

**South Carolina
Drycleaning Facility Restoration Trust Fund
Program Status Report
January 15, 2014**



**South Carolina Department of Health and Environmental Control
Catherine Templeton, Director**

**Bureau of Land and Waste Management
Division of Site Assessment, Remediation & Revitalization**

The South Carolina Drycleaning Facility Restoration Trust Fund Program Status Report is submitted by the South Carolina Department of Health and Environmental Control in compliance with S.C. Code Section 44-56-430(A).

Additionally, Act 119 of 2005 mandates that agencies provide all reports to the General Assembly in an electronic format.

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Definitions & Acronyms:

Act	The South Carolina Drycleaning Facility Restoration Trust Fund Act of 2013
ACOR	Annual Certificate of Registration
DFEC	Drycleaning Facility Exemption Certificate
DFI	Detailed Facility Investigation
DOR	South Carolina Department of Revenue
Dry-Drop	A retail store which collects items to be dry cleaned at a remote location
EIA	Expanded Initial Assessment
FS	Feasibility Study
Fund	The South Carolina Drycleaning Facility Restoration Trust Fund
FY	Fiscal Year
NFA	No Further Action
Opt-Out	A facility not subject to the Act, or eligible for the Fund, in accordance with 44-56-425
PCE	Tetrachloroethylene (Perchloroethylene, or “perc”); a halogenated drycleaning fluid
SCDHEC	South Carolina Department of Health and Environmental Control
Stoddard	A non-halogenated petroleum based drycleaning fluid

1. Introduction

This report is provided to the South Carolina General Assembly as required of Article 4 of Title 44, Chapter 56 of the 1976 Code of Laws (Section 44-56-430 (A)), herein referred to as the Act. It contains the financial obligations and a 5-year budget projection, as required by the Act, as well as a summary of activities for fiscal year (FY) 2013.

Background

In 1995, the South Carolina General Assembly created the South Carolina Drycleaning Facility Restoration Trust Fund (the Fund) to address environmental contamination resulting from drycleaning activities in South Carolina. The Act was revised in 2004, 2009, and again in 2013. The Fund was created at the urging of the drycleaning industry to protect drycleaners from financial liability caused by environmental problems at their facilities. The Act specifically states that taxpayer monies shall not be used and that all funding sources must come from the drycleaning industry itself. A description of funding sources is in Section 2. The South Carolina Department of Revenue (DOR) is responsible for drycleaner registration and collection of monies into the Fund. The Department of Health and Environmental Control (SCDHEC) is responsible for administering the Fund. The Act allows SCDHEC to pay up to four staff using Fund monies to manage assessment and remediation of drycleaning facilities statewide. Currently, the Fund pays for 3.05 Full Time Equivalent (FTEs).

There are several reasons for the presence of soil and groundwater contamination at drycleaning facilities. The most commonly used drycleaning solvents, perchlorethylene (PCE, or “perc”) and various compounds derived from petroleum, such as Stoddard solvent, easily pass through concrete floors common at drycleaning facilities. In the past, most drycleaning machines were “transfer” machines, where solvent laden clothes were transferred to a separate machine for drying. This provided an opportunity for release of solvents to the floor and then to the environment. Filling a drycleaning machine’s solvent tanks from drums or other containers could also result in spills, as could improper storage or handling of containers. Also, since older drycleaning machines vented solvent vapors to the atmosphere, these vapors could condense in cool weather and collect on nearby exposed soil. Other potential sources of contamination include drycleaning wastes, such as spent solvents, distillation wastes, separator water, and used filters. Before hazardous waste regulations were enacted in the early 1980’s, these wastes were commonly disposed of by pouring liquids into sewer lines, septic systems, or onto the ground. Used filters were commonly placed on the ground or into trash dumpsters which leaked.

