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South Carolina Department of Health
and Environmental Control

C. Earl Hunter, Commissioner

Hazardous Waste Contingency Fund Annual Report

Fiscal Year 2008: July 1, 2007 through June 30, 2008

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

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The Hazardous Waste Contingency Fund Annual Report is submitted by the SC Department of Health and Environmental Control in compliance with S.C. Code Section 44-56-180. Additionally, Act 119 of 2005 mandates that agencies provide all reports to the General Assembly in an electronic format.

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I. THE STATE SUPERFUND PROGRAM: INTRODUCTION

This Annual Report is submitted to the South Carolina General Assembly as required by S.C. Code Ann. Section 44-56-180(b) of the South Carolina Hazardous Waste Management Act (HWMA). The HWMA mandates the South Carolina Department of Health & Environmental Control (DHEC or the Department) to annually report on the activities and response actions that have been carried out under the auspices of the Hazardous Waste Contingency Fund (HWCF or State Superfund). The State Superfund Program further publishes this report to provide outreach and education to a wide variety of audiences, including other elected officials, financial and real estate communities, businesses, consultants, local governments, redevelopment authorities, and the general public.

This report highlights some of the many accomplishments of DHEC's State Superfund Program during Fiscal Year 2008 (FY08). The State Superfund Program's purpose is to protect public health and the environment by requiring investigation and cleanup of abandoned and uncontrolled hazardous waste sites and by taking short-term actions to mitigate immediate threats to human health and the environment. DHEC focuses its attention and financial resources on the sites that pose the greatest risk to human health.

During FY08, staff directed response actions at over 200 uncontrolled or abandoned sites, including removal actions and emergency response actions to address immediate threats, long-term remedial actions, Brownfields, and criminal investigations. While some of these sites are being addressed by responsible parties (RPs) or non-responsible parties (NRPs), many response actions, as well as DHEC's oversight activities, are funded totally or partially by the HWCF.

In FY08, DHEC expended in excess of $4.7 million from the HWCF. Of this amount, approximately $2.6 million was used to complete a time-critical removal of thousands of large chemical containers (also known as totes) at the Horton Sales Development Corporation—Piedmont Site in Greenville. (See photographs on page 2.) It is anticipated that total response costs could reach $4.1 million by FY09. The HWCF also continued to fund several other ongoing projects such as the groundwater cleanup at the Suffolk Chemical Site in Lexington County, the remedial investigation/feasibility study at the Philip Services Site in Rock Hill, and the design of a groundwater treatment system at the Stoller-Jericho Site in Charleston County. Further, the HWCF funded 14 emergency response actions and supported five criminal investigations, some of which resulted in convictions for illegal waste disposal as well as reimbursement of the Department's environmental response costs.

In addition to performing investigation and cleanup activities, the Department continued to pursue recovery of it's past response costs. The Department also entered into contracts with private parties to pay for or perform response actions with Departmental oversight.

While we recognize these successes, we remain mindful of our need to quickly and efficiently address the threats to public health and the environment that are posed by remaining uncontrolled waste sites in South Carolina. Currently, there are approximately 1095 sites that have been identified as being known or potentially contaminated. DHEC consistently attempts to direct private parties to assess and/or cleanup contamination where appropriate. Nonetheless, each site represents a potential liability to the HWCF if the RP(s) is unknown, unwilling, or unable to conduct the necessary activities. In light of that and prior fund expenditures to date, the known number of contaminated sites represents a potential liability to the HWCF in excess of $60 million. Staff typically work on more than 100 sites per year, but work is not always continuous and most sites require several years of attention before they are ready for reuse as residential or commercial properties. As in the past, DHEC will continue to focus its limited staff and financial resources on addressing the problems that pose the greatest risk to human health.

The intent of this report is to provide the reader with an idea of the magnitude of work that has already been performed on uncontrolled sites as well as an understanding of the challenges that lie ahead in addressing the hundreds of other sites in our inventory.

HORTON SALES DEVELOPMENT CORPORATION—PIEDMONT SITE

This aerial photograph predates DHEC's removal action.

In FY08, DHEC, through its contractors, completed its removal of approximately 9462 large chemical containers (or totes), which were stacked haphazardly and leaking unknown substances. Samples were collected to determine proper disposal methods for waste streams including the following:

- 85,000 gallons of hazardous waste,
- 1 million gallons and 725 tons of non-hazardous sludges and solids, and
- 8520 metal cages which surrounded some of the containers were recycled.

Soil samples were collected after the chemical totes were removed.

The photograph to the left shows DHEC's contractors sampling and segregating the liquids and sludge stored in the chemical totes.

II. HAZARDOUS WASTE CONTINGENCY FUND AND STATE SUPERFUND PROGRAM

A. Brief History of Hazardous Waste Contingency Fund and the State Superfund Program

South Carolina's Hazardous Waste Contingency Fund was created in 1980 when the General Assembly amended the South Carolina Hazardous Waste Management Act (HWMA) to impose a fee of $1.50 per ton on the disposal of hazardous waste at the former GSX Services landfill facility (later operated by Laidlaw and Safety-Kleen) at Pinewood. Through the years, various amendments to the HWMA modified the fee structure to include non-hazardous wastes and to increase the per ton rates on waste disposal.

Historically, the HWCF has been segregated into distinct and separate funds: the Permitted Sites Fund which ensures the availability of funds for response actions at permitted waste landfills, and the Uncontrolled Sites Fund which is used to defray the costs of governmental response actions at uncontrolled hazardous waste sites and from accidents in the transportation of hazardous materials.

In 1980, Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or federal Superfund law) to identify and manage the nation's worst abandoned and uncontrolled hazardous waste sites. In the early 1980s, the South Carolina General Assembly amended the HWMA and authorized DHEC to implement and enforce CERCLA. The HWMA was also amended to specifically incorporate the liability provisions of Section 107 of CERCLA, which created a liability scheme that encourages RPs to perform cleanups and provided a mechanism for recovering costs from recalcitrant parties.

The Uncontrolled Sites Fund (of the HWCF) is used to address abandoned and uncontrolled waste sites that do not qualify for federal assistance. The primary uses of the HWCF are to oversee the cleanup of contaminated sites, to cleanup those sites where other funds are not available, and to conduct emergency response activities. The HWCF is also used to conduct criminal investigations, to support the Voluntary Cleanup Program, to provide the State's cost share (10% up to 50% match) for federal dollars spent on remedial actions at Federal Superfund Sites, and to conduct the Waste Minimization and Reduction Program. The following paragraphs provide a brief discussion of the major uses of the HWCF. More detail is provided in Appendices A through E.

B. Hazardous Waste Contingency Fund Uses

1. State Lead Response Actions (Appendices A, B, and C)

The primary purpose of the HWCF is to provide funds for contractual services to perform state-funded investigation and cleanup activities at sites where other funds are not available. The State Superfund Program evaluates and sets priorities for sites in order to address the worst cases first. In FY06 and FY07, DHEC staff developed a new process for "tiering" sites (i.e., assigning a priority based on available information) to help ensure that the worst sites are addressed first. Unless the Department deems an imminent threat exists or a criminal investigation is necessary, state-funded response actions are generally taken only after the Department initiates the appropriate administrative procedures to secure alternative funding. Considerable time and effort are expended to ensure that all available funds from the RPs and other sources are utilized before drawing on funds from the HWCF. In most cases, the Department attempts to negotiate settlements with RPs and NRPs prior to using the HWCF.

There has been considerable progress in the State Superfund Program's efforts to address uncontrolled hazardous waste sites in spite of the complex process involved in resolving problems that have taken decades to develop. For example, many sites have been abandoned by bankrupt firms or are the product of

"midnight" dumping and thus, the contamination remains unknown and undiscovered for years. This situation provides the multiple challenges of identifying the materials involved, the persons responsible, defining the true extent of the problem and its associated risk, and notifying the community of findings and keeping them informed and involved in the cleanup efforts. Even though information on the chemicals used at a facility is often available, information on wastes may not be, and identifying the source and nature of the contamination is often very difficult. Considerable resources must be invested to properly sample and analyze materials, which are likely to be volatile, reactive, explosive, corrosive, and/or toxic.

During FY08, the Program completed a state-funded time-critical removal action at the Horton Sales Development Corporation—Piedmont Site to address imminent threats posed by several thousand chemical totes at a closed Greenville cleaning and recycling facility. Some of these totes were leaking and many of them contained hazardous substances and were stacked haphazardly about the property. Since this project began, DHEC has spent over $4 million on this site, including in excess of $2.6 million during FY08. See page 2 for site photographs. Appendix A includes summaries briefly describing some of the many state-lead and voluntary cleanup sites at which the Department managed or oversaw response activities during FY08. Additional information on the processes for addressing contaminated sites is included in Appendix B.

