

**South Carolina
Drycleaning Facility Restoration Trust Fund
State Fiscal Year 2018
Program Status Report**



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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 drycleaned 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)2018 (July 1, 2017 through June 30, 2018).

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 for restoration of drycleaning facilities and that all funding sources for cleanup activities 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 3.5 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 required to certify that their facilities meet the applicable containment requirements every five years. 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 included an application deadline of December 21, 2014 for former and existing 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. There are 135 drycleaning facilities that have elected to “Opt-Out” of the Fund. 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. Review of the results of these investigations indicated that 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 the risk of human exposure to contaminants, usually by providing an alternative source of drinking water.

Sufficient 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 process is described in greater detail in Section 4.

New technology has the possibility of dramatically changing the drycleaning industry. The new technology does not involve the use of traditional solvents, like Perc or Stoddard, but only uses water, special soaps, and specialized machines. When the specialized machines replaces the old drycleaning equipment it is no longer is a "drycleaner" because there are no solvents being used to clean clothes. A facility location that is covered by the Fund and using the specialized machines would still be required to collect the 1% sales fee.

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.

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, 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.

According to DOR data, 150 operating drycleaning facilities in South Carolina are currently paying into the Fund. This is an increase from FY-17, when 138 facilities were registered. The DOR also reports that out of the 135 facilities that elected to "opt-out" of the program, there are now 68 operating. This is 3 fewer "opt-out" facilities than were registered the previous fiscal year (Figure 1).

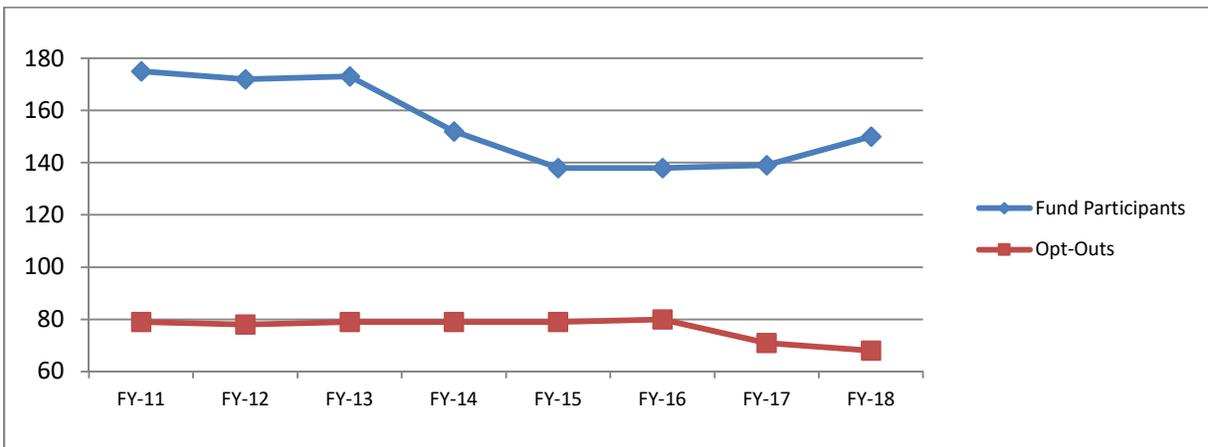


Figure 1. Active Drycleaners

FY-18 combined revenue was \$1,038,221.51 as compared to \$1,015,634.34 in FY-17. 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, revenue has generally declined since FY-07. FY-19 revenue is estimated to be \$1,000,000.00.

