NEWS

December 2011

New on the State Coalition for Remediation of Drycleaners Website

The State Coalition for Remediation of Drycleaners (SCRD) recently posted on its website the document ***A Citizen's Guide to Drycleaner Cleanup***. This document is an easy-to-read guide explaining the drycleaner cleanup process and describing the technologies that are most commonly used to clean up contaminated drycleaner sites. This guide was designed specifically for citizens with little or no technical or scientific background. This document can be found on the website at http://www.drycleancoalition.org/download/citizens_guide_drycleaner_cleanup.pdf.

SCRD Member sites featured in EPA Newsletter

The September 2011 issue of the Environmental Protection Agency's (EPA) Technology News and Trends newsletter highlighted assessment and remediation of several SCRD member sites where past use of tetrachloroethene (PCE) at drycleaners resulted in environmental contamination. Topics included commonly used technologies such as soil vapor extraction (SVE), bioremediation, and in situ chemical oxidation (ISCO); renewable energy to power these technologies; and studies on controlling contaminant vapor mitigation. The September issue can be found at http://clu-in.org/download/newsltrs/tnandt0911.pdf.

State and National Updates

Alabama

- For the 12th consecutive year, ADEM is providing free compliance calendars to dry cleaners that use perchloroethylene (PERC) as their primary cleaning solvent. The 2012 calendars provide logs for documenting the storage and use of dry cleaning chemicals and also feature monthly tips to explain compliance requirements.

  ADEM will provide this compliance assistance tool to more than 70 dry cleaners whose use of perchloroethylene requires compliance with specific record-keeping guidelines. In the past, the calendars have proven to be a valuable asset in tracking the use of dry cleaner chemicals and in meeting regulatory obligations. The 2012 calendars feature information on refrigeration system pressure, carbon adsorbers, along with leak detection and repair logs.

These calendars serve as a compliance tool to help small businesses and can be utilized to enhance compliance efforts, which is a tremendous benefit for small businesses. The calendars also address additional requirements for PERC usage established by the EPA. The calendars contain contact information that dry cleaner owners can use to get answers to questions they may have regarding environmental regulations, record-keeping, or adding new machines.

Alaska

- The State of Alaska currently does not have a specific dry cleaner remediation program. Dry cleaners investigated as contaminated sites have nearly always had chlorinated solvent releases. Alaska is currently engaged in a Targeted Brownfield Assessment survey to identify historic dry cleaner locations within the communities of Fairbanks and Anchorage. It was anticipated that well over 100 dry cleaners have likely operated within Alaska and have used chlorinated solvents. So far, 46 historic dry cleaners have been located in Fairbanks from the survey. The survey has yet to be completed for Anchorage.

Florida

- The Florida Drycleaning Solvent Cleanup Program has utilized excavation/removal as a remedial technology at eighty-one (81) sites to date. In general these removal actions can be grouped into five (5) different categories.

    - Contaminated soils beneath building floor slabs: 27.3%
    - Contaminated soils near service doors/delivery areas: 23.2%
    - Sanitary sewers/septic tank drain fields: 20.2%
    - Stormwater drains: 19.2%
    - Above/Underground storage tanks: 10.1%

    Since approximately 75% of the Program sites are located in shopping centers or strip malls, removal work is generally conducted where active businesses are present. Coordination with real property owners and business owners/operators is critical. Work is often conducted at night and on weekends. As-built construction drawings are rarely available and the locations of utilities are often unknown by real property owners. It is not uncommon to "discover" unknown structures during the course of excavation, such as surge tanks, blind drains etc.

    Given Florida's shallow water tables, where feasible, most excavations are to the water table. Excavations that encounter organic materials, such as peat, are generally extended into the water table to remove as much of the organic material as possible. Excavation removal methods utilized include: manual excavation, trackhoes and backhoes, vacuum trucks, and large diameter augers. Although most of these excavations have been relatively simple, wooden cribbing, sheet piling, and trench boxes have been utilized to stabilize some excavations and helical piers have been used to stabilize building foundations at a few sites. The volumes of

soil/sediment/sludge removed from these sites have ranged from less than a cubic yard to over 3,200 cubic yards.