DHEC has addressed many other abandoned and uncontrolled waste sites using the HWCF. The following are examples of sites addressed and the amount of fund money that has been spent at these sites:

Hollis Road Site. A groundwater plume polluted at least 42 business and private drinking water wells with trichloroethene contamination in Lexington County. The Department conducted extensive sampling and approximately 300 businesses and residences were provided access to public water using HWCF monies. Cost to date: approximately $2.9 million.

Philip Services Corporation Site. A permitted hazardous waste disposal facility for solvent reclamation and incineration, which filed for bankruptcy protection in 2003. DHEC responded and kept a groundwater treatment system operating, removed the incinerator and its building, completed the Remedial Investigation, and initiated a Feasibility Study. Costs to date: approximately $3 million. DHEC has recovered $2.3 million from the bankrupt debtor and is negotiating with other RPs to implement a long-term remedial action.

Stoller Chemical Company Site. A former fertilizer manufacturing company located in Charleston County had extensive sediment, soil and groundwater contamination. The pollution impacted Caw-Caw Swamp, which is currently being cleaned up. The project cost to date exceeds $17 million. The HWCF has allowed DHEC to pursue RPs to recover almost 100 percent of all costs to date. DHEC has already treated and disposed of thousands of tons of waste materials and cleaned up contaminated sediments in Caw Caw Swamp, and is preparing to implement a long-term groundwater remediation in FY09.

Over the last few years, DHEC has mobilized and responded after emergency orders were issued to close operating facilities such as Tin Products in Lexington County, Cardinal Chemical in Richland County, and Starmet in Barnwell County. The U.S. Environmental Protection Agency (EPA) has also assisted with cleaning up these facilities; however, their actions have generally been limited to short-term surficial cleanup. Long-term cleanup of the contaminated groundwater will likely be DHEC's responsibility. The S.C. Hazardous Waste Management Act requires that DHEC pursue RPs to recover costs associated with the investigation and cleanup. DHEC often finds that the RPs are bankrupt and costs cannot be recovered.

Various styles of settlements with responsible and non-responsible parties require settling parties to perform investigations to determine the source, nature, and extent of contamination at a site, and/or cleanup contaminated sites, to fund these response activities themselves, or alternatively, to reimburse the Department's response costs when the Department performs cleanups of sites. Appendix A includes information on each site relating to the type of settlement, RP and NRP contracts, cost recovery and settlement agreements, and/or judicial consent orders where a party may be performing and/or funding response activities). In many cases, multiple funding sources are used to investigate and/or cleanup sites.

With many of these settlements, the Department provides bargaining tools, such as covenants not to sue for the work performed by the RP or NRP to the Department's satisfaction, and/or state contribution protection from other RPs which may seek reimbursement of all or a portion of costs of responding to environmental conditions at a site.

SCE&G Florence MPG Site
To minimize disturbances to surrounding roads, the Responsible Party's contractors installed sheet pilings and braced excavation area prior to excavating waste.

Even though a RP or NRP enters into an agreement or voluntary cleanup contract with the Department to pay for or perform response activities, DHEC staff must review and approve all environmental reports, sampling data, and other activities associated with the cleanup of contaminated sites to assure that public health and the environment are protected. Under these contracts and agreements, parties are required to reimburse DHEC's costs for oversight activities. Further, DHEC performs public participation/community involvement activities pursuant to CERCLA and the National Contingency Plan (NCP) to ensure that affected communities have input into the cleanup. Appendix C details these activities.

2. Emergency Response (Appendix D)

DHEC's Emergency Response Program responds to accidental spills and other problems associated with the transportation of hazardous materials as well as other incidents where hazardous materials are spilled, illegally dumped, or otherwise abandoned on public property. The Emergency Response Program administers the Emergency Response Contract which is used to secure, sample, and properly dispose of wastes. These activities are funded by the HWCF.

During FY08, DHEC expended approximately $95,182.50 responding to 14 incidents. The Emergency Response Program recovered $39,417.93 from the National Pollution Funds Center during FY08, and over $34,569.53 is pending approval for reimbursement. The amount of reimbursement varies from year to year depending on the number and type of incidents that occur. All reimbursements are returned to the HWCF.

Appendix D lists emergency response actions during FY08 and includes a brief description of each response.

3. Administrative Costs/Salaries

DHEC uses some of the HWCF monies for administration. The HWCF typically funds approximately 12 FTEs (full-time equivalent positions) that perform site prioritization activities, project management, technical reviews and field oversight, cost recovery activities, public participation activities, and other administrative activities in support of the Program. During FY08, the HWCF provided approximately $845,000 for salaries and fringe benefits, agency administrative assessments, and other non-site-specific costs. These costs are included in DHEC's cost recovery efforts against potentially responsible parties.

4. Criminal Investigations

The State Superfund Program also assists DHEC's Office of Criminal Investigations in providing technical assistance and contractual services for gathering evidence for environmental crime cases. During FY08, the HWCF supported criminal investigation activities at five sites. After the initial criminal investigation activities were completed, DHEC performed additional cleanup activities using its civil authorities and the HWCF. On these five sites, DHEC spent approximately $429,293 in supporting environmental crime investigations and civil cleanup actions.

These matters are considered enforcement confidential until the criminal investigations are completed.

5. National Priorities List Sites (Appendix E)

The NPL is a list of sites that the United States Environmental Protection Agency (EPA) has identified for investigation and potential long-term remediation under the authority of the Federal Superfund Program. There are currently 40 NPL sites in South Carolina, four sites that have been deleted from the NPL, 12 sites that are being addressed as "NPL-equivalent" sites, and six Federal-lead removal sites that are being addressed under the Support Agency Cooperative Agreement. DHEC staff provides technical and administrative assistance to EPA on these sites. Cleanup activities on most of these sites are being funded by private parties and most of DHEC's day to day costs are funded through a cooperative agreement with EPA; however, DHEC is "potentially" liable for a state cost share of 10% to 50% for long-term remedial action costs at sites being funded by EPA. There are currently no NPL sites that require that the state fund 100% of operations and maintenance costs. DHEC may also incur costs for activities such as natural resource damage assessments and other activities that are outside the scope of the cooperative agreement. In FY08, DHEC expended approximately $72,000 from the HWCF for activities at NPL and other Federal-lead sites. Additional information on South Carolina's NPL sites is included in Appendix F.

C. Hazardous Waste Contingency Fund – Uncontrolled Sites Fund Status and Financial Sheets

1. Fund Status

Just as CERCLA provided federal funding to address certain uncontrolled hazardous waste sites, the HWMA provided state funding to investigate and cleanup uncontrolled sites that do not qualify for federal assistance. From its beginning in 1980, the Uncontrolled Sites Fund portion of the HWCF grew to a balance of approximately $11 million at the close of FY90.

