

**South Carolina
Drycleaning Facility Restoration Trust Fund
State Fiscal Year 2015
Program Status Report**



**South Carolina Department of Health and Environmental Control
Catherine E. Heigel, 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
Existing	A drycleaning facility that started operations before November 24, 2004
Former	A drycleaning facility that ceased operations before July 1, 1995
Fund	The South Carolina Drycleaning Facility Restoration Trust Fund
FY	Fiscal Year
New	A drycleaning facility that started operations on or after November 24, 2004
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
VIP	Vapor Intrusion Pathway

1. Introduction

This report is provided to the South Carolina General Assembly as required by Article 4 of Title 44, Chapter 56 of the 1976 Code of Laws (Section 44-56-430 (A)), herein referred to as the Act. The report 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) 2015 (July 1, 2014 through June 30, 2015).

Background

The South Carolina General Assembly created the South Carolina Drycleaning Facility Restoration Trust Fund (the Fund) in 1995 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 provides that monies from the general fund 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 3.0 Full Time Equivalent employees.

The most commonly used drycleaning solvents are organic solvents such as perchloroethylene (PCE, or “perc”) and petroleum-based solvents such as Stoddard solvent. There are several reasons for the presence of soil and groundwater contamination 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 solvents to be spilled onto the floor which would then permeate the concrete floor and be released into 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 solvent laden filters were commonly placed on the ground to drain or into trash dumpsters which leaked.

Currently, 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 greatly 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. A closed-loop delivery system reduces opportunities for spills and vapor loss during refilling by using a special dry-disconnect coupler. The dry-disconnect coupler permits solvent flow and vapor return in one self-contained unit. Furthermore, there is a growing trend among drycleaners to manage a series of remote “dry-drop” locations. A driver picks up clothes to be cleaned from the “dry-drop” location and brings them to a “wet” drycleaning operation at a single central location. The driver then returns the cleaned clothes to the “dry-drop” location. Finally, the newer drycleaning machines are much more efficient in their use of solvents, reducing the amount of solvents used due to fewer losses to the atmosphere, and reduced disposal costs due to reduced volumes used.

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

Eligibility for the Fund is dependent upon several factors, listed in Section 44-56-470 (B). Revisions to the Act in 2013 have allowed an additional 115 facilities to be 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 specified final application date of December 21, 2014, for existing or former facilities.

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 discovered. Nine additional drycleaners were recently discovered on a 2004 DOR list of “Opt-Outs.” This brings the total number of drycleaning facilities that have elected to “Opt-Out” of the Fund to 135. All new drycleaning facilities that opened on or after November 24, 2004, however, are required to participate by paying into the Fund regardless of the type of solvents used which eliminates the opportunity to “Opt-Out” of the fund.

Revisions to the Act 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. Both certificates apply uniquely to the registration location and cannot be transferred to a different location.

Prior to the 2013 revisions to the Act, SCDHEC had performed investigation at every eligible drycleaning site in South Carolina and found contamination at the majority of these sites. These investigations documented groundwater contaminated by drycleaning operations had, in some

cases, impacted public or private water supplies. When impacts to drinking water are identified, SCDHEC immediately takes steps to eliminate human exposure to contaminants, usually by providing an alternative source of drinking water.

Funding is not available to address contamination at all sites, therefore SCDHEC prioritizes sites for future work based on actual or potential risks to human health and the environment. Prioritization criteria are outlined in both the Act and in Regulation 61-33, Subpart D. This topic is addressed in greater detail in Section 4.

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:

- Annual registration fees
- Surcharges on drycleaning solvents
- Facility deductibles, which range from \$1,000 to \$25,000, and
- A 1% surcharge on the gross proceeds of retail sales of laundering and drycleaning services, which has been in place since FY-05.

According to FY-15 DOR data, 138 operating drycleaning facilities in South Carolina pay into the Fund. This is a decrease from FY-14, when 152 facilities were registered. The DOR also reports that out of the 135 facilities that elected to “opt-out” of the program, there are 79 operating. This is the same number registered as the previous two years. (Figure 1)