Since anaerobic conditions exist in most of the surficial aquifers in Florida, an excavation at a site into the water table provides an opportunity to introduce carbon amendments into the aquifer to stimulate reductive dechlorination. Carbon amendments, including potassium lactate, ethyl lactate, emulsified oil substrate, dextrose and HRC-X™ have been introduced into open excavations at seven (7) Program sites to date.

Illinois

- Legislation to phase out the use of perchloroethylene (perc) by January 1, 2030 was passed by the Illinois Senate, but has stalled in committee in the Illinois House. It is uncertain at this time if the legislation will be pursued during the 2012 legislation session by the Illinois Environmental Protection Agency.

Minnesota

- The Commissioner of the Minnesota Pollution Control Agency (MPCA) has authority to adjust fees to drycleaners annually in order to maintain an annual income to the Dry Cleaner Environmental Response and Reimbursement Account (Account) of $650,000. In order to meet the income objective, the Commissioner of the MPCA raised solvent and registration fees in FY11 (as of July 1, 2010). In FY11, the total fund income was $615,125; below the legislated income goal of $650,000. The MPCA has been able to reimburse several private parties who have been waiting for reimbursements; however, reimbursement of State Superfund drycleaner cleanup costs is currently on hold. The MPCA must ensure a sufficient balance remains in the Account to provide for reasonably sizeable reimbursements each fiscal year (the statute limits reimbursements to 20 percent of the Account balance at the beginning of the fiscal year). The MPCA is looking into various means to ensure the Account remains in the black. On May 1, 2011, the MPCA announced that the Account will no longer be reimbursing mark-up costs. For work conducted prior to May 1, 2011, eligible mark-up costs (not in excess of 15%) will be reimbursed.

Missouri

- In September, the Missouri Department of Natural Resources' Drycleaning Environmental Response Trust (DERT) Fund issued a Certificate of Completion for Premier Dry Cleaners of KC site in Kansas City, Missouri. Formerly known as Pride Cleaners, this site was a tenant business in a shopping center from 1990 to 2008. A Phase II Limited Subsurface Investigation (Jan 2006) found dry cleaning chemicals near the machine and chemical storage area. The probable cause was thought to be general drycleaning operations.

Two quarters of groundwater monitoring, soil testing from well installation and hand-augered soil samples inside the building found no contaminants at levels higher than Default Target Limits. The department determined that the site is safe for its intended use.

This is the tenth Certification of Completion letter issued by the DERT Fund since the regulations went into effect on May 30, 2006. To date the DERT Fund has reimbursed $1,619,887 in eligible costs to its participants.

North Carolina

- Effective December 1, 2012, the North Carolina Superfund Section has named Peter Doorn as the Special Remediation Branch head, replacing John Powers. The Special Remediation Branch administers the Drycleaning Solvent Cleanup Act (DSCA) Remediation and DSCA Compliance Programs as well as the state's Manufactured Gas Plant Program.

  In July 2011, the DSCA Program completed an interim remedial action that involved the demolition and removal of a former drycleaning building that had been condemned by the local municipality due to high perchloroethylene indoor air concentrations. Removal of the structure has enabled a more detailed assessment of the highly contaminated soil which had impacted indoor air in the former site building, and continues to affect adjoining residential properties. A remedial action plan is being developed that includes excavation of the soil sources to the water table, application of an Fe/carbon amendment (Daramend) to the backfill at the water table, and injection of carbon/ZVI (EHC) to treat remaining groundwater source areas. If approved following public participation, implementation of the remedial action plan is projected for April-July 2012.

South Carolina

- South Carolina has completed screening level evaluation of all eligible drycleaning sites. Based on these results, the eligible sites have been prioritized for further investigation. In the last year, fourteen sites have been identified as requiring no further action (NFA) based on documented absence of contamination. Detailed facility investigations were completed for five sites during 2011, and assessment is ongoing at eight additional sites.