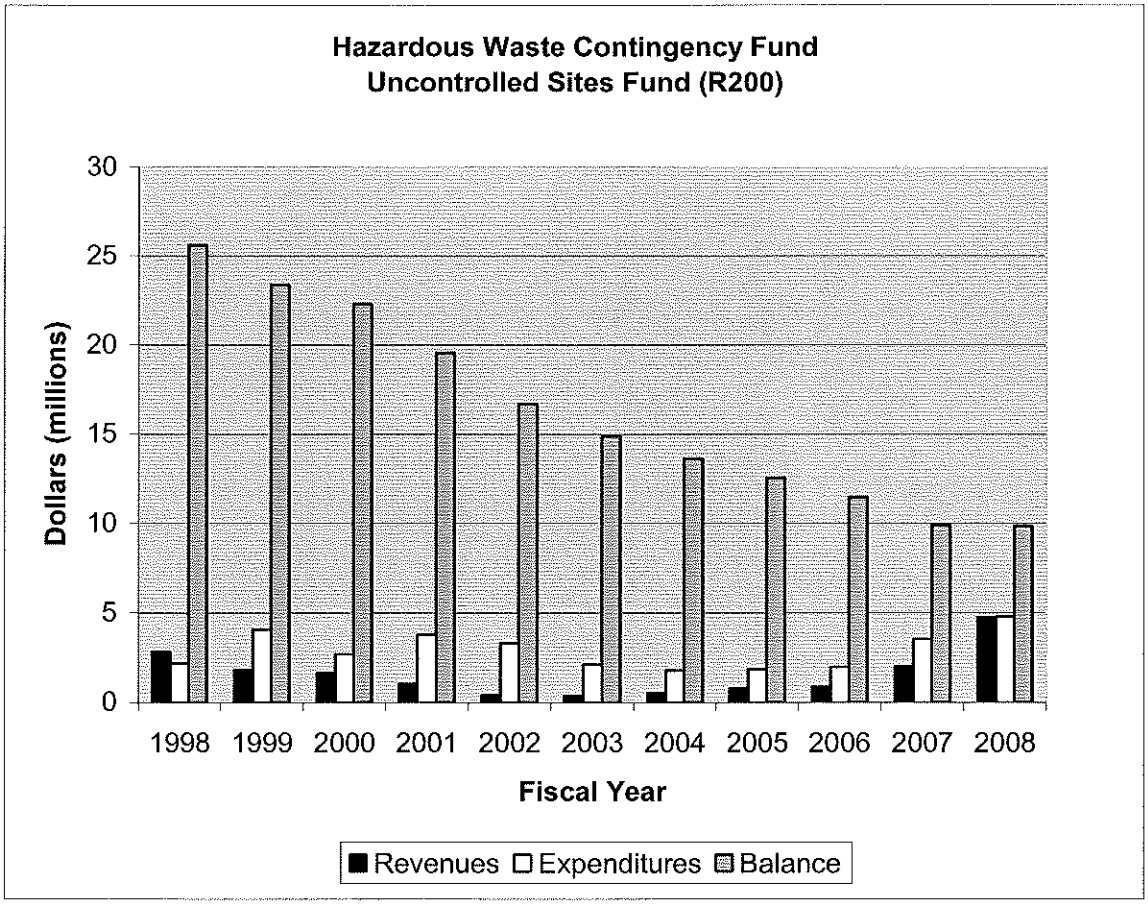
Through the 1990s, revenues for the Uncontrolled Sites Fund averaged approximately $2-3 million annually and the Fund balance grew and briefly exceeded $25 million in 1998 (see Figure 1). However, in 2000, Safety-Kleen filed for bankruptcy protection and shortly thereafter stopped receiving waste at the Pinewood landfill. At that time, the Uncontrolled Sites Fund had a balance of approximately $22 million. With the exception of monies from cost recovery efforts and the billing of private parties for DHEC's oversight of work performed under consent agreements and voluntary cleanup contracts, there were no new revenues for the HWCF. From 1999 through 2007, expenditures greatly exceeded revenues and the

HWCF balance steadily declined to a closing balance of approximately $9,891,239.51 on June 30, 2007. During FY08, revenues and expenditures were almost identical and the HWCF closed FY08 with a balance of $9,858,955.69.

Beginning in 2000, establishing a continued funding source for the HWCF was a budget priority for the Department. Budget Proviso 9.45 which was passed in 2006 allowed the HWCF to retain the interest on the fund balance. In FY08, Budget Proviso 9.54 authorized DHEC to assess an annual fee on hazardous waste generators and to levy a per ton fee on hazardous waste generated with the proceeds to be deposited into the HWCF. Specifically, large quantity generators, as determined by R.61-79.262 (South Carolina Hazardous Waste Regulations) producing greater than 100 tons of hazardous waste per year are assessed an annual base fee of $1,000 per facility and a $1.50 per ton fee for all hazardous waste the company generates. Large quantity generators producing 100 tons or less of hazardous waste are assessed an annual fee of $1,000. Small quantity generators are assessed an annual fee of $500. Fees collected under this provision shall not exceed an annual cap of $15,000 per generator. Companies subject to fees required by S.C. Code Ann. Section 44-56-170(F)(1)(1976) are exempt from fees established by this provision. It is anticipated that these two provisos will authorize the annual collection of approximately $1.5 to 2.0 million.

2. Financial Sheets

The chart below and table on page 8 show the Uncontrolled Sites Fund balances, revenues, and expenditures for FY08. Revenues were in excess $4,753,152.33, expenditures were $4,785,396.15, and the closing balance was $9,858,995.69.



Hazardous Waste Contingency Fund Balance for 2008

The Department has established separate accounts within the Hazardous Waste Contingency Fund for permitted sites and uncontrolled sites. The HWCF is reflected below in the balance statement.

UNCONTROLLED SITES FUND	
Opening Balance (07/01/2007)	9,891,239.51
Revenues	4,753,152.33
Total Expenditures FY08 (chart below)	(4,785,396.15)
Closing Balance (06/30/2008)	9,858,995.69
Obligated as State Match for National Priorities List Sites.	(54,504.00)
Obligated in Purchase Orders for Response Activities, etc. (chart on page 9)	(7,642,448.38)
Obligated in Purchase Orders for Existing Emergency Response Actions	(86,666.55)
Obligated for Administrative Expenses for FY09	(866,338.00)
Un-obligated Balance for Uncontrolled Sites Fund (06/30/2008)	1,209,038.76

BREAKDOWN OF TOTAL FY08 EXPENDITURES	
Uncontrolled Sites	3,964,634.41
Emergency Response	95,182.50
Salaries, Fringe Benefits, Agency Administrative Assessment	725,579.24
Total Expenditures	4,785,396.15

Obligations in Purchase Orders for Response Actions, Legal Activities, Etc. as of June 30, 2008

This table shows future site-specific obligations (approximately $7.6 million) that are already assigned to a state contractor or which are planned to be assigned to a state contractor. These sites and obligations represent a very small portion of DHEC's site inventory. Based on recent and historical averages, it is estimated that the existing inventory of sites may present a $60 million liability to the HWCF.

OBLIGATION	DESCRIPTION	AMOUNT
Belk	Sampling	1,066.25
Columbia Organic Chemical—Drake Street	Sampling	5,830.00
Hollis Road	Groundwater Treatment	2,600,000.00
Horton Sales Development	Complete Chemical Tote Removal	192,193.87
I-85	Response to transformer release	34,338.56
JESCO	Waste Removal	150,000.00
Kalama	Sampling	16,153.00
Old Adamsville School	Sampling	11,065.02
Philip Services Corp. (PSC)	Phase I Remedial Investigation	220,700.46
South Lake Drive/Old Orangeburg Road	Groundwater Treatment	2,600,000.00
Suffolk Chemical Company	Operation and Maintenance of Groundwater Pump and Treat System	27,323.20
US Finishing/Cone Mills	Sampling	5,000.00
Whitmire City Landfill	Sampling	3,263.93
CI Site 1	Criminal Investigation	6,312.00
Original Contractor Commitments	Various Sites/Activities	916,542.65
Miscellaneous		5,441.76
Various Parties	Outside Legal Services in Support of Cost Recovery and Other Related Activities	95,591.68
Total Obligation through June 30, 2008 ***		7,642,448.38

*** This figure does not include any additional planned future assessment or cleanup activities that have not yet been assigned to a contractor. Sites that have a Record of Decision and previously had funds committed include the Columbia Organic Chemicals Site and Adams (Pete) Hasell Site.

Appendix A

Summaries of State - Lead Sites

The following summaries describe some of the State-lead sites at which Department personnel oversaw response activities during Fiscal Year 2008 (FY08). The funding for these activities came from Responsible Parties, Non-Responsible Parties, or the Hazardous Waste Contingency Fund. The primary source of the funding for each site is designated in each site summary.

A-CHEM CORPORATION

Location: 5205 S MAIN ST (U.S HWY 29) COWPENS, SC
Description: Facility formerly manufactured dyes and resins for the textile industry and had a permitted wastewater treatment system that discharged to the public sewer.
Lead Designation: Responsible Party Funded Consent Agreement 93-46-HW 08/30/1993
Funds Expended in FY08: $ 2,175.00 **Total Site Expenditures:** $73,370.00
Actions Taken in FY08: The interim remedial action, which includes pumping water from the contaminated bedrock aquifer, treating the water by air-stripping, and discharging the treated water to the Spartanburg Sanitary Sewer, continued to operate. Monthly monitoring reports indicated the recovery and treatment of total VOCs was ongoing. Since the system startup in April 2000, nearly 47 million gallons of groundwater have been treated and the total VOC mass removed is estimated at 166 kg.

ALCOA BUILDING PRODUCTS

Location: 100 CELLWOOD PL GAFFNEY, SC
Description: Manufacturing plant with former drum burial area comprised of two (2) parallel trenches in which waste was disposed, including drums containing waste paints.
Lead Designation: Responsible Party Funded Consent Agreement 93-23-SW 04/01/1993
Funds Expended in FY08: $ 510.00 **Total Site Expenditures:** $8,815.00
Actions Taken in FY08: The Department issued a Certificate of Completion to the Responsible Party.