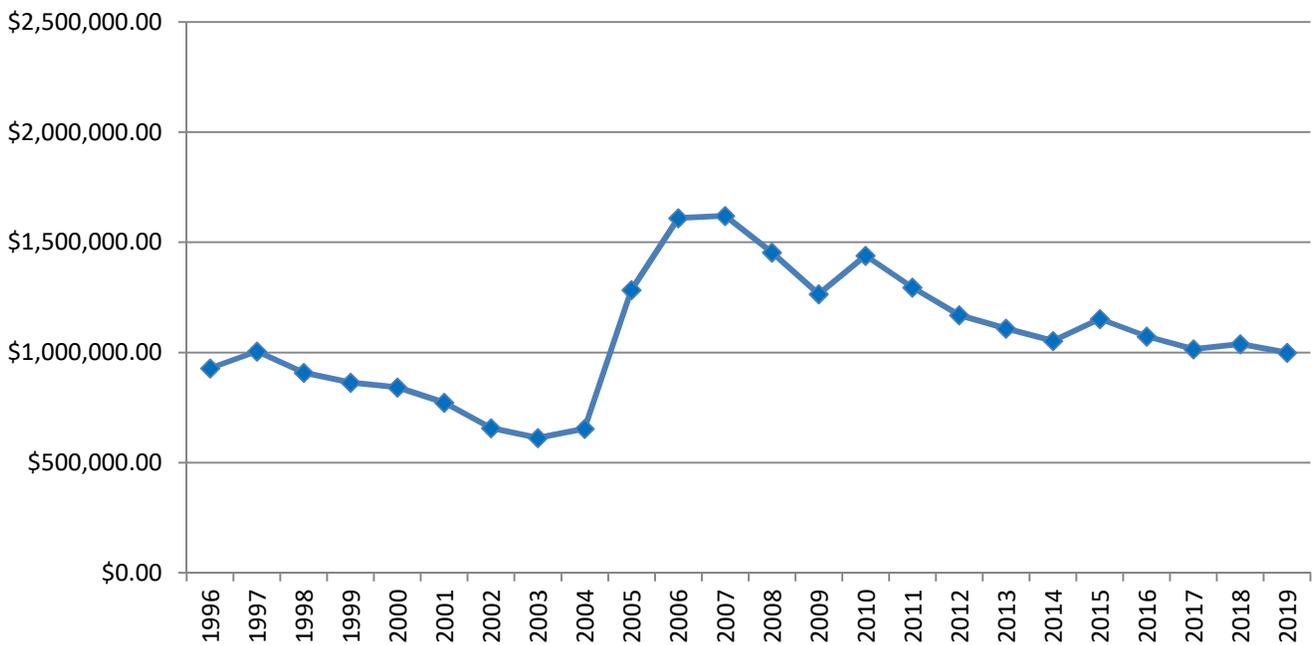


Figure 2. Yearly Revenue (2018 is estimated)

The cumulative revenue from the inception of the program through the end of FY-18 is \$24,832,748.35 and the cumulative expenditures are \$22,261,967.09 (Figure 3). Allowing for outstanding commitments of

\$924,823.15 the uncommitted Fund balance on June 30, 2018, was \$1,645,958.11. The Fund is managed to retain approximately \$750,000.00 in the Fund for emergency corrective actions.

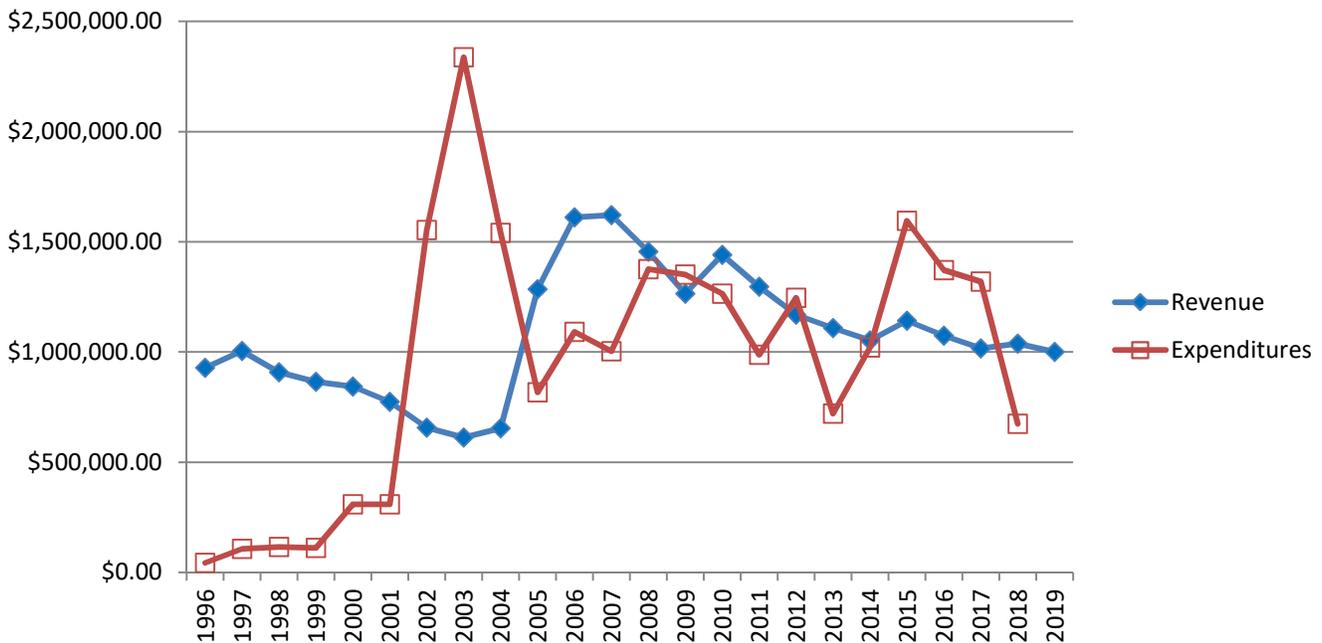


Figure 3. Yearly Revenue vs. Expenditures

Project Inventory

There are a total of 381 Eligible sites where SCDHEC may obligate Fund monies for assessment and remediation. Fourteen sites were removed from the Eligible category during FY-18 for not paying their deductibles or fulfilling different regulatory requirements.