Today, the Act requires that all drycleaning facilities participating in the Fund use special floor coatings around the drycleaning machines and waste storage area to prevent spilled solvents from permeating through concrete floors. Other requirements include containment pans or dikes for drycleaning machines and waste storage areas. Drycleaners participating in the Fund are periodically required to certify that their facilities meet the applicable containment requirements. SCDHEC personnel also visit facilities participating in the Fund to verify the presence and adequacy of containment structures prior to committing Fund dollars for assessment or remediation.

Modern “dry-to-dry” machines perform both washing and drying cycles without the need to transfer items, thereby reducing the potential for release of solvents to the environment. Beginning in 2010, the Act required all “perc” drycleaning solvents to be delivered by a “closed-loop” system. This reduces opportunities for spills during refilling and eliminates on-site storage of solvents. Newer drycleaning

machines are much more efficient in their use of solvents, reducing the amount of solvents used as well as losses to the atmosphere.

While improvements in industry practices will not remove contamination that has already been released into the environment, these preventive measures will greatly reduce the probability and scope of future releases. This allows the Fund to focus on cleaning up the past environmental releases with the expectation that far fewer new releases will occur.

Eligibility

The owner, operator, or property owner may submit an application form in order for SCDHEC to determine eligibility. Eligibility for the Fund is dependent upon several factors, listed in Section 44-56-470 (B). Revisions to the Act in 2013 have made an additional 115 facilities potentially eligible for the fund. These facilities were not eligible previously because either the registrants did not have access to the property or the initial sample did not show evidence of contamination. The revised Act specifies that applications from existing or former facilities will not be accepted after December 31, 2014.

When the Fund was created in 1995, several hundred drycleaners registered with DOR, and applied to SCDHEC for eligibility. Drycleaners who used petroleum-based solvents were given a one-time opportunity in 1995 to “Opt-Out” of the Fund. These businesses are not required to pay the annual registration fees or surcharges paid by participating drycleaners, but they will not be able to access the Fund if contamination from their facilities is ever discovered. There are 123 drycleaning facilities that have “Opted-Out” of the Fund. All new drycleaning facilities, however, are required to participate in the Fund.

Revisions to the Act made in 2009 required that a facility possess either an Annual Certificate of Registration (ACOR) or a Drycleaning Facility Exemption Certificate (DFEC - for Opted-Out facilities) in order to receive shipments of drycleaning solvent. The ACOR is issued by DOR annually when the facility registration fees are paid. The 2009 revisions to the Act required Opt-Out facilities to obtain a DFEC between July 1, 2009 and December 31, 2009.

Prior to the 2013 revisions to the Act, SCDHEC had performed some degree of investigation at every eligible drycleaning site in South Carolina, and found contamination at the majority of these sites. Investigations have documented that groundwater contaminated by drycleaning operations has impacted public and private water supplies in several cases. As impacts to drinking water are identified, SCDHEC takes steps to eliminate human exposure to contaminants, usually by providing an alternative source of drinking water. Investigations have been initiated at the additional 115 facilities now eligible for the Fund and have been separated into three groups to minimize mobilization costs.

The Fund cannot address all environmental problems at every participating site at once, because revenue is limited. Therefore, SCDHEC prioritizes sites for future work based on risks to human health and the environment. Prioritization criteria are outlined in both the Act and in Regulation 61-33, Subpart D. SCDHEC performed a comprehensive update to the priority list in 2010 and continues to update this list as new information becomes available. The priority list can be viewed at:
<http://www.scdhec.gov/environment/lwm/pubs/drycleaningrank.pdf>

2. Fund Status and Five-Year Funding Projection

Funding Sources

Revenue for the Fund is currently derived from four sources, all of which come from the drycleaning industry itself:

- Annual registration fees
- Surcharges on drycleaning solvents
- Facility deductibles, which range from \$1,000 to \$25,000, and
- A 1% surcharge on retail sales of drycleaning services, which has been in place since fiscal year (FY) 2005.

Annual registration fees apply to operating drycleaning facilities, and vary based on the number of people employed by that business – including employees at drop-off store locations. Facilities employing up to 4 employees pay \$750 per year, those with 5-10 employees pay \$1,500 per year, and those with 11 or more employees pay \$2,250 per year.