ARVIN MERITOR FACILITY

Location: 144 TRANQUIL CHURCH RD MULLINS, SC
Description: VOCs & metals in soils. Transfer project from BOW.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 05-5626-RP
Funds Expended in FY08: $ 6,303.00 **Total Site Expenditures:** $8,403.00
Actions Taken in FY08: On July 3, 2007, the Department received the Remedial Investigation-Initial Phase Report that evaluated the source, nature, and extent of contamination. On August 7, 2007, the Department requested that the Responsible Party address the need for additional investigation in some areas. On March 7, 2008, the Department approved the Remedial Investigation-2nd Phase Work Plan. Also in March 2008, field activities began and ended in May 2008. The purpose of the second phase of investigation was to confirm and define potential source areas of soil and groundwater impact that were identified in the previously performed soil gas survey in the initial phase of the Remedial Investigation and to evaluate the horizontal and vertical extent of groundwater impacts from contaminants. The work plan consisted of the advancement of 16 soil borings for confirmation soil sampling of the soil gas survey results to determine the lateral extent of contamination and also collect groundwater samples from the areas of

concern and existing groundwater monitoring wells. The Department anticipates the Remedial Investigation--Second Phase Report in FY09.

ATLANTIC PHOSPHATE WORKS/SCE&G HAGOOD ST

Location: 2200 HAGOOD RD CHARLESTON, SC, SC
Description: Former phosphate fertilizer plant. Documented low pH groundwater and heavy metal contamination.
Lead Designation: EPA-Lead
Funds Expended in FY08: $ 3,581.00 **Total Site Expenditures:** $6,824.00
Actions Taken in FY08: This site is being addressed under the Federal Superfund Program. The HWCF supported the Department's participation in several conferences with the Natural Resource Trustees and ExxonMobil Corporation regarding natural resource damages.

AUTOMATIC SWITCH COMPANY

Location: 1561 COLUMBIA HWY N AIKEN, SC
Description: Electronics manufacturer with groundwater contaminated with chlorinated solvents.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 02-5455-RP
Funds Expended in FY08: $ 2,991.00 **Total Site Expenditures:** $46,766.00
Actions Taken in FY08: The Responsible Party, Emerson, conducted quarterly sampling of eleven private wells. Data from the latest sampling event indicated two of these private wells contained concentrations of VOCs (PCE and 1,1-DCE) above the Maximum Contaminant Levels. However, the property owners of these two wells stated the wells are not used as a drinking water source. Concurrent with the continued field sampling, the Department began to draft the Proposed Plan that will identify the Department's preferred cleanup remedy.

AVX - AMERICAN GEAR & PINION CO

Location: HWY 501 CONWAY, SC
Description: An electronic components manufacturing facility has two unlined lagoons with metal plating waste and is located adjacent to the Intracoastal Waterway. Contamination is attributed to the former operator, American Gear & Pinion Company.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 97-36-SW; Responsible Party Funded Consent Agreement 86-51-SW (9/29/1986) & Administrative Order 97-36-SW 10/23/1997
Funds Expended in FY08: $ 2,403.00 **Total Site Expenditures:** $38,602.00
Actions Taken in FY08: The Department reviewed two groundwater monitoring reports. Contaminant concentrations in monitoring wells surrounding the extraction wells for the groundwater pump and treat system continued to decrease. However, one well at the property boundary continued to exceed the drinking water standards for TCE. Concentrations in the small creek along the property line were all below detectable limits. On June 11, 2008, the Department requested that AVX conduct additional groundwater characterization to assure that contamination is not migrating offsite.

AVX CORPORATION MYRTLE BEACH

Location: 17TH AVE S MYRTLE BEACH, SC
Description: AVX acquired the property from the former Myrtle Beach Air Force Base and currently manufactures electronic components. From 1980 until 1996, groundwater contamination was monitored and treated by AVX without the Department's knowledge or approval.
Lead Designation: Responsible Party Funded Consent Order 96-43-HW, DWP 12/19/1996
Funds Expended in FY08: $ 55,898.00 **Total Site Expenditures:** $82,465.00

Actions Taken in FY08: In July 2007, the Department provided comments on the off-site groundwater investigation report. In October 2007, the Department approved a work plan for an additional off-site groundwater investigation, which included the collection of soil gas samples, groundwater samples, and surface water samples. The fieldwork for this additional investigation was conducted in November and December 2007.

In December 2007, the Department held an availability session for the public. The Department also attended both Horry County Council and City of Myrtle Beach Council meetings in January and February 2008 to provide an update on site activities since the December 2007 availability session.

Reports for both the additional off-site groundwater and surface water investigation and the soil gas analysis were submitted in the spring 2008. In addition, the Department approved a proposal for additional groundwater monitoring wells and requested that AVX submit a Feasibility Study Work Plan. In April 2008, the Department met with AVX to discuss the progress of the off-site investigation and the Department's expectations for the Feasibility Study Work Plan.

In May 2008, the Department held a second public availability session. Also, the Department approved a plan for groundwater sampling on-site and the Feasibility Study Workplan. Fieldwork to install additional groundwater wells around the facility property and to sample on-site groundwater wells began at the end of FY08. Reports on the annual groundwater sampling and the installation of the new groundwater monitoring wells reports, and the implementation of the Feasibility Study Work Plan are expected in FY09.

BAHAN MACHINE & FOUNDRY CO INC

Location: 200 W WAREHOUSE CT TAYLORS, SC
Description: Former textile machinery manufacturing facility with possible PCB contamination.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 00-5403-RP
Funds Expended in FY08: $ 2,042.00 **Total Site Expenditures:** $11,961.00
Actions Taken in FY08: On October 2, 2007, the Department conducted a site visit to address some data gaps concerning the horizontal extent of contamination in the southern portion of the site. The Department later requested a work plan on October 9, 2007, that would include field screening in that area, followed by the selection of monitoring well locations based on the results of the initial screening.

The Department approved a Revised Work Plan for additional field screening. The screening results indicated no contaminants of concern were in that area and, therefore, no additional wells were required. The property owner proposed the design and implementation of a free product recovery system on the existing monitoring wells. A Work Plan is expected in FY09.

BARITE HILL/NEVADA GOLD MINE

Location: BETWEEN US 378 & US 221 OFF RD 30 MCCORMICK, SC
Description: Abandoned mine with 7 processing ponds containing an unknown amount of free-liquids potentially contaminated with cyanide, 3 large waste rock piles & 2 open pits containing water that is potentially acidic with a high dissolved metal content.
Lead Designation: Federal and State Funded
Funds Expended in FY08: $ 705.00 **Total Site Expenditures:** $9,440.00
Actions Taken in FY08: The Department assisted EPA with its response action and performed title searches of the properties consisting of this site.

BARNWELL TOWN DUMP

Location: ON CO RD 607 5 MI E OF INT CO RD 70 BARNWELL, SC
Description: The Town of Barnwell operated this dump from 1955 - 1972. Lanolin sludge containing perchloroethene from wool mill dry-cleaning operation and trichloroethene found in open dump. Approximately 100 drums found. Site adjacent to Salkehatchie River.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 00-13-HW; Responsible Party Funded Consent Agreement 00-13-HW 06/09/2000

Funds Expended in FY08: $ 7,361.00 **Total Site Expenditures:** $41,629.00
Actions Taken in FY08: On August 15, 2007, the Department published a notice of the Proposed Plan public meeting to be held on August 23, 2007, to propose a final cleanup remedy. The proposed remedy includes removal of the Rouge Area, a section of the landfill that contains mostly industrial waste and a large quantity of drums and metals contaminated soils, creation of a 20-foot buffer zone between the wetland and the landfill, removal of surficial waste, and deed restrictions and institutional controls to limit the use of groundwater and prevent public access. The public were favorable to the remedy during the meeting and no comments were received during the public comment period. The Department drafted a Record of Decision and forwarded the ROD to EPA for review. The ROD should be issued in FY09.

BELK SITE

Location: US HWY 5/21 ROCK HILL, SC
Description: Approximately 1,200 loads of soil containing boiler fly ash was excavated at Winthrop University and improperly deposited on this property. Coal Ash waste from a former Springs facility was disposed of at the site to fill in some low areas.
Lead Designation: State Funded
Funds Expended in FY08: $ 20,094.00 **Total Site Expenditures:** $44,483.00
Actions Taken in FY08: Two groundwater monitoring wells were installed and sampled by the Department's contractor. All sample results were below drinking water standards for all parameters. The Department also performed a property title search and provided notices of potential liability to Potentially Responsible Parties (PRPs). The Department met with the PRPs to discuss remediation.

