feet bgs
- Screen interval or total depth
- Bell Facility: 11600 Jones Road
- Inferred Isoconcentration Contour (ppb)
- Monitoring Well and screen interval or total depth

MW-19
240-260

MW-11R
249-269

To 10514

0 250 500 FT
SCALE

Figure 29
VC Concentrations in Groundwater Lots with Well Depths 231 to 260 Feet Below Ground Surface
November 2007
Jones Road Groundwater Plume Superfund Site
Harris County, Texas

120389.1400 (B18)-B36_Nov07_VC

(from the Texas Commission on Environmental Quality)

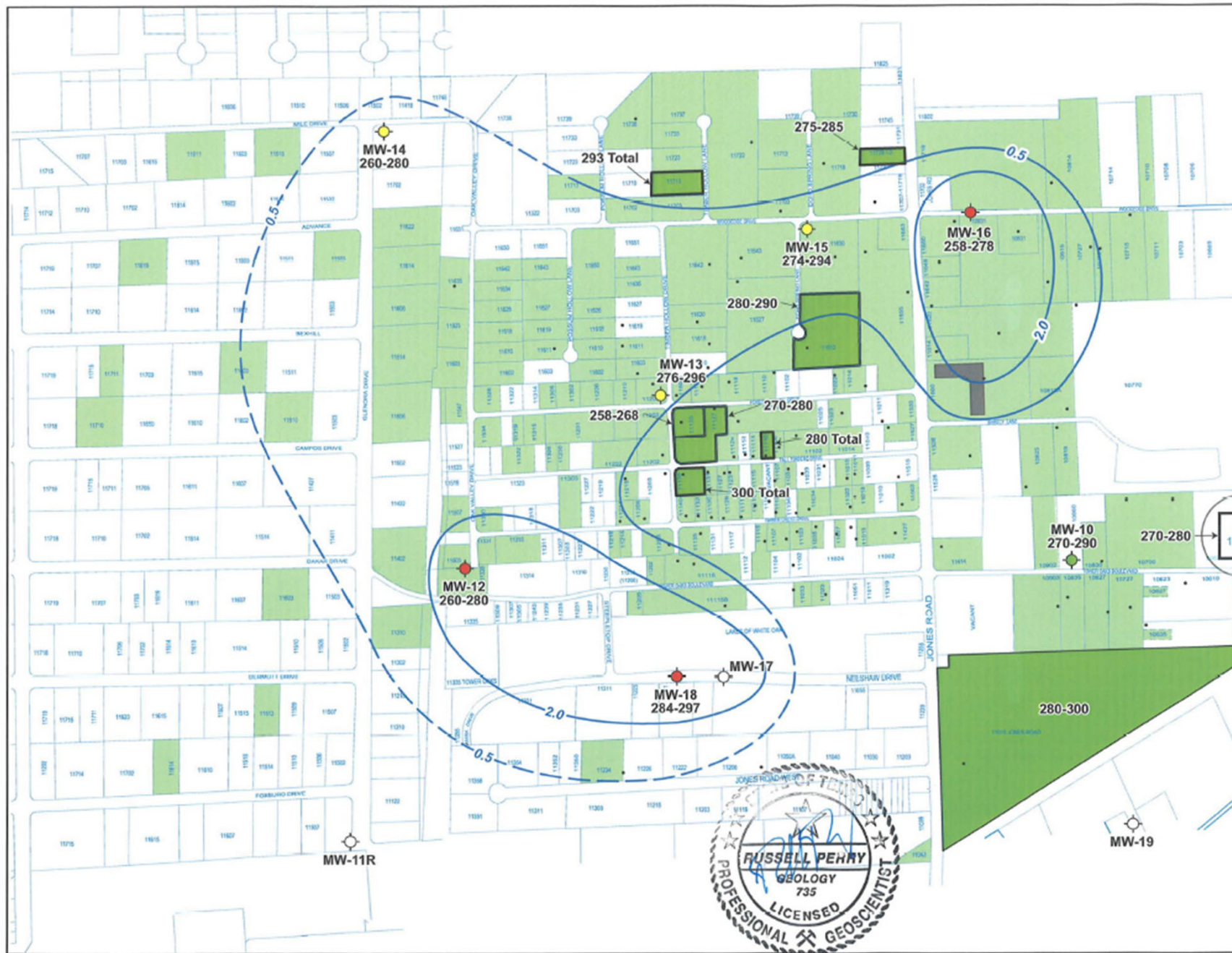
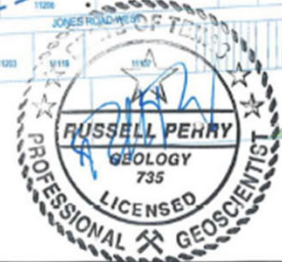


Figure 30
 VC Concentrations in Groundwater
 Lots with Well Depths 261 to 300 Feet
 Below Ground Surface
 November 2007
 Jones Road Groundwater Plume
 Superfund Site
 Harris County, Texas



(from the Texas Commission on Environmental Quality)

Vapor Intrusion Investigation Results - Volatile Contaminants of Concern in Air (September 2022)