Solvent surcharges are \$10 per gallon for halogenated solvents, such as PCE, \$2 per gallon for non-halogenated drycleaning fluids such as Stoddard solvent, and \$0.25 per pound for non-liquid drycleaning agents.

Deductible amounts are assigned to a facility based on the date the eligibility application was submitted. The Act initially offered a \$1,000 deductible as an incentive to quickly bring existing facilities into the Fund. The deductible is \$25,000 for any facility starting operations on or after November 24, 2004.

A 1% surcharge on retail sales of drycleaning services is collected at the point of sale, regardless of whether the store is a drop-off location (or “dry-drop”) or has a drycleaning machine on site. This surcharge produces the majority of revenue for the Fund.

Businesses that have opted-out of the Fund as allowed by statute do not pay these surcharges or fees, and are not eligible to receive monies from the Fund for investigation or cleanup of contamination.

FY13 revenue was \$1,109,546.43 as compared to \$1,169,338.75 in FY12. The historical trend shows income to the Fund declining steadily from a high in 1997 until the 1% surcharge on retail sales of drycleaning services was implemented in FY05 (Figure 1). Revenue has decreased since FY07, with the exception of FY10, when revisions to the Act increased the number of operating facilities paying into the Fund. According to DOR data, there are currently 152 operating drycleaning facilities in South Carolina that are paying into the Fund. This is a decrease from the previous year, when 157 facilities were registered.

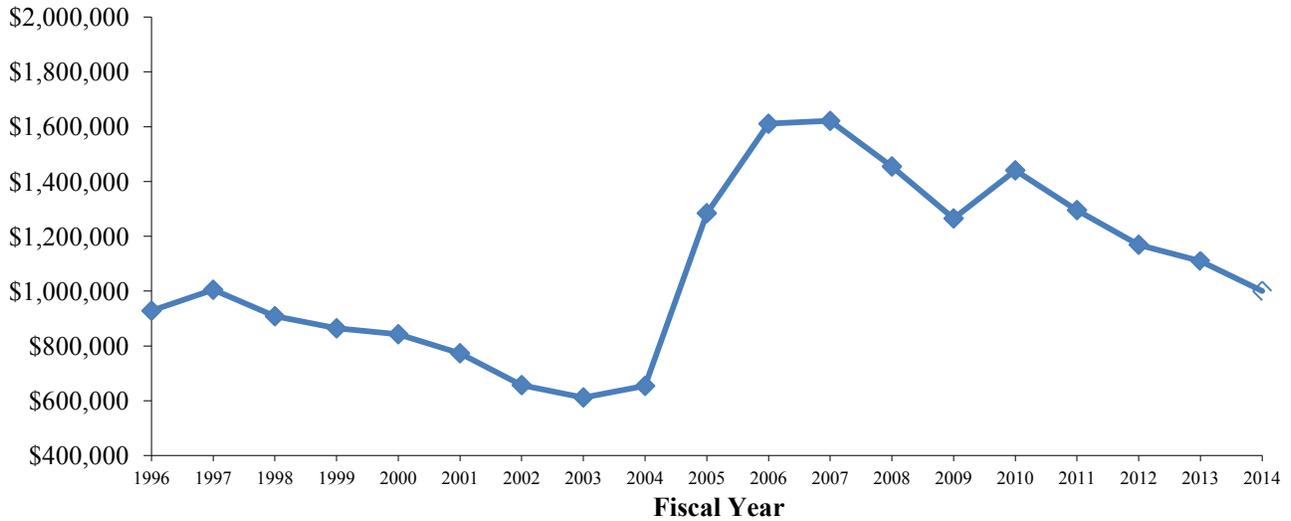


Figure 1: Drycleaning Facility Restoration Trust Fund Yearly Income
 (FY 2014 revenue is projected based on the first 6 months)

From the inception of the program through the end of FY13, the Fund has taken in a total of \$19,498,968.76 and had total expenditures of \$16,279,759.46. Allowing for outstanding commitments of \$26,190.48, the uncommitted Fund balance on June 30, 2013 was \$3,166,728.38. Based on revisions to the Act, additional work is being planned that will greatly reduce the uncommitted Fund balance.

