



# FROM CUPA TO CLEAN UP

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# AGENDA

## Site Mitigation Program Overview

- Who are we and what do we do?
- Local Oversight Program
- Voluntary Cleanup Program

## Getting from CUPA to Clean Up

- Starts with data collection
- Facility/chemical considerations
- Sampling protocols
- Steps along the way

## We Have Hits, Now What?

- Unauthorized Release Reporting (Leak Report)
- What to report, and how to report it?
- Critical information for decision making
- When does case get opened?

## Questions and Open Discussion



# WHO WE ARE AND WHAT WE DO?

## Site Mitigation implements two types of clean up programs

1. Local Oversight Program (think underground storage tanks) ~ 150 cases
2. Voluntary Cleanup Program (think everything else) ~ 50 cases

## Program Staff

- Jennifer Kaahaaina (Program Manager)
- Gerald O'Regan (Environmental Health Geologist)
- Aaron Costa (Hazardous Materials Specialist)

## What exactly do we do?

- Macro level: Protect human health and the environment from exposures related to chemical releases in the subsurface through remediation and/or risk management.

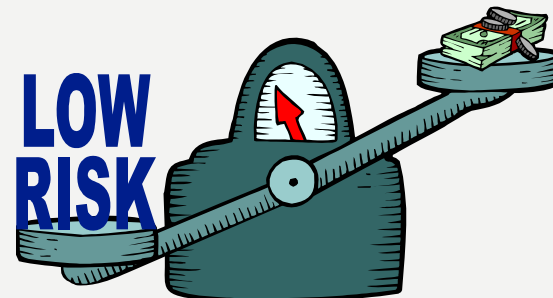
# LOCAL OVERSIGHT PROGRAM (LOP)

150 open cases in portfolio

- Program is funded under contract with the State Water Resources Control Board
- Oversees corrective actions with property owners and environmental consultants to clean up petroleum hydrocarbon releases from leaking underground storage tanks
  - Mainly retail service stations
  - Includes some commercial/industrial properties that have/had USTs
- Prescriptive with limited flexibility in case management (Low-Threat Closure Policy)
- Even with many LOP cases being closed, there are long term management and redevelopment considerations due to the allowable conditions in the Low-Threat Closure Policy.

Typical chemicals in LOP

- Petroleum Hydrocarbons
- Benzene
- Gasoline
- Diesel
- Methyl Tertiary Butyl Ether (MTBE)
- Tert Butyl Alcohol (TBA)
- Polycyclic Aromatic Hydrocarbons (PAH)



# VOLUNTARY CLEANUP PROGRAM (VCP)

50 open cases in portfolio

Can be more "complex" sites with numerous risk drivers. Makes up 30% of caseload, may take 50% or more of caseworker time.

Program is expanding and need for clean up oversight is high

- Driven by development
- Lending community has high level of awareness after 2008 economic crash
- Site data is almost always required during lending process (Phase I/II)
- Financing and even permitting is often dependent on sign off from a regulatory agency
- Greater flexibility in how case is managed and decision making process

Typical chemicals in VCP

- Chlorinated Solvents (PCE, TCE) – Dry cleaning/industrial
- Metals (Chromium, Lead) - Industrial
- Pesticides (DDT, Organochlorines) - Orchards/Private Residence
- Petroleum Hydrocarbon related (benzene, MTBE, TPH) - Previously closed LOP Sites

# SOME SMP STATISTICS

- LOP has >10% annual closure rate
- VCP has ~5% annual closure rate
- LOP opens approximately 5 new cases/year
- VCP opened 5 in the last month and close to 20 in 2015
- SMP sees approximately 20-30 leak reports (URR) annually of which 10-15% are converted to cases. The rest are "**No Action**".



# GETTING FROM CUPA TO CLEAN UP

## It starts with data collection

Closure Permits through the participating agencies often/always have sampling associated with them.