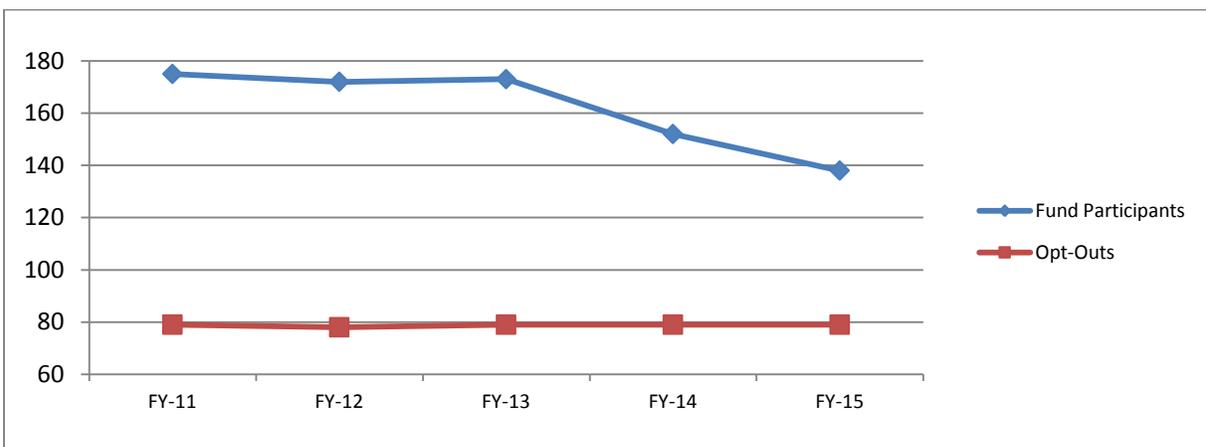


Figure 1. Active Drycleaners

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 or Green Earth 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 to SCDHEC. The Act initially offered a \$1,000 deductible for facilities submitting an application by November 24, 2005, as an incentive to quickly bring existing or former facilities into the Fund. Existing or former drycleaning facilities submitting an eligibility application after November 24, 2005, will have a deductible of \$25,000. New facilities starting operations on or after November 24, 2004, have a deductible of \$25,000.

A 1% surcharge on retail sales of laundering and drycleaning services is collected at the point of sale, regardless of whether the store is a “dry-drop” or has a drycleaning machine on site. This surcharge produces the majority of revenue for the Fund. The 1% surcharge is in addition to the 5% sales tax collected at the point of sale which goes to the South Carolina General Fund.

FY-15 combined revenue was \$1,153,199.80 as compared to \$1,052,666.79 in FY-14. The historical revenue trend shows revenue to the Fund declined steadily from a high in 1997 until 2003 when the 1% surcharge on retail sales of drycleaning services was implemented (Figure 2). With the exceptions of FY-10 and FY-15, when revisions to the Act increased the number of operating facilities paying into the Fund, revenue has generally declined since FY-07.