During the first five months of FY14, the Fund has taken in \$389,776.14. This is \$116,881.85 less than collected in the first five months of FY13. FY14 revenue is projected to be approximately \$1,000,000.

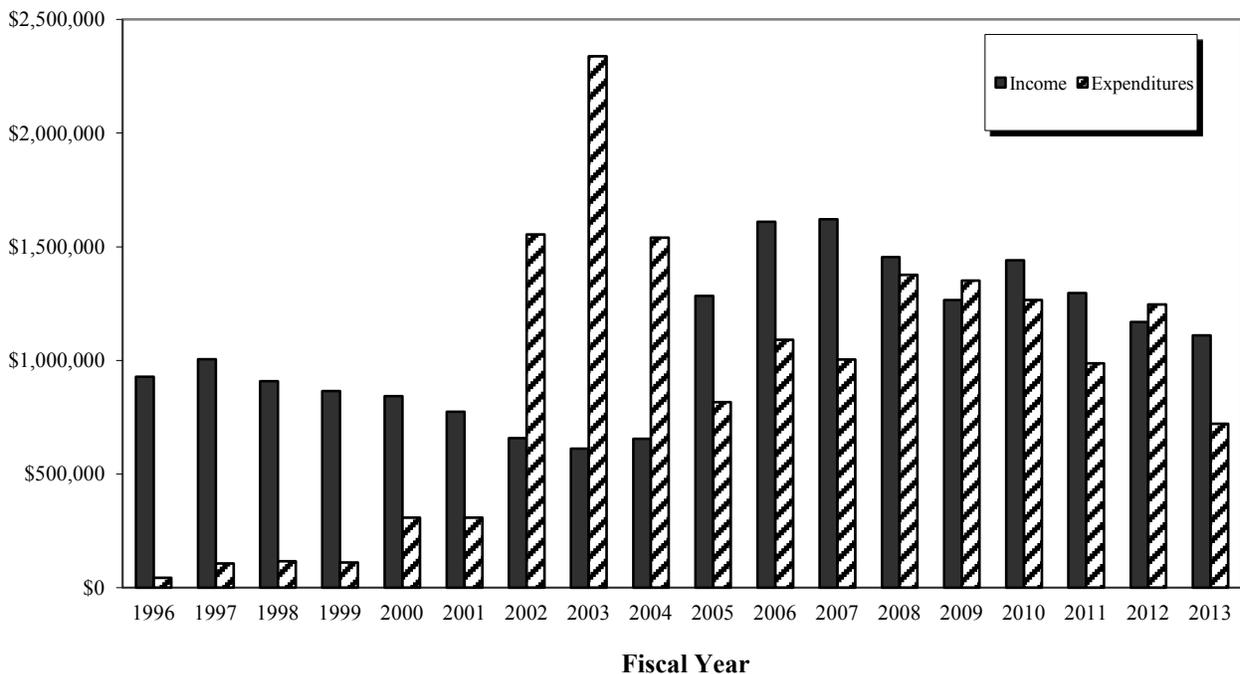


Figure 2: Comparison of Income versus Expenditures

Project Inventory

Revisions to the Act in 2013 added 115 sites to the 288 previously eligible sites for a total of 403 sites where SCDHEC may obligate Fund monies for assessment and remediation. SCDHEC has made No Further Action (NFA) decisions on 20 sites in FY13 bringing the total of NFA's to 46 sites, leaving 357 sites where some additional work is anticipated. An additional 63 sites are registered with DOR as operating drycleaners, but they have not yet submitted a complete eligibility application to SCDHEC. Drycleaners that have not submitted a complete eligibility application are paying into the Fund but are not eligible for assessment or clean-up by the Fund. The 63 sites will be eligible for the Fund if they submit a complete application before the December 31st, 2014 deadline. Because nothing is known about environmental conditions at these locations, the 63 sites remain a potential financial liability to the Fund.