1. UST Systems
  - Have fairly robust sampling protocols and required analysis (New Unidocs form UN-078)
2. Other facilities such as dry cleaners, labs, metal plating, fab shops, etc.
  - Typically don't have standardized sampling protocols or "required" analysis and may be based off of UST guidance.

You may get a complaint that generates an inspection.

1. Inspection follow up shows visible signs of staining/leaking, which generates samples.

# IN THE FIELD AT YOUR FACILITY

## Facility specific examples

1. Permit application states 1,000 gallon gasoline tank located in the parking lot of a pest extermination company.
  - Through communication with the contractor you learn that the tank was discovered during the repaving of the parking lot and was not installed by the current or most recent property owner. How would you categorize this tank to identify the required verification analysis?
    - a. Gasoline tank?
    - b. Diesel tank?
    - c. Used Oil Tank?
    - d. Unknown fuel tank?





# IN THE FIELD AT YOUR FACILITY

## Facility specific examples

2. At a UST closure on an active construction site there are obvious signs that a spill has occurred. There is a hole in the tank and the soil beneath the tank is stained. The contractor is eager to excavate the stained soil, backfill the hole, and move on with the project. Is this acceptable to SMP?
  - When is it ok to backfill a tank excavation?
  - Will additional investigation be required?
  - What are the risks/considerations?
  - Is a leak report required?

# IN THE FIELD AT YOUR FACILITY

## Facility specific examples

3. A dry cleaner located within a strip mall that had been in operation over 30 years is closing. The next door tenant is a children's tutor center. Your inspection shows minimal signs of surface staining and the RP indicates that the operators kept things clean.
  - Would you require soil sampling beneath the foundation?
  - Are there other things to consider?
  - Does what's next door matter?

# SAMPLING PROTOCOLS

Sampling methods are dependent on what media you are targeting

- Soil (primary leak indicator)
- Groundwater (secondary leak indicator)
- Soil Vapor (new primary leak indicator at some sites?)

Most frequently the media that we want targeted is soil and soil vapor.

Although groundwater is a good indicator of a release, it is not typically observed during tank removals. Groundwater sampling would be required once a case was opened.

# SAMPLING PROTOCOLS

Soil Sampling – under EPA Method 5035 purge and trap in conjunction with 8260B gas chromatography

1. Brass sleeves with Teflon paper on each end sealed with plastic caps.
  - Samples typically collected out of excavator or backhoe bucket. The “less disturbed” the sample, the better.
2. EnCore Sampling
  - <https://youtu.be/QUHiyHXzCn0>
3. TerrCore Sampling
  - Kit comes with vials which contain preservative

\*\*Do not allow use of glass jars for soil sampling. Other agencies within the State may allow this, so consultants not familiar with SCC may attempt to collect samples this way.

