

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




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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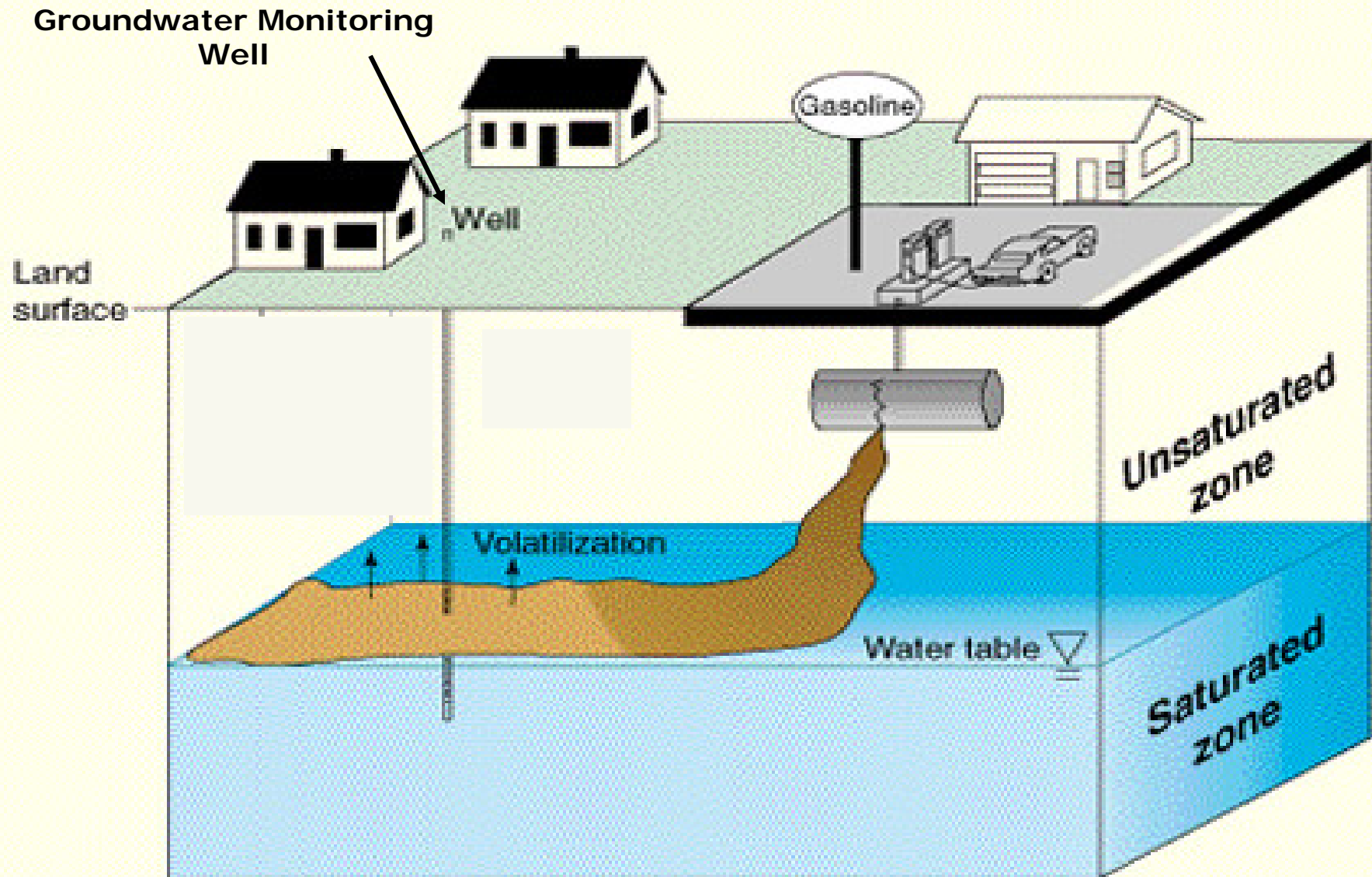
Now it is a Case

- ◆ 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
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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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