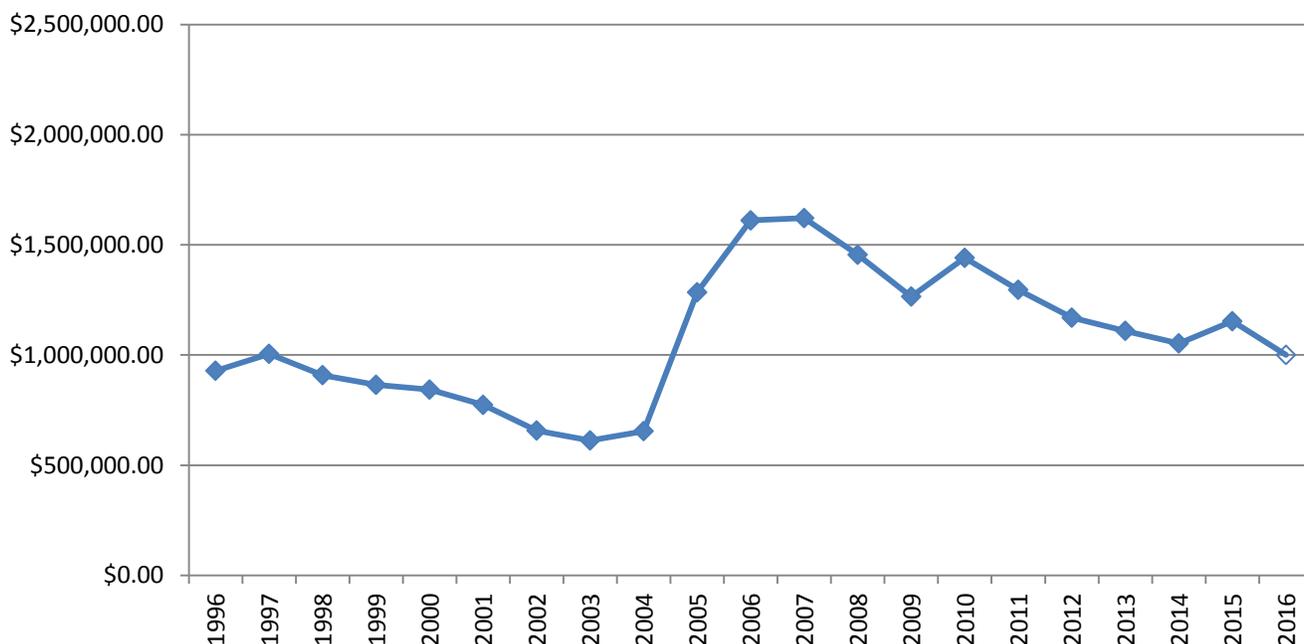


Figure 2. Yearly Revenue (2016 is estimated)

From the inception of the program through the end of FY-15, the Fund has taken in a total of \$21,704,735.35 and had total expenditures of \$18,896,081.94 (Figure 3). Allowing for outstanding commitments of \$1,339,525.66, the uncommitted Fund balance on June 30, 2015, was \$1,468,327.19. Efforts are taken in managing the Fund to retain approximately \$1 million in the Fund for emergency corrective actions.

During the first three months of FY-16, the Fund has taken in \$248,683.09. This is \$62,966.05 less than collected in the first three months of FY-15. FY-16 revenue is projected to be approximately \$1,000,000.

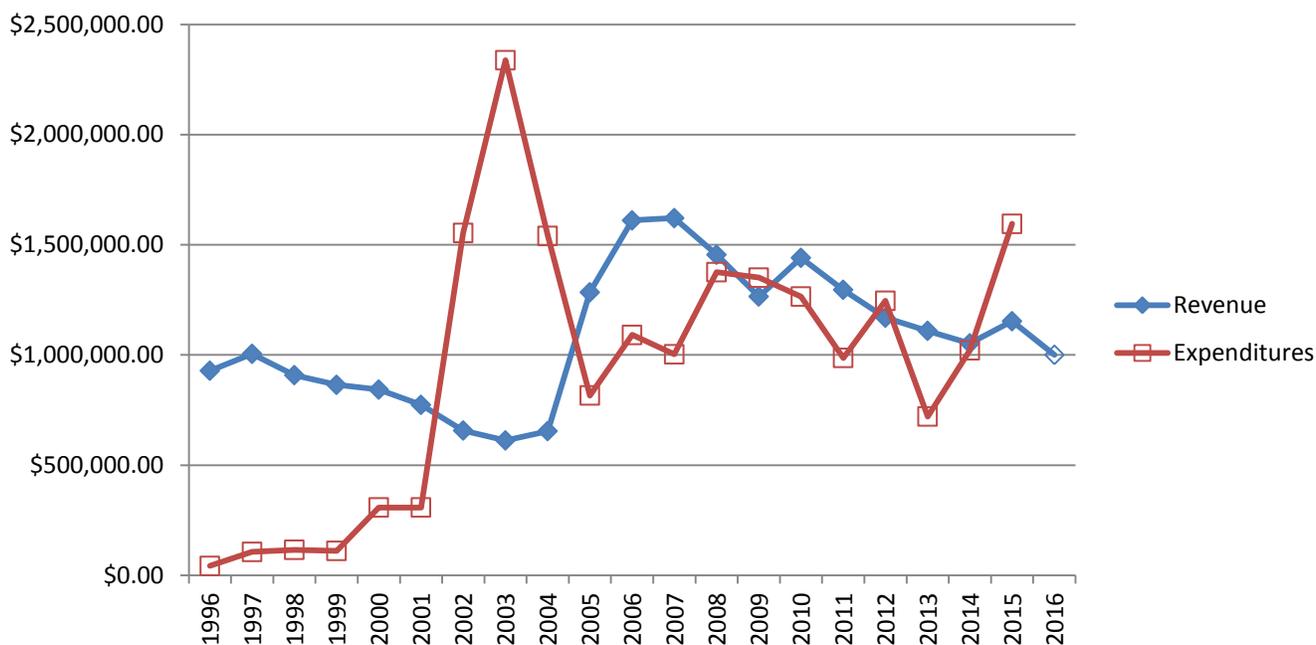


Figure 3. Revenue vs. Expenditures

Project Inventory

There are a total of 404 sites where SCDHEC may obligate Fund monies for assessment and remediation. Four sites were removed from the Eligible category during FY-15 for the following reasons:

- 1 Site committed Gross Negligence by releasing solvents from old drycleaning equipment.
- 2 Sites did not pay their deductibles.
- 1 Site was determined to never have operated as a “wet” drycleaning facility.