Jones Road Ground Water Plume Superfund Site, Harris County, Texas

				Tetrachloroethene ¹	Trichloroethene ¹	cis-1,2-Dichloroethene ¹	trans-1,2-Dichloroethene ¹	Vinyl chloride ²
				(ug/m ³)	(ug/m ³)	(ug/m ³)	(ug/m ³)	(ug/m ³)
USEPA RSL for Industrial Indoor Air				180	8.8	180	180	280
USEPA RSL for Residential Indoor Air				42	2.1	42	42	17
Location ID	Field Sample ID	Sample Date	Sample Type	Result	Result	Result	Result	Result
Shopping Center - Outdoor and Indoor Air								
Outdoor Air								
ASBKG-2	ASBKG-2-09082022	9/8/2022	N	0.23	0.17	< 0.12 U	0.026 J	< 0.038 U
ASBKG-4	ASBKG-4-09082022	9/8/2022	N	1.6	0.10 J	0.029 J	0.028 J	< 0.035 U
Indoor Air								
ASI-101	ASI-101-09082022	9/8/2022	N	0.68	0.18 J	0.038 J	< 0.69 U	< 0.045 U
ASI-101	ASI-101-DUP-09082022	9/8/2022	FD	0.67	0.13 J	0.041 J	< 0.65 U	< 0.042 U
ASI-102	ASI-102-09082022	9/8/2022	N	0.71	0.14 J	0.027 J	< 0.66 U	< 0.042 U
ASI-103	ASI-103-09082022	9/8/2022	N	0.64	0.25	0.062 J	< 0.53 U	< 0.034 U
ASI-104	ASI-104-09082022	9/8/2022	N	0.52	0.13 J	0.027 J	< 0.56 U	< 0.036 U
ASI-105	ASI-105-09082022	9/8/2022	N	0.70	0.18	0.023 J	< 0.56 U	< 0.036 U
ASI-106	ASI-106-09082022	9/8/2022	N	0.40	0.15 J	< 0.11 U	0.028 J	< 0.036 U
ASI-107	ASI-107-09082022	9/8/2022	N	0.46	0.18	< 0.11 U	0.039 J	< 0.037 U
ASI-108	ASI-108-09082022	9/8/2022	N	1.2	0.13 J	< 0.11 U	0.025 J	< 0.036 U
Shopping Center Sub-slab Soil Gas								
				Tetrachloroethene ³	Trichloroethene ³	cis-1,2-Dichloroethene ³	trans-1,2-Dichloroethene ³	Vinyl chloride ³
				(ug/m ³)	(ug/m ³)	(ug/m ³)	(ug/m ³)	(ug/m ³)
Sub-slab Industrial Levels				6,000	293	6,000	6,000	9,333
Sub-slab Residential Levels				1,400	70	1,400	1,400	567
Sub-slab Soil Gas								
ASS-101	ASS-101-09082022	9/8/2022	N	610	16	2.5	< 6.4 U	0.27 J
ASS-101	ASS-101-DUP-09082022	9/8/2022	FD	620	16	2.2	< 6.6 U	0.27 J
ASS-102	ASS-102-09082022	9/8/2022	N	470	28	4.3	< 6.3 U	0.97
ASS-103	ASS-103-09082022	9/8/2022	N	33	1.1	2.6	< 0.59 U	< 0.038 U
ASS-104	ASS-104-09082022	9/8/2022	N	11	1.0	0.11	< 0.51 U	< 0.033 U
ASS-105	ASS-105-09082022	9/8/2022	N	16	0.92	0.80	< 0.60 U	< 0.039 U
ASS-106	ASS-106-09082022	9/8/2022	N	34	1.2	0.042 J	< 0.61 U	< 0.039 U

Notes:

¹ EPA RSLs for HQ=1; Nov 2022; (the RSL for HQ=1 is more conservative than for TR=1E-04)

² EPA Regional Screening Levels (RSLs) for TR = 1E-04; Nov 2022; (the RSL for TR=1E-04 is more conservative than for HQ=1)

³ Sub-slab values calculated using the methodology specified in the EPA OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Source to Indoor Air, June 2015, by dividing indoor air by an attenuation factor of 0.03 for shallow/sub-slab soil gas.

All vapor intrusion samples were analyzed via EPA Method TO-15 Selective Ion Monitoring.

Links

TCEQ's Dry-Cleaner Program

[Dry Cleaner Remediation Program - Texas Commission on Environmental Quality - www.tceq.texas.gov](http://www.tceq.texas.gov)

TDLR Water Well Driller and Pump Installer

<https://www.tdlr.texas.gov/wwd/wwd.htm>

EPA Private Well Water Testing Fact Sheet

https://www.epa.gov/sites/default/files/2015-11/documents/2005_09_14_faq_fs_homewatertesting.pdf

EPA Safe Drinking Water Hotline 800-426-4791

State Accredited Laboratories

www.epa.gov/safewater/labs

https://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html

- ToxFAQs
- Tetrachloroethylene <https://www.atsdr.cdc.gov/toxfaqs/tfacts18.pdf>
- Trichloroethylene