

County of Santa Clara Local Oversight Program of Leaking Underground Storage Tanks

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LOP

- ◆ Contract with the State Water Resources Control Board
- ◆ Releases of Petroleum Products from Underground Storage Tanks
- ◆ This does not include hydraulic lifts, sumps or clarifiers

UST Removal

- ◆ Oversight by CUPA
- ◆ Soil samples in accordance with LUFT Manual (being revised)
- ◆ Groundwater samples
- ◆ Should they overexcavate?




Legend

- San Francisco Bay
- Santa Clara Confined
- Santa Clara Unconfined
- Coyote
- Ulagas Unconfined
- Ulagas Confined
- Bedrock
- Santa Clara County Boundary

Santa Clara County with Groundwater Subbasins

0 2 4 8 12 16 Miles


When does a Release become a Case?

- ◆ There are No clear cut guidelines
 - ◆ If there is groundwater present in the excavation, submit data to us
 - ◆ If Petroleum Hydrocarbons are >100 ppm in soil, we generally will open a case
 - ◆ Are there historic releases at the site?
 - ◆ Sensitive Receptors
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What do you do?



What do we consider?

- ◆ Review the analytical data, UST condition, and site conditions
 - ◆ Research historical releases at the site
 - ◆ Proximity of Water Supply Wells or surface waters
 - ◆ Open and Close Listings
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- A decorative graphic at the bottom right of the slide, consisting of a stylized mountain range silhouette in various shades of teal and blue.

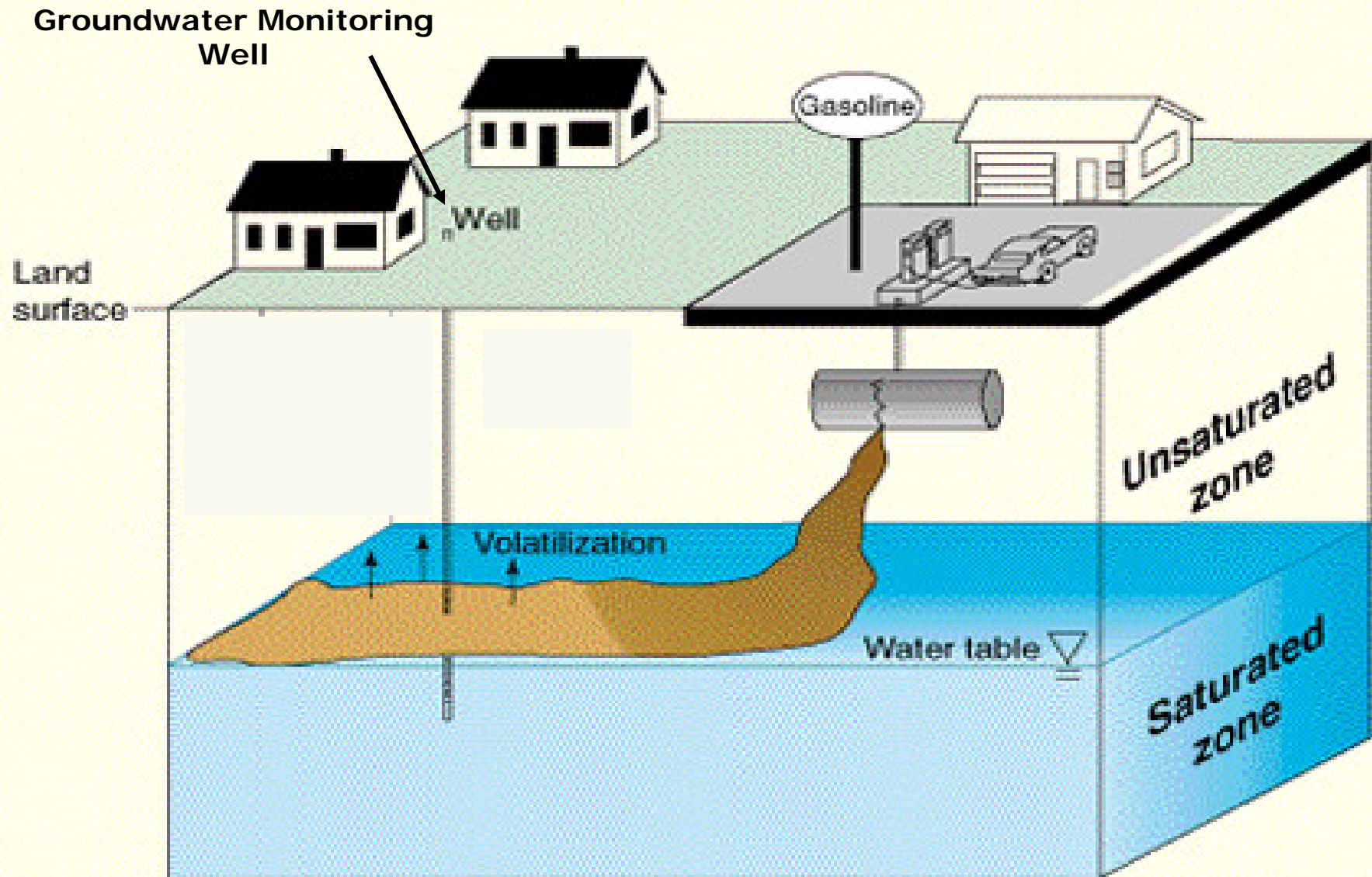
Now it is a Case

- ◆ Site Assessment
- ◆ Remediation
- ◆ Confirmation Monitoring
- ◆ Case Closure

Site Assessment

- ◆ Define vertical and horizontal extent of soil and groundwater contamination
- ◆ Define the hydrogeologic characteristics of the site including:
 - Groundwater flow direction
 - Depth to Groundwater
 - Engineering Properties of Soils
- ◆ May require the installation of monitoring wells

Define the Extent of Contamination



Soil and Groundwater Investigation Drilling and Geoprobe



Soil and Groundwater Investigation

Soil Sampling and Lithologic Description




Risk Assessment

Prior to Closure a Risk Assessment May Be Completed

- ◆ Evaluates All Potential Risks to Human Health and the Environment Related to:
 - Groundwater
 - Soil
 - Vapor
- ◆ Includes Assessment of Vapor Intrusion, and Quality of Drinking Water
- ◆ If No Risk - Site Can be Closed
- ◆ If Risk – Proceed With Remediation

Remediation is Source Removal

Based on the Results of the Assessment a Remediation Alternative is Selected.

- ◆ Excavation
 - ◆ Vacuum Extraction of Vapors
 - ◆ Pumping of Groundwater
 - ◆ Injection of Chemicals (e.g., ozone)
 - ◆ Natural Attenuation
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Confirmation Sampling

- ◆ Was the Remediation Effective?
- ◆ Did we Reach Our Goals?
- ◆ How do we Know?
 - Soil Sampling
 - Groundwater Monitoring for One Year

Case Closure

- ◆ Were the Cleanup Goals Reached?
- ◆ All Closures are Reviewed by the RWQCB
- ◆ All Wells are Destroyed Prior to Final Closure

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