Sixteen additional “New” facilities have registered with DOR as operating drycleaners but have not submitted a complete eligibility application to SCDHEC. Drycleaners that are registered but have not submitted a complete eligibility application pay into the Fund. These sixteen facilities may become eligible for the Fund if an eligibility application is submitted within six months of the discovery of contamination per Section 44-56-470 (B) (6). Therefore, the sixteen “New” sites remain a potential financial liability to the Fund.

SCDHEC made No Further Action (NFA) determinations on 26 sites in FY-15, bringing the total of NFA's to 144 sites, leaving 260 sites where some level of additional work is anticipated.

Assessment Costs

A full delineation assessment, or Detailed Facility Investigation (DFI), has been completed at 34 of the 260 sites to date. This means that 226 sites still require a full assessment. The costs for full assessments have ranged from \$51,000 to \$477,000 per site with an average cost of \$174,318. The average cost of five full assessments completed over the last four years was \$121,285. This reduction in the average assessment cost compared to previous years is attributed to more streamlined investigation processes that have been developed and utilized based on past experiences and lessons learned. Assuming that the average assessment cost can be kept near \$125,000 per site and that the remaining 226 sites will require a full assessment, projected funding of \$28,250,000 will be needed for assessment of the balance of eligible sites. This projected funding amount has not been adjusted for inflation.

Remediation Costs

Once sites are fully assessed, they will be classified as needing an Active Remedial System, a Limited Removal Action, Long Term Monitoring, or NFA. NFAs are only issued to clean sites or sites with such low levels of contamination that they are not expected to impact human health or the environment. Long Term Monitoring requires periodic sampling to document the contamination is not expanding and is decreasing over time. 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 include pilot studies and cleanup system design and installation, and may include groundwater recovery wells, carbon filtration units, monitoring, and operations and maintenance in order to reduce risks and reach cleanup goals.

Projection of remediation funding needs is based on historic patterns where 37% of sites received NFA determination following assessment, 38% of sites required limited removal, and 25% of sites required active remediation. 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. Using the assumption that historic patterns will continue in the future, the projected funding need estimates for assessment and remediation are compiled in Table 1.

Table 1: Assessment and Cleanup Cost Estimates

Work	Sites	Estimated Cost / Site	Total Cost
Need Full Assessment	226	\$125,000	\$28,250,000
NFA at 37% of 226	84	Work Complete	\$0
Limited Removal at 38% of 226	86	\$66,668	\$5,733,448
Active Remediation at 25% of 226	56	\$790,356	\$44,259,936
		ESTIMATE TOTAL	\$78,243,384

Future Liabilities

Based on expenditures to date and the above projections, SCDHEC estimates that a total of approximately \$78.2 million will be required to fully assess and clean up all eligible sites. This amount does not consider the “New” sixteen facilities 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 revenue to the Fund was estimated over the next five fiscal years. Based on data through September 2015, FY-16 revenue is anticipated to decrease slightly to approximately \$1,000,000 (Table 2). The average revenue to the Fund for the next five years is anticipated to remain at approximately \$1,000,000 per year. Actual expenditures will not exceed revenue to the Fund plus remaining balances carried forward from previous years.

Table 2: Revenue and Expenditures

Fiscal Year	Revenue	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	\$1,052,666.79	\$1,021,339.51
2015	\$1,153,199.80	\$1,594,982.97
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
2019	\$1,000,000.00	\$1,000,000.00
2020	\$1,000,000.00	\$1,000,000.00

3. Recent Activities

Investigation Activities

In FY-14, 115 additional sites became eligible for the Fund because of the changes to the Act made in 2013. As a result of the changes, Expanded Initial Assessments (EIAs) were conducted on 66 sites in the Midlands and in the Upstate. There are 11 remaining sites in the Midlands and Upstate where work is in progress. The remaining 35 sites, located in the Low Country, are slated to be completed in the first half of FY-16.

Detailed Facility Investigations (DFIs) were completed on two sites and work is in progress on 11 other sites. A soil assessment was completed at one site. Groundwater profiling was completed on one site and is in progress on one other site. Groundwater monitoring was completed on six sites and is in progress on six sites.

Vapor Intrusion Pathway (VIP) investigations are an additional tool for site assessments and were implemented in late 2014. This tool measures sub-slab vapor concentrations at drycleaning sites and may include indoor air samples at sites that are no longer in operation. This additional sampling is a very important step towards protecting public health. VIP investigations were conducted on most sites where EIAs were conducted and there are 104 sites with work in progress.

