



Dry Cleaners

Dry cleaners commonly employ a chemical called Tetrachloroethylene (PCE) in their clothes-cleaning processes. PCE, a chemical with known health risks, sinks when it contacts wet soils and groundwater. PCE is called a Dense Non-Aqueous Phase Liquid (DNAPL) or a “sinker”. Because of its solubility, PCE released into the soil has a tendency to spread horizontally and vertically from the source area traveling through permeable layers of soil and along underground conduits. Often, PCE plumes exist as vapors within soil below dry cleaning sites, creating potential health risks to building occupants.

The Reynolds Group (TRG) staff are experts in the environmental audits of dry cleaners and subsurface assessments, including soil gas surveys, soil sampling, and groundwater well installation. TRG has extensive experience resolving PCE cases. TRG’s remediation techniques include excavation, in-situ extraction (soil vapor, sparging, and pump and treat), and chemical injection. In addition, given current regulatory trends, TRG focuses on remedial approaches on mitigating potential health risks which may exist at properties or adjoining sites using vapor intrusion models.

TRG’s professionals assist clients with a variety of legal issues associated with dry cleaners, including assignment of responsibility in litigation, diminution of real property value, Superfund responsible party designation, third party litigation regarding off-site impacts, and determination of most appropriate, timely, cost-effective remedial solutions.

TRG can employ engineering and chemical forensic methods to determine sources and ages of releases. TRG’s innovative approaches have added tremendous value to a variety of cases involving dry cleaners ranging from a city dealing with a contaminated water supply to a client whose dry cleaner lies in a potential Superfund zone.

REPRESENTATIVE CLIENT LIST (All Services)

Banks/Insurance Co.

Stancorp Financial Group
World Trade Bank
Union Bank of California

Industrial

Unilever
McMullen Oil Company
Brea Cañon Oil Company

Law Firms

Allen, Matkins, Leck, Gamble, Mallory, Natsis
Manatt, Phelps & Phillips
Weston, Benshoof, Rochefort, Rubalcava
Cassel, Malm, Fagundes

Property Owners

CB Commercial Real Estate
Koll Management Services
Morgan Stanley Real Estate
Primstor Development, Inc.

School Districts

Los Angeles
Long Beach
Santa Ana
San Bernardino

Government

California Regional Water Quality Control Board
County of Riverside Real Estate Services
County of Orange General Services
County of San Bernardino Engineering Services
City of San Diego
Los Angeles County Dept. of Public Works
Orange County Water District

SUCCESS STORIES

Groundwater Contamination Source Identification – Lodi, CA

The Reynolds Group (TRG) provided expert testimony and technical consulting services for a groundwater contamination case in Lodi, California. In this prominent litigation, PCE was found in the drinking water supply, prompting City and State actions against local dry cleaners and land owners. TRG's client (the defendant) was accused of contributing to the PCE release, therefore being the responsible party. The defendant formerly conducted printing operations less than 100 feet from two dry cleaning facilities.

To identify potential PCE sources and release points, TRG staff conducted forensic engineering investigations of the sewer using closed circuit TV and subsurface surveys. From this data, an accurate sewer map was created precisely locating cracks, misaligned joints, and lateral connections from the dry cleaners. Using the surveyed locations on the sewer map, TRG staff conducted subsurface sampling to better define the soil and groundwater impact in the immediate vicinity of the sewer. With continuous coring data, a model of the site's lithology was created, and PCE migration pathways were identified. The thorough assessment of the lateral and vertical extent lead to a DTSC/RWQCB approved pilot test for remediation of the Site.

From the subsurface assessment data, TRG staff created PCE release models and visualization tools for legal discussions. A presentation of this information led to a prompt settlement of the case.

Superfund Area – “De Minimus” Status

The client is a Potential Responsible Party (PRP) in an area that is being considered for Superfund status. It lies near a major stream tributary where the soil conditions are very rocky. TRG was able to bring the client back into regulatory agency compliance by negotiating a reasonable scope of work for the investigation. The investigation included installing "semi-permanent" soil probes and sampling them to a depth greater than 160 feet below ground surface. Based on the results of the sampling, TRG prepared an expert's consulting report that detailed reasons for considering the client as a “de minimus” contributor to any regional groundwater issue. TRG points to an adjacent property as a large contributor to the contamination. TRG currently is working to minimize the client's PRP liability and is working closely with legal counsel to craft strategies coordinating work with the adjacent PRP.

Soil Vapor Extraction

At a dry cleaner, only vadose zone soils were impacted by PCE; it did not spread to groundwater. When it moved out, a computer retailer occupied the space. TRG provided a lump sum (guaranteed maximum) contract to complete assessment and perform soil remediation via soil vapor extraction. The soil vapor extraction system worked well to reduce PCE soil vapor concentration levels to those acceptable to protect human health and the environment. Three rebound tests and two rounds of confirmation borings were required prior to the Los Angeles County Fire Department granting closure of this site. A copy of the closure letter can be found on TRG's website.

Soil and Groundwater Remediation/Litigation/Cost Recovery

Found in a densely developed urban retail shopping center surrounded by housing, PCE-impacted soil and groundwater were discovered at the active dry cleaner. The owner of the retail center is seeking reimbursement from both current and former dry cleaner tenants. To avoid a protracted cleanup schedule and reduce litigation costs, TRG was retained by the land owner to expeditiously assess and clean up the site. Following site assessment, TRG designed and installed a soil vapor extraction system. Moving into the remediation phase involved coordination with a large number of permitting agencies for construction permits, operating permits (vapor extraction and air sparging), and permitting/monitoring discharges. TRG is working closely with legal counsel as they seek input into the sources of PCE and cost basis of remediation.



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