BEST GOLF CARTS/DUMP/WOOD PRESERVATION

Location: HWY 701 IN HOMEWOOD 2 MILES N OF CONWAY CONWAY, SC
Description: Former wood treating operation with copper, chromium and arsenic contamination.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 01-5103-RP
Responsible Party Funded Consent Agreement 95-17-HW 08/02/1995
Funds Expended in FY08: $ 3,118.00 **Total Site Expenditures:** $27,924.00
Actions Taken in FY08: On June 25, 2008, the Department forwarded the restrictive covenant, which prevents onsite groundwater use and prevents disturbance of the capped areas, for execution by BFS and filing with the Horry County Register of Mesne Conveyance. The Department anticipates BFS's request for a notice of completion letter in FY09. All active cleanup activities have been completed.

BLACKBERRY VALLEY LANDFILL

Location: GROCE RD1.5 MI.FROM INT S-199 & S-132 GREENVILLE, SC
Description: A Greenville County permitted landfill that accepted domestic and industrial waste.
Lead Designation: Responsible Party Funded Administrative Consent Agreement 02-21-HW (10/04/02); Consent Order 92-08-HW & 11Responsible Party Cost Recovery Settlement Agreements, 03/06/1992
Funds Expended in FY08: $ 2,154.00 **Total Site Expenditures:** $180,244.00
Actions Taken in FY08: On August 2, 2007, the Department issued comments recommending future sampling events on the 2007 Semi-Annual Corrective Action Report. The Department submitted comments on the 2007 Annual Groundwater Corrective Action on March 24, 2008. The Department received a response to comments on May 1, 2008. The response included analytical data on material build-up from the Blackberry Valley landfill cascade aeration system.

BROCKMAN CHRYSLER-PLYMOUTH SUZUKI

Location: 2750 LAURENS RD GREENVILLE, SC
Description: An auto dealership with groundwater contaminated with organics from an onsite paint/body shop.
Lead Designation: Responsible Party Funded Consent Agreement 94-08-HW 03/29/1994
Funds Expended in FY08: $ 491.00 **Total Site Expenditures:** $16,072.00
Actions Taken in FY08: The Department provided comments on the June 2008 Groundwater Monitoring Report.

BUSH'S RECYCLING INC

Location: 102 W SUMTER ST FLORENCE, SC
Description: Former scrap yard & metal recycling facility. Waste oils, PAHs, heavy metals likely in soil and groundwater from large amounts of scrap metal stored on ground at facility.
Lead Designation: EPA-Lead
Funds Expended in FY08: $ 89.00 **Total Site Expenditures:** $274.00
Actions Taken in FY08: This site is an EPA-Lead project under the Federal Superfund Program. The HWCF supports the Department's participation in the oversight of soil sampling.

CALHOUN PARK AREA SITE

Location: CALHOUN @ CONCORD ST S CHARLESTON, SC
Description: A former manufactured gas plant and Ansonborough Homes, a public housing unit.
Lead Designation: EPA-Lead
Funds Expended in FY08: $ 1,948.00 **Total Site Expenditures:** $36,750.00
Actions Taken in FY08: This site is an EPA-lead project under the Federal Superfund Program. The HWCF supported the Department's review of various reports. DNAPL removal is continuing, and contaminated unsaturated soils have been removed. A cap has been placed over affected sediments. Long-term monitoring of remediation effectiveness continued. A special study of arsenic concentrations in groundwater was also conducted, and an evaluation of potential indoor air risks was developed.

CARDINAL CHEMICAL CO

Location: 0.1 MI E OF INT OF SHOP RD & S BELTLINE COLUMBIA, SC
Description: Operating facility became unable to discharge to Publicly-owned Treatment Works and exhausted onsite capacity for storage of processed waste and storm water.
Lead Designation: State Funded
Funds Expended in FY08: $ 147.00 **Total Site Expenditures:** $208,284.00
Actions Taken in FY08: The Department periodically visited the site to verify security was maintained and discussed site issues with potential purchasers.

CASTLEBRIDGE PROPERTIES

Location: 200 & 280 NATIONAL AVE SPARTANBURG, SC
Description: Pre-buy assessment found PCE, TCE in groundwater. Site consists of two buildings previously used for warehousing and manufacturing. Metal plating operation in one building. Both buildings contained industrial dry-cleaning processes.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 07-5712-RP
Funds Expended in FY08: $ 1,736.00 **Total Site Expenditures:** $2,088.00

Actions Taken in FY08: On June 2, 2008, the Department provided comments on the Remedial Investigation Work Plan and the Sampling and Analysis Plan. Revisions and implementation are expected in FY09.

CHAPIN PRIVATE WELL CONTAMINATION

Location: 261 OUTBACK RD CHAPIN, SC
Description: Private well contaminated - benzene above MCL.
Lead Designation: State Funded
Funds Expended in FY08: $ 4,303.00 **Total Site Expenditures:** $4,303.00
Actions Taken in FY08: In December 2007, the Department responded to a private well where sample results indicated contaminants were present above drinking water standards. Because the source of contamination had not been identified, DHEC used a state contractor to place a filter on the well.

CHEMURGY PRODUCTS PLANT

Location: 101 CONGAREE RD(AKA WOODS LAKE RD) GREENVILLE, SC
Description: Groundwater contamination resulting from disposal of waste containing coal tar residue. Soil contamination has been removed, and the groundwater plume appears to have migrated across Piper Lane. One interim remedial pumping well in place.
Lead Designation: Responsible Party Funded Administrative Consent Agreement 89-32-SW 09/29/1989
Funds Expended in FY08: $ 902.00 **Total Site Expenditures:** $26,218.00
Actions Taken in FY08: The Department provided comments on the September 2007 Groundwater Monitoring Report and met with Chemurgy in June 2008 to discuss further remedial efforts. A work plan is expected in early FY09.

CLINTON MILLS-PLANTS 1 AND 2

Location: 600 ACADEMY ST CLINTON, SC
Description: Textile plant used 1,1,1-trichloroethane for a cleaning solvent and approximately 1531 gallons of waste 1,1,1-trichloroethane were used around railroad tracks and fence for weed control.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 02-5327-RP
Responsible Party Funded, Voluntary Cleanup Contract 05-5327-RP
Funds Expended in FY08: $ 99.00 **Total Site Expenditures:** $5,349.00
Actions Taken in FY08: On July 31, 2007, the Department requested that the Responsible party resample the five wells onsite to better characterize the impact of groundwater. The Department expects a groundwater sampling report in FY09.

COASTAL LUMBER CO - CARMICHAEL TRACT

Location: 800 HULL RD MARION, SC
Description: Disposal site for Coastal Lumber Marion Sawmill. Demolition and CCA-treated wood were disposed. Arsenic and chromium was detected in soil and groundwater.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 04-5539-RP
Funds Expended in FY08: $ 151.00 **Total Site Expenditures:** $632.00
Actions Taken in FY08: The Department conducted a file review to determine the need for further assessment of groundwater contamination and discussed the further assessment needs with the RP and NRP. The Department anticipates a proposal letter illustrating additional groundwater sample locations in FY09.

COASTAL LUMBER CO - MARION SAWMILL SITE

Location: SC HWY 41 ALT & EAST ST MARION, SC
Description: Former pine sawmill with CCA wood treatment operation. Possible arsenic and chromium in soil & groundwater.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 04-5538-RP
Funds Expended in FY08: $ 152.00 **Total Site Expenditures:** $1,385.00
Actions Taken in FY08: The Department conducted a file review to determine the need for further assessment of groundwater contamination and discussed the further assessment needs with the RP and NRP. The Department anticipates a proposal letter illustrating additional groundwater sample locations in FY09.

COLONIAL HEIGHTS PACKAGING

Location: EXIT 68 INTERCHANGE OF I-85 SPARTANBURG, SC
Description: Chlorinated solvents. Transfer from BOW.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 07-5647-RP
Funds Expended in FY08: $ 924.00 **Total Site Expenditures:** $924.00
Actions Taken in FY08: A Responsible Party Voluntary Cleanup Contract was signed in April 2008, after which a work plan to sample groundwater was approved by the Department. A groundwater sampling report was submitted in June 2008 and additional groundwater samples are expected to be obtained in FY09.