# SAMPLING PROTOCOLS

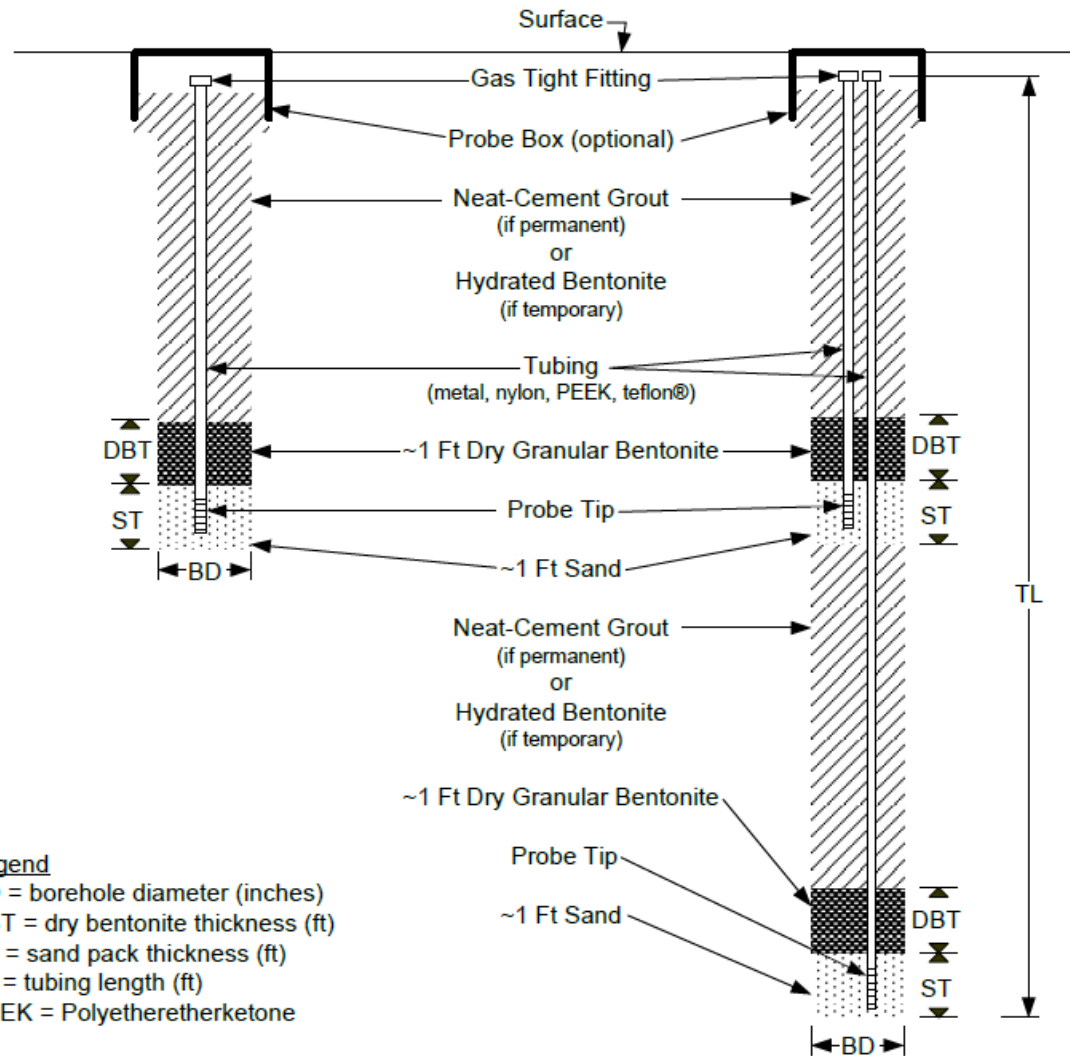
Soil Vapor Sampling – There are no approved EPA Methods specifically designed for analyzing soil gas. Labs use modified TO-15 or Modified 8260.

- There are several sampling guidance documents and sampling methods for soil vapor sampling.
  - SMP uses most recent DTSC Soil Gas Advisory by default and is the preferred guidance for sampling methods.
  - [https://www.dtsc.ca.gov/SiteCleanup/Vapor\\_Intrusion.cfm](https://www.dtsc.ca.gov/SiteCleanup/Vapor_Intrusion.cfm)
- July 2015 EPA published a guidance document.
- Soil vapor sampling for determination of a release should be done at depth of 5 feet below the surface.

\*\*Please note that typical soil vapor sampling requires additional time/planning

# SOIL VAPOR PROBE DESIGN

Typical Single and Nested Soil Gas Probe Design



# UST/FACILITY CLOSURE PROCESS

1. Closure is permitted
2. UST is removed/Facility is inspected
3. Samples are collected
4. CUPA inspector receives and reviews the analytical report
  - COCs and methods should be reconciled against what was required in permit
  - If any chemicals are reported above the detection limit, the URR process is initiated.
  - If no chemicals are reported above the detection limit, CUPA closes out permit.
  - What about metals?
5. URR is filled out and sent (via email) to SMP for processing.
  - The email transmittal process may be changing soon due to CERS integration
  - Processing includes distribution to RWQCB, County Health Officer, etc.
6. SMP staff will determine if additional action is required or issue a “No Action” letter.
7. If anything is questionable, please contact SMP staff to discuss.