  Operation of several remediation systems has been discontinued. One was shut down after contaminant concentrations stabilized above remedial goals, but below levels that would justify continued active remediation. Two other remedial systems have been shut down due to decreased effectiveness. Groundwater monitoring continues at these facilities, and pilot testing of alternative treatment methods is planned. Follow-up monitoring is being conducted at three other sites to assess the effectiveness of past remedial actions and the potential to meet remedial goals through natural attenuation.

The program has also begun a new round of containment certification. Operating facilities are periodically required to certify that they meet containment standards. A subset of facilities will subsequently undergo containment inspections.

Texas

- In fiscal year 2012, the Texas Dry Cleaner Remediation Program has been allocated approximately $3.5 million to perform corrective action on eligible dry cleaner sites. At the beginning of the fiscal year, there were 68 sites with ongoing assessment or remediation. Work has been postponed on 99 sites pending funding. The most frequently used remediation for impacted soils has been excavation and soil vapor extraction. For groundwater contamination, the most common remediation technologies have been bioremediation and chemical oxidation.

State Progress on Remediation of Dry Cleaning Sites

Remediation is currently being conducted at drycleaning sites in all of the member states. As of December 2011, cumulative statistics for the State Coalition for Remediation of Drycleaners member states are as follows:

3,922 Sites in drycleaning programs
2,275 Sites where contamination assessment work has been initiated
1,402 Sites where contamination assessment work has been completed
623 Sites where remediation has been initiated
245 Sites where remediation has been completed
771 Sites closed

Remedial Technologies Employed at SCRD Drycleaning Sites

Soil/Sediment/Sludge Remediation:
- Excavation/Removal, including conventional excavations, trench box excavations, large diameter auger, vacuum trucks, septic tank/lift station cleanouts
- Heated Soil Vapor Extraction
- Mobile Injection Treatment Unit
- Passive Venting
- Soil Vapor Extraction (in-situ and ex-situ)
- Sub-slab Depressurization System

Groundwater Remediation:
- Air Sparging
- Bioaugmentation using: KB-1™, Bio-Dechlor INOCULUM™, Pseudomonas, Co-solvent flushing
- Bioremediation using: HRC®, HRC-X™, Cl-Out, ethyl lactate, sodium lactate, potassium lactate, molasses, emulsified oil substrate, ORC®, ABC®, ERC, Phoster's Process™, Vitamin B_{12} / B_1, chitin, corn syrup, vegetable oil, Bio Rem H-10™ , and ChitoRem®

- Chemical Oxidation using: Fenton's Reagent, potassium permanganate, sodium permanganate, hydrogen peroxide, ozone, Cool-Ox™, persulfate
- Co-oxidation
- Diffusive Emitter
- Electrical Resistance
- Granular activated carbon
- Monitored Natural Attenuation (MNA)
- Multi-phase Extraction
- Nanno-scale zero-valent iron
- Permeable Reactive Barrier (iron filings)
- Pump & Treat (conventional and solar powered)
- Recirculating Wells
- Surfactant/Co-solvent flushing
- Vapor control/venting
- Zero-valent Iron Soil Mixing
- Zero-valent iron

Upcoming Events

- May 21-24, 2012, Monterey, California – Eighth International Conference on Remediation of Chlorinated and Recalcitrant Compounds (http://www.battelle.org/conferences/chlorinated/index.aspx).

SCRD Facts

- As of December 13, 2011, there are 662 subscribers to the SCRD newsletter.
- The SCRD website received an estimated 9,152 visits during the month of October.

Newsletter Subscription

If you would like to be placed on the subscription list for the SCRD newsletter please go to the following address http://www.drycleancoalition.org/newsletter.cfm. Copies of previous newsletters can be viewed at http://www.drycleancoalition.org/pubs.cfm on the SCRD website.

SCRD members are state governments that have established programs to fund remediation of drycleaner sites. Current member states include Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin. Alaska, California, Delaware, Maryland, New Jersey, New York, and Virginia, which do not have formal programs but are active in drycleaner remediation under other authorities, also participate in Coalition activities. SCRD provides a forum for states to share programmatic, technical, and environmental information to improve the remediation of drycleaner sites. SCRD was established in 1998 and receives technical, management, and training support from the U.S. EPA Office of Superfund Remediation and Technology Innovation (OSRTI).