COLUMBIA ORGANIC CHEMICALS INC

Location: 1 BLK FRM INT OF TRUE ST & DRAKE AVE COLUMBIA, SC
Description: A closed specialty chemical manufacturer whose processes led to soil and groundwater contamination. Delineation of groundwater contamination is ongoing, while the remedy for addressing soil contamination, a protective cap, is currently being designed.
Lead Designation: State Funded; Responsible Party Funded Consent Agreement 91-10-SW, Incomplete 02/27/1991
Funds Expended in FY08: $ 6,163.00 **Total Site Expenditures:** $3,666,217.00
Actions Taken in FY08: At the request of the Department, EPA conducted a removal site assessment to determine whether site conditions would warrant a federal fund-lead removal action. After reviewing the Removal Assessment Evaluation, EPA determined that site conditions met the requirements for a time-critical removal action. Between January and April 2008, contractors for EPA excavated and removed dioxin contaminated soil. During this removal action, numerous amber jars were unearthed and further assessment using exploratory trenching was warranted. During this trenching assessment, two additional bottles were found and a continued odor from the soil was noticeable four to six feet below ground surface. Results from the analysis of the bottle contents revealed the presence of pesticides. Based on the observations of the stained soils, jars found at depth, the pesticide odor in the soils, and the known groundwater issues, the EPA's Emergency Response and Removal Branch referred the site to the EPA Remedial Program.

During the soil removal action, residents were kept informed of site activity through two public meetings. EPA and the Department also attended the community's neighborhood association meetings to provide periodic updates.

After the soil removal, the excavated areas were brought back to grade with clean off-site fill dirt. These areas were then re-graded to improve drainage and prevent storm water runoff from traveling offsite. The excavated areas were then seeded to prevent soil erosion. In May 2008, to verify no contaminated soils had been transported offsite, the Department collected six soil samples from residential areas located along the stormwater runoff path from the site. These samples were analyzed for the presence of dioxins. Based on a review of the sampling data, the Department determined that dioxins were not present in excess of the EPA's residential Removal Action Level.

COLUMBIA SUPPLY COMPANY

Location: 823 GERVAIS ST COLUMBIA, SC
Description: Site of former manufactured gas plant with buried coal tar.
Lead Designation: State Funded
Funds Expended in FY08: $ 414.00 **Total Site Expenditures:** $11,024.00
Actions Taken in FY08: Groundwater remediation continued using chemical oxidation. The Department reviewed five groundwater monitoring reports. The contaminant concentrations in groundwater have been reduced to below the MCLs in all the wells except two nearest the previously removed gas holder. On May 28, 2008, the Department revised the cleanup levels for the two wells that still had impact. Since remediation began, concentrations in the most highly impacted well have decreased significantly.

CONE MILLS CORP/UNION BLEACHERY PLANT

Location: 3335 OLD BUNCOMBE RD GREENVILLE, SC
Description: Former textile dyeing and finishing plant with hexavalent chromium, PCBs, and other metals in groundwater, sediment, surface water, and soil.
Lead Designation: State Funded
Funds Expended in FY08: $ 21,188.00 **Total Site Expenditures:** $607,263.00
Actions Taken in FY08: On June 11, 2008, the Department toured the property and met with the attorney and real estate agent in charge of coordinating the sale of the property. The Department met with the prospective purchaser regarding plans to redevelop portions of the site.

CONSOLIDATED SYSTEMS INC

Location: 650 ROSEWOOD DR COLUMBIA, SC
Description: A metal fabrication manufacturing facility.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 06-5671-RP
Funds Expended in FY08: $ 4,059.00 **Total Site Expenditures:** $6,143.00
Actions Taken in FY08: The September 11, 2007, Baseline Investigation was reviewed and the Department provided comments to the report. A Work Plan for follow-up activities was submitted to the Department and, on June 9, 2008, the Department provided comments.

CREATEX MANUFACTURING CORP

Location: INT OF SC 9 & IRON ORE RD SPARTANBURG, SC
Description: Two unpermitted disposal areas at the Milliken plant contain drums, industrial waste and construction debris. Volatile Organic Compounds were found in soil and groundwater. Based on Remedial Investigation results, removal was the chosen remedy.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 96-22-HW; Responsible Party Funded Consent Agreement 96-22-HW, Amended 05/07/97 05/28/1996
Funds Expended in FY08: $ 139.00 **Total Site Expenditures:** $23,121.00
Actions Taken in FY08: The Department reviewed and commented on the Groundwater Feasibility Study. Additional groundwater monitoring was needed prior to the approval of the FS. The groundwater monitoring report indicated that the furthest downgradient well was impacted with TCE contamination.

CSX MCCORMICK TRAIN WRECK

Location: HWY 28 & STATE RD 62 MCCORMICK, SC
Description: Area of a train derailment; toluene, xylene, and benzene contamination present.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 96-36-HW; Responsible Party Funded Consent Agreement 96-36-HW 10/01/1996
Funds Expended in FY08: $ 216.00 **Total Site Expenditures:** $31,804.00

Actions Taken in FY08: The phytoremediation system was established. The Department reviewed an annual monitoring report. Additional sampling to confirm the extent of the plume boundary was performed. The area of groundwater contamination is stable.

CUSTOM WORKS PLATING- INMAN RD

Location: 511 INMAN RD LYMAN, SC
Description: Formerly housed a plating operation. Fire destroyed in 2000. Chromium from plating process on-site. Plating waste was dumped from a tote on a trailer to 10-12 miles of roadways near this site.
Lead Designation: State Funded
Funds Expended in FY08: $ 832.00 **Total Site Expenditures:** $832.00
Actions Taken in FY08: In coordination with other Department areas, a response action was performed to, among other things, characterize waste.

DALE OWEN SITE

Location: 250 WENTZKY RD ANDERSON, SC
Description: Dow Badische Plant (now owned by BASF Corporation) disposed of plant waste at this residential property without a permit. High concentrations of trichloroethene are in the groundwater and soil. BASF entered into an RP-VCC in 1998, but the VCC was terminated and BASF entered into a Consent Agreement in 2001.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 98-5220-RP; Responsible Party Funded 01-21-HW 06/26/2001
Funds Expended in FY08: $ 2,942.00 **Total Site Expenditures:** $210,922.00
Actions Taken in FY08: Groundwater monitoring indicates that the Hydrogen Release Compound (HRC) injection has been effective at decreasing the concentrations in shallow groundwater to near the MCL. However, deeper groundwater sampling did not indicate the same decreasing trend; instead, concentrations in the deeper interval remained about the same as before the injections.

On May 20, 2008, the Department approved a work plan, which includes the injection of HRC into the ground and the installation of three new monitoring points to help monitor the efficiency of the injections. An underground injection permit was issued by Bureau of Water on June 30, 2008, and the injection should take place in early FY09.

DARLINGTON COUNTY PRISON FARM

Location: 200 CAMP RD DARLINGTON, SC
Description: Former wood treatment operation where wood was dipped into a creosote pit. A prison is currently located on the site.
Lead Designation: Responsible Party Funded Amendment 95-43-SW (07/10/1995); Administrative Consent Agreement 92-43-SW (08/05/1992)
Funds Expended in FY08: $ 2,030.00 **Total Site Expenditures:** $30,542.00
Actions Taken in FY08: The Department met with Darlington County officials on August 8, 2007, to discuss the long-term monitoring results and future necessary actions. The Department received a Groundwater Monitoring Data report on January 16, 2008. The Department issued comments on the data report on February 7, 2008.

DENMARK LEGARE WELL

Location: LEGARE ST DENMARK, SC
Description: Public supply well containing TCE above MCLs. Source of contamination is not known.
Lead Designation: State Funded

Funds Expended in FY08: $ 1,048.00 **Total Site Expenditures:** $5,665.00
Actions Taken in FY08: The Department began its potentially responsibility party investigation and provided general notice of potential liability and request for information upon potentially responsible parties.

DETROIT BROACH COMPANY

Location: BUNCOMBE RD GREER, SC
Description: Company manufactures cutting tools. Groundwater beneath the site contains chlorinated solvents at levels exceeding Maximum Contaminant Levels.
Lead Designation: Responsible Party Funded Amended (11/14/96); Consent Agreement 94-55-HW 12/19/1994
Funds Expended in FY08: $ 193.00 **Total Site Expenditures:** $12,573.00
Actions Taken in FY08: The Department provided comments to the 2007 Annual Groundwater Monitoring Report. One of the five monitoring wells has a slight detection of contamination above drinking water standards.

DONWAL

Location: 125 INDUSTRIAL PARK RD SUMMERVILLE, SC
Description: Site of former foam insulation manufacturing facility. Groundwater contaminated by chlorinated solvents.
Lead Designation: Responsible Party Funded Consent Agreement 95-28-HW 10/26/1995
Funds Expended in FY08: $ 883.00 **Total Site Expenditures:** $39,514.00
Actions Taken in FY08: In September 2007, the Responsible Party, General Dynamics, collected groundwater samples within the facility's boundaries and two adjacent properties. Data from this activity was used to develop a Feasibility Study Work Plan, which was submitted to the Department shortly thereafter. It is expected that the Work Plan will be implemented in FY09.