Assessment Costs

Full assessments have been completed at a total of 34 sites to date. The costs for these assessments have ranged from \$51,000 to \$477,000 per site. The average cost of the full assessments to date has been \$174,318. The average cost of five full assessments completed over the last two years was \$121,285. This represents a significant reduction in the average assessment cost compared to previous years. Assuming that the average assessment cost can be kept near \$125,000 per site and that 323 additional sites will require a full-scale assessment, \$40,375,000 will be needed for assessment of the remaining known sites.

Remediation Costs

Once sites are fully assessed, they are classified as NFA, Limited Removal Action, or Active Remedial System. NFAs are either clean sites or sites with low levels of contamination that will not impact human health or the environment. Limited Removal Actions include removal of highly contaminated soil, passive remedies, and institutional controls that enhance cleanup and reduce expenditures while protecting human health and the environment. Active Remedial Systems may include groundwater recovery wells, carbon filtration units, removal actions, pilot studies, cleanup system design, installation, monitoring, and operations and maintenance in order to reduce risks and reach cleanup goals.

Of the 288 sites investigated to date, 46 or 16% have been determined not to require further action. The remedial cost estimates are based on the remaining 84% of sites requiring some form of remedial action and/or long term monitoring. The average cost of Limited Removal Actions to date is \$66,668 per site. The average cost of Active Remedial Systems to date is \$790,356 per site.

The assumptions used in the cost estimate found in Table 1 are made from previous assessment and cleanup work.

Table 1: Assessment and Cleanup Cost Estimates

Work	Sites	Estimated Cost per Site	Total Cost
Need Assessment	323	\$125,000	\$40,375,000
NFA at 16% of 323	52	Work Complete	\$0
Limited Removal at 21% of 323	68	\$66,668	\$4,533,424
Active Remediation at 63% of 323	203	\$790,356	\$160,442,268
		ESTIMATE TOTAL	\$205,350,692

Future Liabilities

Based on expenditures to date and the above projections, SCDHEC estimates that a total of approximately \$205.4 million will be required to fully assess and clean up all eligible sites. This amount does not consider new drycleaning sites, the 63 sites that may become eligible for the Fund, nor has it been adjusted for inflation.

Five Year Funding Projection

In order to complete the funding projection, the income to the Fund was estimated over the next five fiscal years. Based on data through December 2013, FY14 revenue is anticipated to decrease slightly to approximately \$1,000,000. The average income to the Fund for the next five years is predicted to remain approximately \$1,000,000 per year.

Table 2 includes a five-year projection of expenditures. Actual expenditures will not exceed income to the Fund plus remaining balances carried forward from previous years.

Table 2: Income and expenditures for the Fund, 1996-2013
(Data for 2014-2018 are projected)

Fiscal Year	Income	Expenditures
1996	\$928,545.65	\$42,582.84
1997	\$1,005,142.60	\$106,383.46
1998	\$908,516.14	\$115,929.62
1999	\$864,553.81	\$111,067.06
2000	\$842,913.75	\$308,156.47
2001	\$773,511.14	\$308,078.22
2002	\$657,242.36	\$1,553,734.08
2003	\$612,189.97	\$2,337,642.77
2004	\$654,508.34	\$1,540,095.94
2005	\$1,284,353.96	\$816,404.12
2006	\$1,610,701.26	\$1,090,890.57
2007	\$1,621,127.21	\$1,003,163.01
2008	\$1,454,856.48	\$1,375,857.27
2009	\$1,265,303.68	\$1,350,910.21
2010	\$1,440,750.89	\$1,265,239.30
2011	\$1,295,766.34	\$986,750.81
2012	\$1,169,338.75	\$1,245,870.21
2013	\$1,109,546.43	\$721,003.50
2014	\$1,000,000.00	\$1,000,000.00
2015	\$1,000,000.00	\$1,000,000.00
2016	\$1,000,000.00	\$1,000,000.00
2017	\$1,000,000.00	\$1,000,000.00
2018	\$1,000,000.00	\$1,000,000.00