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

SCDHEC made No Further Action (NFA) determinations on 3 sites in FY-18. The sharp decrease of the number of sites where NFA is issued is due to the Program’s accomplishment to address all dry cleaning sites. THE current total of NFA’s is 163 sites, leaving 218 sites where some level of additional work is anticipated.

Assessment Costs

A full delineation assessment, or Detailed Facility Investigation (DFI), has been completed at 51 of the 218 sites to date. This means that 167 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 five years was \$115,225.000. 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 \$115,000 per site and that the remaining 176 sites may require a full assessment, projected funding of \$20,240,000 will be needed for assessment of the balance of eligible sites. This estimated future funding amount has not been adjusted for inflation.

The estimated amount of future assessment costs could be significantly lower as the Program devises more effective approaches to reduce costs and achieve the same or higher quality results. It is anticipated that significantly lower estimates will be reflected in the next year's annual report.

Remediation Costs

Once sites are fully assessed, they will be classified as needing either an Active Remedial System, a Limited Removal Action, 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 vapor intrusion mitigation/remediation systems, 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. This is a reduction of \$3,117,656.24 from the FY-17 estimate.

Table 1: Assessment and Cleanup Cost Estimates

Work	Sites	Estimated Cost / Site	Total Cost
Need Full Assessment	176	\$115,000	\$20,240,000
NFA at 37% of 176	65	Work Complete	\$0
Limited Removal at 38% of 176	67	\$66,668	\$4,466,756
Active Remediation at 25% of 176	44	\$790,356	\$34,775,664
		ESTIMATE TOTAL	\$59,482,420

Future Liabilities

Based on expenditures to date and the above projections, SCDHEC estimates that a total of approximately \$59.5 million will be required to fully assess and clean up all eligible sites. This amount does not include the seventeen "New" facilities that may become eligible for the Fund. This estimated future funding amount has not been adjusted for inflation.

Five Year Funding Projection

The revenue projection for FY-19 is \$1,000,000.00, based upon DOR receipts through June 2018 (Table 2). The projected revenue to the Fund for the next five years is expected to remain at approximately \$1,000,000 per year.

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	\$1,073,528.33	\$1,371,967.90
2017	\$1,015,634.34	\$1,319,952.90
2018	\$1,038,221.51	\$673,964.35
2019	\$1,000,000.00	\$1,000,000.00
2020	\$1,000,000.00	\$1,000,000.00
2021	\$1,000,000.00	\$1,000,000.00
2022	\$1,000,000.00	\$1,000,000.00
2023	\$1,000,000.00	\$1,000,000.00

3. Recent Activities

Investigation Activities

Expanded Initial Assessment (EIA) was conducted on 1 site and the work is in progress on 3 more sites throughout the state in FY-18.

Detailed Facility Investigations (DFIs) were completed on 4 sites in FY-18 and work is in progress on 10 other sites.

Vapor Intrusion Pathway (VIP) investigations were completed on 11 sites and work is in progress on 8 more.

Remediation Activities

During FY-18, SCDHEC conducted remedial work at 2 sites and work is in progress on 8 more sites. The Drycleaning Program achieved 99% completion of sub-slab soil/gas and indoor air sampling on all qualified sites by the end of FY-18. The Program was also searching for a reliable and cost effective remedial system to mitigate indoor air impact. In January 2018 the Program approved engineering design and operational costs for Sub-Slab Depressurization Systems (SSDS) being installed from the outside of a building what would greatly minimize interruption to occupants' business. The first SSDS system was installed in 2018. With negligible maintenance costs and high contaminant removal rate, this system is very effective. The Program anticipates installing the system at 9 additional facilities in FY-19.

Monitoring

There are 55 sites at which full DFI assessment have been completed, but these 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 2 to 3 years, to continue monitoring site conditions for risk evaluation. During FY-18, groundwater and/or surface water quality monitoring was completed at 8 sites and work is in progress on 8 sites.

No-Further-Action Sites

SCDHEC has made NFA determinations at a total of 163 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-18.

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 containment certification mail-out will occur in FY-18. The next mail out is due in FY-23.

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. No forms were revised in FY-18.

Revisions of the Regulations

The revisions to the Act in 2013 removed certain requirements of drycleaning facilities and property owners to participate in the Fund. SCDHEC, working with the Drycleaning Advisory Council, revised the Regulations R.61-33. The Draft Regulations had a public comment period in the fall of 2016 followed by a hearing by the SCDHEC Board in December 2016. The Regulations became effective May 26, 2017. No regulations were revised in FY-18.

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 the risk of actual human exposure or to prevent imminent exposure to environmental contamination.

While the Funding Priority group system categorizes sites broadly, it does not prioritize individual sites within each Group. 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 until an effective remedy to exposure is in place.

SCDHEC distributes information about sites and upcoming remediation activities to the public via legal notices in local newspapers, SCDHEC web site public notice page, 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 SCDHEC's main web page. The main web page address is:<http://www.scdhec.gov>

SCDHEC's Drycleaning Program home page is:<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.