DUKE POWER - SPARTANBURG MGP SITE

Location: 684 N PINE ST SPARTANBURG, SC
Description: Possible tar, hydrogen sulfide, waste sludge, phenol, oil contamination. Former manufactured gas plant (MGP); currently a natural gas facility.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 01-5406-RP
Funds Expended in FY08: $ 2,441.00 **Total Site Expenditures:** $33,913.00
Actions Taken in FY08: Duke Power continued monitoring the pilot study for the in-situ chemical oxidation treatment technology, which showed significant decrease in contaminant concentrations in the treated area. The Department is reviewing a Feasibility Study submitted on June 13, 2008.

EFP PRODUCTS

Location: 6247 CAMPBELL RD YORK, SC
Description: Site of metal plating facility where bedrock groundwater is impacted by chromium.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract, Letter of Agreement;
Responsible Party Funded Consent Agreement 95-32-HW 11/30/1995
Funds Expended in FY08: $ 23,466.00 **Total Site Expenditures:** $76,026.00
Actions Taken in FY08: On January 22, 2008, the Department provided a Proposed Plan Fact Sheet to the public. On February 5, 2008, the Department held a public meeting to provide the RI/FS results and the Department's preferred remedial alternatives for addressing chromium-contaminated soil and ground water. A no action approach was proposed for chromium-contaminated clayey soils beneath a former plating area, as the soils are covered by a building and are not subject to leaching forces.

Although the sampling results indicated that the contamination had not left the facility property, many residents were concerned about their property values and were concerned that the Responsible Party would not complete the response action and other issues. On March 3, 2008, the Department announced an extension of time to accept comments on the Proposed Plan. On March 17, 2008, the Department provided an availability session in which the Department met with smaller intimate groups of residents to respond to their concerns.

The responsible party, SPX Corporation, re-evaluated potential treatment technologies that could address the chromium-contaminated clayey soils without removing the overlying structure. The new remediation process included the pneumatic fracturing of the clay and the subsequent injection of zero valent iron into the contaminated area. Pilot tests were initiated to determine the viability of this technology on-site. The preferred groundwater remedy included the in-situ injection of treatment materials into both the chromium-contaminated saprolite and fractured bedrock. There was no public opposition to the groundwater remedies. Pursuant to the Responsible Party Consent Agreement 95-32-HW and the Work Plan, the quarterly monitoring of wells continued.

EVODE-TANNER INDUSTRIES

Location: FURMAN HALL COURT PO BOX 1967 GREENVILLE, SC
Description: Former latex paint manufacturing facility at which spent solvents were disposed of in a trench.
Lead Designation: Responsible Party Funded Consent Agreement 94-49-HW 11/21/1994
Funds Expended in FY08: $ 3,231.00 **Total Site Expenditures:** $39,358.00
Actions Taken in FY08: In accordance with the Consent Agreement, quarterly reports detailing monitoring events were submitted to the Department. The expanded interim corrective action system continued to operate and to date has recovered and treated more than 39 million gallons of impacted groundwater. Data indicates the expanded interim remediation system continues to be effective in removing constituents from the recovered groundwater.

Additional groundwater assessment was also conducted during this time. In September 2007, the Responsible Party installed two additional monitoring wells onsite, as requested by the Department, to verify groundwater concentrations in the transition zone. Lab results indicated PCE was present at a level exceeding the MCL in one well.

FIBER INDUSTRIES INC

Location: INT I-85 & WOODRUFF RD GREENVILLE, SC
Description: Site of former textile manufacturing company that utilized on-site landfill. Landfill contained textile manufacturing waste, asbestos, construction materials, oily wastes, solvents, acid, and a waste impoundment.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 00-4782-RP; Responsible Party Funded Administrative Consent Order 90-09-SW 01/23/1990
Funds Expended in FY08: $ 1,731.00 **Total Site Expenditures:** $48,676.00
Actions Taken in FY08: Fiber Industries has completed active remediation and is continuing long-term groundwater quality monitoring. The Department reviewed proposals from several developers for redevelopment of various portions of the site. Two tracts of land have received a certificate of completion, and an apartment complex is being built in this area. The Department was involved in review of the additional sampling on these two tracts of land to confirm the property is safe for the intended use. Monitoring wells in the area under construction have been abandoned, and selected wells will be replaced.

FLORENCE MGP SITE

Location: 553 N IRBY ST FLORENCE, SC
Description: Site of former Manufactured Gas Plant at which soils are contaminated with tar and fuel; groundwater is contaminated with Volatile Organic Compounds and Semi-Volatile Organic Compounds.

Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 00-5396-RP
Funds Expended in FY08: $ 3,890.00 **Total Site Expenditures:** $29,509.00
Actions Taken in FY08: SCANA submitted a proposal for an In-situ Chemical Oxidation (ISCO) treatment in September 2007, and began implementation of the Record of Decision. SCANA received an underground injection permit to install and inject the Geo-Cleanse Process for the area along the Irby Street right of way. In June, 2008, SCANA began removal activities, which will continue into FY09. Soil excavation will extend to approximately 35 feet below ground surface and, to minimize disturbances to the surrounding roads, sheet piling was used to brace the excavation area.

FORMER COOPER HAND TOOLS SITE

Location: 815 STATE RD CHERAW, SC
Description: Company designed and manufactured small hand tools, electroplating, tinning, & wastewater treatment. VOCs in soil and groundwater, chlorinated solvents.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 04-5582-RP
Funds Expended in FY08: $ 1,333.00 **Total Site Expenditures:** $6,657.00
Actions Taken in FY08: The Department provided comments on the Supplemental Investigation Work Plan and three groundwater monitoring reports. The Department requested that additional groundwater profiling be conducted to establish the vertical and horizontal extent of contamination.

FRANKLIN SITE

Location: 6305 MACEDONIA CHURCH RD PROPSPERITY, SC
Description: Buried C&D debris including tires, lead-based painted debris as well as asbestos.
Lead Designation: State Funded
Funds Expended in FY08: $ 6,736.00 **Total Site Expenditures:** $6,736.00
Actions Taken in FY08: On March 18, 2008, trenches were excavated and the Department collected soil, water, and waste samples.

GEORGIA CHEMICAL WORKS

Location: HWY 17 @ EDISTO RIVER PON PON, SC
Description: Former superphosphate fertilizer producer. Elevated arsenic and lead in soil.
Lead Designation: EPA Lead
Funds Expended in FY08: $ 3,512.00 **Total Site Expenditures:** $6,253.00
Actions Taken in FY08: This site is an EPA-lead project under the Federal Superfund Program. The HWCF supported the Department's participation in several conferences with the Natural Resource Trustees regarding natural resource damages.

GLO-TEX INTERNATIONAL

Location: 25 STAN PERKINS RD SPARTANBURG, SC
Description: Bankrupt specialty chemical manufacturer.
Lead Designation: State Funded
Funds Expended in FY08: $ 2,809.00 **Total Site Expenditures:** $2,809.00
Actions Taken in FY08: Facility manufacturing operations ceased on February 29, 2008, and the company filed bankruptcy protection. On April 4, 2008, the Department performed a preliminary site investigation and worked with Glo-Tex to identify areas where immediate action was required to prevent any hazardous contaminants from releasing into the environment.

GRACE WR & CO AG CHEM GROUP

Location: INT OF HARMAN & ELGIN ST CHARLESTON, SC
Description: Superphosphate fertilizer manufacturing facility that also blended various pesticides for agricultural use. Soil, groundwater, surface water, and sediment contaminated with pesticides, metals, and Volatile Organic Compounds.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 89-34-SW; Responsible Party Funded Administrative Consent Agreement 89-34-SW, S 11/13/1989
Funds Expended in FY08: $ 3,186.00 **Total Site Expenditures:** $92,501.00
Actions Taken in FY08: WR Grace completed remedial activities. In February 2008, the Department forwarded to WR Grace a Declaration of Covenants and Restrictions, which was executed and filed with Charleston County.

GRANITEVILLE CO/VAUCLUSE LANDFILL

Location: .5 MI CO RD 105 ON SC 191 ADJ SMITH BRAN VAUCLUSE, SC
Description: 20-acre open dump operated from 1950 to 1973 by Graniteville Company. At least 300 drums eroded out of retaining bank.
Lead Designation: Responsible Party Funded Consent Agreement 97-32-HW 12/18/1997; Responsible Party Funded, Voluntary Cleanup Contract 97-32-HW
Funds Expended in FY08: $ 743.00 **Total Site Expenditures:** $36,838.00
Actions Taken in FY08: The NRP VCC was executed and a work plan for additional assessment is under review by the Department.