3. Recent Activities

Investigation Activities

From 1995 through 2006, SCDHEC completed Detailed Facility Investigations (DFI) at 29 Fund-eligible sites, an average of 2.5 sites per year. DFIs provide thorough, complete, full delineation of contamination in soil and groundwater at each site. From 2006 through 2010, SCDHEC decided to accelerate this rate by conducting preliminary investigations called Expanded Initial Assessments (EIAs) at the remaining 255 Fund-eligible sites, for an average of 51 sites per year. The EIAs were used to rapidly identify existing and potential human exposures and also provided data to help prioritize future work. Additional sampling was conducted during FY11 to fill data gaps and allow closure at a number of these sites.

Over the last two years, SCDHEC conducted DFIs at five additional sites. Using more efficient assessment methods such as direct-push sample collection and rapid field-screening techniques reduced overall costs. The average cost for these assessments was significantly lower than for those conducted previously. During FY13, sixteen limited assessments were conducted and six sampling events were completed.

In FY14, 115 additional sites became eligible for the Fund because of the changes to the Act made in 2013. During the past year, SCDHEC has continued to evaluate data generated by the EIAs and DFIs. Limited assessments are to be conducted at these remaining 115 sites over the next two years (FY14 and FY15).

Remediation Activities

Full-scale groundwater remedial actions have been conducted at five sites. Operating costs for these remedies continued to accumulate, even as remedial effectiveness declined. As a result of this decreased effectiveness and increasing cost, SCDHEC shut down and dismantled remedial equipment from three of these sites. Alternative remedies are being evaluated to find a more cost effective method to reach final remedial goals. The remedial equipment taken out of service is warehoused for potential use in other systems in the future.

During FY13, SCDHEC conducted pilot scale testing of alternative remedies at two of these sites. These pilot tests involve injection of chemical amendments into the contaminated groundwater to stimulate bacterial breakdown of the contaminants. A key advantage of this type of remedy is that it does not require continued operation and maintenance of on-site equipment. Once the chemicals are injected, they continue to interact with contaminants until they are used up. Injection remedies require monitoring to verify effectiveness. It is anticipated that this type of remedy may be applied at a significant number of sites, thereby reducing the average cleanup cost per site.

No-Further-Action Sites

Since September 2010, SCDHEC has made no-further-action (NFA) determinations at 46 sites where investigation has determined that drycleaning contaminants are not present at levels that require additional assessment or remediation. Additional NFA determinations are anticipated. Provided that these facilities continue to meet the requirements of the Act, they remain eligible in the event that evidence of contamination is discovered in the future.

Containment Certification

Containment certification is a requirement for eligibility under the Fund, and is conducted periodically to ensure that containment remains effective. Failure to comply with the containment requirements constitutes gross negligence with regard to determining site eligibility for the Fund [44-56-470(I)]. The previous round of containment certification was conducted in 2005. SCDHEC began sending out containment structure certification forms in October 2011. Containment certification forms have been sent to all eligible, operating facilities. Staff continues to follow up with phone calls to locations which have not responded, and site visits to those locations that cannot be reached by phone. This effort has also helped to identify a number of businesses that have closed or changed ownership.

Alternative Water Supplies

During FY12, monitoring activities identified an impacted water well at one drycleaning business. A filter system was installed at the drycleaning business in FY13 as a temporary solution until the business is able to tie on to the public water system. The Fund will provide safe drinking water to any residence or business impacted by a participating drycleaning site. No other sites required an alternative water supply in FY13.