Remediation Activities

During FY-15, SCDHEC continued a post-pilot Potassium Permanganate injection study at one site since the pilot results were encouraging. A second Potassium Permanganate injection site is being monitored and the outcome also appears positive. A chemical oxidation study using Ethyl Lactate has been suspended at a third site as it was not effective in reducing contaminant concentrations.

Monitoring

There are 34 sites at which full DFI assessment have been completed, but site conditions do not meet NFA criteria. However, based on risk evaluation criteria, conditions at these sites do not warrant substantial fund expenditures. Therefore, the sites are sampled on a periodic basis, generally every 3 to 5 years, to continue monitoring site conditions for risk evaluation. During FY-15, groundwater and/or surface water quality monitoring was completed on 10 sites.

No-Further-Action Sites

SCDHEC has made NFA determinations at a total of 144 sites where investigation has determined that drycleaning contaminants are not present at levels that require additional assessment or remediation. 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.

Alternative Water Supplies

The Fund will provide safe drinking water to any residence or business impacted by a participating drycleaning site. No sites required an alternative water supply in FY-15.

Containment Certification

Containment measures are required in all areas where drycleaning solvents are used or stored in order for operating drycleaning facilities to qualify for the Fund. Containment measures may include impermeable pans of sufficient capacity under drycleaning machinery, sealing concrete floors with epoxy paint, etc. This topic is addressed in greater detail in “Drycleaning Containment Guidelines,” which may be found on the drycleaning program web site. See Section 6 for the web link.

Operating drycleaning facilities self-certify containment measures every five years [44-56-480(A)] to ensure that containment remains effective. Failure to comply with the containment requirements constitutes gross negligence which may impact site eligibility for the Fund [44-56-480(D)]. SCDHEC does not routinely conduct containment inspections but will inspect facilities on a case-by-case basis. The next containment certification mail-out will occur in FY-16.

Form Revisions

The drycleaner Eligibility Application form was last revised in May 2005. Revisions to the Act in 2013 eliminated portions of that application form. The Eligibility Application form (DHEC 3469) was updated in July of 2014 to match the revised Act and includes fillable form fields. Revisions to the remaining three drycleaning forms are planned for FY-16.

4. Prioritization

Prioritization Process

SCDHEC prioritizes sites for future funding based on available assessment information. The Funding Priority system categorizes sites into one of five groups, and is designed to identify sites which require immediate action to eliminate actual human exposure or to prevent imminent exposure to contaminants. New sites with limited, or without any, environmental information would be assigned Group A (for Assessment). After an initial assessment or other investigation is conducted, a site is included in a funding priority group ranging from First Group (first funding priority), Second Group (second funding priority), Third Group (third funding priority), to Group N (no funded activity planned).

Should SCDHEC determine that there is an imminent health risk, the site is immediately designated a First Group site and the health risk is mitigated accordingly. For example, if impacted private drinking water wells are discovered, then the residents are provided with bottled water for consumption until a permanent alternate water source is established. Once the risk from contaminated drinking water is eliminated, the site is re-prioritized for assessment and/or remediation and is usually moved to the Second or Third Group, reflecting that there is contamination present at the site, but no actual or imminent health risks.

While the Funding Priority group system categorizes sites broadly, it does not prioritize individual sites within each Group. However, program staff use site data to assign a numeric score and rank to each site within the groups. 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 become available, or as corrective actions are taken to mitigate risks. Currently, all eligible sites have been evaluated using the Group system. The list is posted on the Agency's website at: <http://www.scdhec.gov/environment/lw/drycleaners>.

5. Public Participation

One of SCDHEC's goals for the Fund 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 voice 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. Sharing of such important information can aid SCDHEC's understanding of the site and influence 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 impacted 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 in a legal notice. SCDHEC also sends individual letters to those in the vicinity of the site. 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

An internet web page has been created for the Drycleaning Program and is hosted on DHEC's main web page. The web addresses are:

South Carolina Department of Health and Environmental Control <http://www.scdhec.gov>

SCDHEC's Drycleaning Program home page:
<http://www.scdhec.gov/environment/lw/drycleaners/>.

Information and resources that may be found on the Drycleaning Program home page include:

- Laws and Regulation (South Carolina Drycleaning Facility Restoration Trust Fund Act [See Article 4], and South Carolina Drycleaning Facility Restoration Regulations);
- State Coalition for the Remediation of Drycleaners (U.S. EPA);

- South Carolina's drycleaning sites by Priority Groups; and,
- SCDHEC forms for Drycleaners.