# MINIMUM VERIFICATION SAMPLING REQUIREMENTS FOR UST CLOSURES

- Guidance document can be found on Unidocs (UN-078).



Adobe Acrobat  
Document

- So you have hits, now what?



# UNAUTHORIZED RELEASE/CONTAMINATION SITE REPORTING

Report It!!!

What Form to use?

- There are two (or more) versions of the URR form, however only the Unidocs form should be used.
  - Unidocs Form UN-028
  - <http://www.unidocs.org/hazmat/ust/misc/index.html>



UNAUTHORIZED RELEASE (LEAK) / CONTAMINATION SITE REPORT			
For Use Within Santa Clara County			
EMERGENCY <input type="checkbox"/> Yes <input type="checkbox"/> No		HAS THE CAL/EMA REPORT BEEN FILED? <input type="checkbox"/> Yes <input type="checkbox"/> No	
REPORT DATE		REPORT TYPE <input type="checkbox"/> UST <input type="checkbox"/> NON-UST	CASE #
NAME OF INDIVIDUAL FILING REPORT		PHONE	SIGNATURE
REPORTED BY	REPRESENTING <input type="checkbox"/> LOCAL AGENCY <input type="checkbox"/> REGIONAL BOARD <input type="checkbox"/> OWNER/OPERATOR <input type="checkbox"/> OTHER	COMPANY OR AGENCY NAME	
ADDRESS			
STREET		CITY	STATE ZIP
RESPONSIBLE PARTY	NAME <input type="checkbox"/> Unknown	CONTACT PERSON	PHONE
ADDRESS			
STREET		CITY	STATE ZIP
SITE LOCATION	FACILITY NAME (IF APPLICABLE)	OPERATOR	PHONE
ADDRESS			
CROSS STREET		CITY	Santa Clara COUNTY ZIP
LOCAL AGENCY		AGENCY NAME	PHONE
Santa Clara County		Department of Environmental Health - Site Mitigation Program	(408) 918-3400
REGIONAL BOARD			
San Francisco Bay RWQCB - (510) 622-2300			
SUBSTANCES INVOLVED	(1)	NAME	QUANTITY LOST (Gallons)
	(2)		<input type="checkbox"/> Unknown
DISCOVERY/ABATEMENT	DATE DISCOVERED	HOW DISCOVERED	<input type="checkbox"/> Subsurface Monitoring <input type="checkbox"/> Spill Response <input type="checkbox"/> Phase I or II Investigation <input type="checkbox"/> Tank Removal/Tank Test <input type="checkbox"/> Facility Closure <input type="checkbox"/> Other
	DATE DISCHARGE BEGAN	METHOD USED TO STOP DISCHARGE (Check All That Apply)	
	HAS DISCHARGE BEEN STOPPED? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, DATE	<input type="checkbox"/> Remove Contents <input type="checkbox"/> Close Tank <input type="checkbox"/> Repair Tank <input type="checkbox"/> Spill Cleanup <input type="checkbox"/> Replace Tank <input type="checkbox"/> Facility Closure <input type="checkbox"/> Repair Piping <input type="checkbox"/> Other	
SOURCE/CAUSE	SOURCE OF DISCHARGE <input type="checkbox"/> Tank /Piping Leak <input type="checkbox"/> Container Leak <input type="checkbox"/> Unknown <input type="checkbox"/> Other	CAUSE(S) <input type="checkbox"/> Overfill <input type="checkbox"/> Corrosion <input type="checkbox"/> Rupture/Failure <input type="checkbox"/> Unknown <input type="checkbox"/> Spill <input type="checkbox"/> Other	
CASE TYPE	CHECK ONE ONLY <input type="checkbox"/> Undetermined <input type="checkbox"/> Soil Only <input type="checkbox"/> Groundwater <input type="checkbox"/> Drinking Water - (Check Only If Water Wells Have Actually Been Affected)		
CURRENT STATUS	CHECK ONE ONLY <input type="checkbox"/> No Action Taken <input type="checkbox"/> Case Closed (Cleanup Completed or Unnecessary) <input type="checkbox"/> Leak Being Confirmed <input type="checkbox"/> Pollution Characterization <input type="checkbox"/> Remediation Plan <input type="checkbox"/> Post Cleanup Monitoring in Progress <input type="checkbox"/> Preliminary Site Assessment Work Plan Submitted <input type="checkbox"/> Cleanup Underway <input type="checkbox"/> Preliminary Site Assessment Underway		
REMEDIAL ACTION	CHECK APPROPRIATE ACTION(S) <input type="checkbox"/> Cap Site (CD) <input type="checkbox"/> Excavate & Treat (ET) <input type="checkbox"/> Treatment At Hookup (HU) <input type="checkbox"/> Other <input type="checkbox"/> Contamination Barrier (CB) <input type="checkbox"/> No Action Required (NA) <input type="checkbox"/> Enhanced Bio Degradation (IT) <input type="checkbox"/> Vacuum Extract (VE) <input type="checkbox"/> Remove Free Product (FP) <input type="checkbox"/> Replace Supply (RS) <input type="checkbox"/> Excavate & Dispose (ED) <input type="checkbox"/> Pump & Treat Groundwater (GT) <input type="checkbox"/> Vent Soil (VS)		
COMMENTS			