4. Prioritization

Prioritization Process

SCDHEC prioritizes sites for future funding based on available assessment information. The Tier system categorizes sites into one of five tiers, and is designed to identify sites which require immediate action to eliminate actual human exposure or to prevent imminent exposure to contaminants. After an initial assessment or other investigation is conducted, a site is assigned a value ranging from Tier I (Most urgent), to Tier N (no further action). Should SCDHEC determine that there is an imminent health risk, then the site is immediately designated a Tier I site and the health risk is dealt with accordingly. For example, if impacted private drinking water wells are discovered, then the residents are provided with bottled water for consumption until an alternate water source is established. Once the risk from contaminated drinking water is eliminated, the site is re-ranked for assessment and/or remediation and is usually moved down to the Tier II or Tier III level, reflecting that there is contamination present at the site, but no imminent health risks. Most of the drycleaning sites that have been ranked were initially assigned to Tier II, on the assumption that they have contamination and need to be investigated further but are not posing an actual exposure risk to human health at the time.

Site Ranking

While the Tier system categorizes sites broadly, it does not prioritize individual sites within each tier. Program staff use data collected from the EIAs to calculate a numeric score and assign a rank to each site. As specified in the Act, this process considers the degree to which human health, safety, or welfare may be affected by exposure to the contamination. Other factors considered include the probability of contamination migrating off-property, and adjacent land use. This system allows program staff to update a site's ranking as new data becomes available, or as corrective actions are taken to mitigate risks. Currently, all eligible sites have been evaluated using this ranking system and the ranking list is posted on the program's website at: <http://www.scdhec.gov/environment/lwm/pubs/drycleaningrank.pdf>

5. Public Participation in the Drycleaning Program

One of SCDHEC's goals for the Drycleaning Restoration Trust Fund Program is to encourage public participation in the remedy selection/cleanup process. Community involvement in the program is important for several reasons. Primarily, it gives local residents an opportunity to have input into choosing a remedial strategy and allows them to address any concerns they may have about the site. People living near a site may be aware of conditions that could influence the effectiveness of the available remedies. On several occasions, sharing of such important information has substantially aided SCDHEC's understanding of the site and influenced remedial decisions.

When SCDHEC conducts assessment activities at a site, it may be necessary to address the potential migration of contaminants onto or beneath adjacent properties. Field personnel meet with homeowners and business owners in the area surrounding the site when there is a likely risk to drinking water supply wells. SCDHEC may conduct sampling to determine if the wells have been affected by contamination emanating from a drycleaner property. If drinking water supplies have been contaminated, SCDHEC will ensure that those affected have access to an alternate source of drinking water.

SCDHEC distributes information about sites and upcoming remediation activities to the public via legal notices in local newspapers and letters to area residents, local government officials, and locally elected members of the S.C. General Assembly. SCDHEC schedules a public meeting at a location near the drycleaning site, and advertises the time and place as a legal notice. SCDHEC also sends individual letters to those in the vicinity of the site in question. At the meeting, a SCDHEC spokesperson presents an overview of site conditions and explains the potential remedies that have been considered. An open forum with a question-and-answer session follows this presentation. People are encouraged to call the program's toll-free telephone number (1-866-343-2379) if they have further questions.

6. Web Links

Please copy and paste the link into a web browser if the hyperlink produces an error message.

South Carolina Department of Health and Environmental Control (SCDHEC)
www.scdhec.gov

SCDHEC's Drycleaning Restoration Program home page:
www.scdhec.gov/environment/lwm/html/drycleaner.htm

SCDHEC forms for Drycleaners and Environmental Contractors:
http://www.scdhec.gov/environment/admin/htm/eqc_forms.asp#Dry

List of SCDHEC Certified Drycleaning Contractors:
www.scdhec.gov/environment/lwm/pubs/South%20Carolina%20Drycleaning%20Fund%20Certified%20Contractors%202012.doc

South Carolina Drycleaning Facility Restoration Trust Fund Act:
<http://www.scdhec.gov/environment/lwm/regulatory.htm#drycleaners>

South Carolina's drycleaning sites by rank (priority list):

<http://www.scdhec.gov/environment/lwm/pubs/drycleaningrank.pdf>

State Coalition for the Remediation of Drycleaners (U.S. EPA):

<http://drycleancoalition.org>