# URR IS FILLED OUT. NOW WHAT?

We need more info!!! In addition to the URR, SMP will need supplemental information to make decisions.

1. Written description of the sampling activity.
  - Tank disposition, depths, locations of all samples collected, and any excavation work that is performed.
2. Complete analytical package for all samples collected.
  - If the project spans multiple days with samples being collected at different times, please wait to send us a complete package.
3. Package must include a site plan or drawing showing sample locations in relation to site landmarks.
4. A description of the overall site status.
  - Is the site currently being developed. Have you heard that it will be in the near future?
  - Is it a straight UST removal or is the facility upgrading/replacing tanks?
5. After reviewing all of this information, SMP can make a decision on whether or not to open a case.

# QUESTIONS/DISCUSSION

- Where do all the leak reports go?
  - Do all of them come through the County? Do some go straight to the RWQCB? Do some not get sent anywhere?
- What if there is visual contamination and we over-excavate? Do we need a leak report?
- What would make things easier for you?
- What kind of questions do you hear from the field?

# RESOURCES

- Contaminated Sites Database
  - GeoTracker Database <http://geotracker.waterboards.ca.gov/>
  - LUSTOP Database <http://lustop.sccgov.org/>
  - EnviroStor <http://www.envirostor.dtsc.ca.gov/public/>

The screenshot shows the GeoTracker website for the State Water Resources Control Board. The page features a navigation menu with links for 'GeoTracker Home', 'Tools', 'Reports', 'Information', and 'SWRCB Home'. A sidebar on the left contains sections for 'TOOLS' (Advanced Search, Download Data, Download ESI Data), 'REPORTS' (Click to View Reports), and 'INFORMATION' (SWRCB Home, GeoTracker Fact Sheet, GeoTracker OAMA Fact Sheet, Electronic Submittal of Information (ESI)). The main content area includes a 'Welcome to GeoTracker' message, a 'MAP LOCATION OF INTEREST' field with an example address, a prompt to use the 'ADVANCED SEARCH TOOL', and a 'REPORTS' section listing various report types such as 'Petitions for Closure to State Water Board', 'Clean-up Sites By County', and 'Site Type Summary Report'. The footer contains 'Back to Top', 'Contact Us', and 'Copyright © 2012 State of California'.

# CONTACT INFORMATION

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