GREENWOOD EXCAVATION SITE

Location: 218 DANIEL RD GREENWOOD, SC
Description: Alleged illegal burial. Former auto shop.
Lead Designation: State Funded
Funds Expended in FY08: $ 2,780.00 **Total Site Expenditures:** $2,780.00
Actions Taken in FY08: In coordination with other Department's areas, a response action was performed to, among other things, characterize waste at the site.

HARRELSON CONSTRUCTION COMPANY

Location: 2045 MINERAL SPRINGS RD CONWAY, SC
Description: Property owner allegedly poured oil, liquid asphalt, and hydraulic fluids into a ditch which discharges into the Cowford Swamp.
Lead Designation: State Funded
Funds Expended in FY08: $ 37,459.00 **Total Site Expenditures:** $37,469.00
Actions Taken in FY08: In coordination with other Department areas, a response action was performed to, among other things, characterize waste that the site.

HITACHI ELECTRONIC DEVICES

Location: 575 MAULDIN RD GREENVILLE, SC
Description: Site of former television picture tube manufacturing facility. Soil and groundwater contaminated with trichloroethene due to spills and leaks.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 97-5303-RP
Funds Expended in FY08: $ 1,994.00 **Total Site Expenditures:** $30,124.00
Actions Taken in FY08: Both a pump and treat system and an In-Situ Thermal Desorption (ISTD) system are operating. Since being placed in full operation in January 2007, the pump and treat system along the southern property boundary has treated a total of 700,000 gallons of groundwater. During the most recent

monitoring period, no VOCs were detected in the effluent samples from this system. The estimated cumulative mass of VOCs removed by the pump and treat system was 338 pounds.

Data from the ISTD remediation in the source area indicated the system achieved its goals of removing TCE from the target treatment zone to less than 60 ug/kg in soil and significantly reducing groundwater concentrations not only in the saprolite aquifer, but also 20 to 25 feet into bedrock. Based on air emission measurements, an estimated 5.8 tons of TCE were removed by the ISTD system.

HOLLIS ROAD CONTAMINATION

Location: 206 HOLLIS RD LEXINGTON, SC
Description: Plume(s) of Volatile Organic Compounds causing groundwater contamination east of the I-20/Highway 6 interchange and south of the Town of Lexington. At least 42 business and private drinking water wells have trichloroethene contamination.
Lead Designation: State Funded
Funds Expended in FY08: $ 18,762.00 **Total Site Expenditures:** $2,956,441.00
Actions Taken in FY08: A contractor collected groundwater and surface water samples and the Department reviewed the Report of Groundwater and Surface Water samples data. The final remedial alternative is being developed.

HORTON SALES DEVELOPMENT CORP—PIEDMONT

Location: 1870 PIEDMONT HWY PIEDMONT, SC
Description: Site is being used as a chemical tote facility. Site appears unstable & contaminated (surficial staining) from potentially hazardous material.
Lead Designation: State Funded
Funds Expended in FY08: $ 2,849,740.00 **Total Site Expenditures:** $4,175,198.00
Actions Taken in FY08: Intermediate bulk container (IBC) removal activities, which began December 2006, were completed. During this time period, a total of 9,462 IBCs were processed and transported to the Union County Landfill for final disposal. Many of the IBCs contained varying quantities of liquids and/or solids. Liquids, including IBC decontamination rinse water, were stored in bulk containers until analytical testing could be performed. During the project, over one million gallons of liquid and 725 tons of solids and sludge were transported to Vopak as nonhazardous waste for disposal. In addition to the nonhazardous waste stream, approximately 85,000 gallons of liquid were transported to a hazardous waste treatment plant (Clean Harbors of Baltimore, MD, or to Michigan Disposal at Belleville, MI).

In January 2008, at the completion of IBC processing activities, eleven soil samples were collected from locations across the site to check for evidence of contamination of IBC spillage or leakage. Data from the sampling event indicated no contaminants exceeded the EPA remediation goals for industrial properties. Also during the removal activities, 8,520 metal cages (a metal cage surrounded most IBCs) were transported to Carolina Recycling Group in Wellman, SC, for recycling. The Department is reviewing data and assisting with the Final Removal Action Report at the end of the fiscal year.

On November 17, 2007, the Department provided notice of potential liability and requests for information to approximately 450 Potentially Responsible Parties as well as requests for information. The Department responded to numerous inquiry calls, emails, and requests for information thereafter, and worked closely with the Department's Freedom of Information office. The Department received a vast number of responses to the requests for information and continues to evaluate and investigate the potentially responsible parties.

I-85 DISTRIBUTION CENTER

Location: NW INTERSTATE OF I85 AND SIGBEE RD SPARTANBURG, SC
Description: Former textile manufacturing facilty. Soil, groundwater, and surface water contaminated with perchloroethene (PCE).

Lead Designation: Responsible Party Funded Civ Action #7:03-0805-26 Consent Decrees (2 CDs on 1/12/05, 1 CD on 3/9/05)
Funds Expended in FY08: $ 188,432.00 **Total Site Expenditures:** $2,343,976.00
Actions Taken in FY08: The Department responded to a release of oil in June 2007, that resulted from the attempted theft of copper from an onsite transformer. The release fouled the existing treatment system and nearby areas in the creek. The remediation system was cleaned, put back into use, and continued to operate through FY08. Samples were collected periodically to confirm the effectiveness of the treatment system. All standards of the NPDES permit were met and monthly reports were submitted to the Bureau of Water.

INDUSTRIAL DRIVE SITE

Location: 341 INDUSTRIAL DR LEXINGTON, SC
Description: Originally part of the South Lake Drive Site, but determined to be separate contamination. Volatile Organic Compounds detected in soils and groundwater.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 00-34-HW
State Funded
Funds Expended in FY08: $ 3,952.00 **Total Site Expenditures:** $62,610.00
Actions Taken in FY08: The Revised Feasibility Study Report submitted in FY07 was incomplete. The Department met with Northrop Grumman to discuss the Report's deficiencies. In May 2008, the Department provided comments to the (second draft) Feasibility Study Report. The additional groundwater sampling and well installation requested by the Department is expected in FY09. A (third draft) Feasibility Study Report is also expected to be submitted in FY09.

INDUSTRIAL METAL PROCESSING/HAMPTON AVE

Location: 1326 HAMPTON AVE EXT GREENVILLE, SC
Description: Scrap metal yard with polychlorinated biphenyls (PCBs), arsenic, and lead in soils. Copper present in surface water at property boundary.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 99-5358-RP
Funds Expended in FY08: $ 369.00 **Total Site Expenditures:** $7,019.00
Actions Taken in FY08: On August 7, 2007, the Department received a Site Assessment and Remediation report and the Department requested the submittal of a work plan to assess the horizontal and vertical extent of contamination due to presence of elevated levels of arsenic and PCBs exceeding Preliminary Remediation Goals. On August 15, 2007, the shredder fluff area was re-sampled. The Department expects a work plan in FY09.

INTERNATIONAL MINERALS AND CHEMICALS

Location: 515 NORTH ST EXT SPARTANBURG, SC
Description: Facility produced phosphate fertilizer until closed out under RCRA in 1987.
Lead Designation: EPA-Lead
Funds Expended in FY08: $ 24,895.00 **Total Site Expenditures:** $26,681.00
Actions Taken in FY08: The responsible party, EPA, and DHEC, worked through a variety of issues on the Revised Feasibility Study through a series of meetings, comments, and site visits. After a failure to come to an agreement on one approach that would remedy contaminated groundwater, soil, and process residuals, the parties agreed to pursue a non-time critical removal action approach to remove contaminated soil and process residuals from the site. Other affected media will be assessed following completion of the NTCRA with additional investigation and sampling, as necessary, followed by a Record of Decision.

IVAX INDUSTRIES INC

Location: 1880 LANGSTON ST ROCK HILL, SC
Description: Abandoned chemical site with shallow groundwater contaminated by chlorinated VOCs.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 02-5416-RP
Funds Expended in FY08: $ 3,275.00 **Total Site Expenditures:** $24,033.00
Actions Taken in FY08: The Remedial Investigation Report submitted in late FY07 was reviewed and the Department determined the report was incomplete in defining the extent of the plume. The Department requested the Responsible Party to submit a proposal for additional investigation of the groundwater plume. In response, on March 18, 2008, the Responsible Party submitted a request for the installation of additional monitoring wells; and the Department approved the request on March 27, 2008. The Department anticipates its receipt of the Supplemental Remedial Investigation Report in early FY09.

J P STEVENS LANDFILLS

Location: HWY 72 W CALHOUN FALLS, SC
Description: Also See File # 56442, Bibb Manufacturing. Two on-site landfills at JP Stevens. #1 landfill had 3 trenches where waste oil & solvents were poured into pits & periodically set afire. Landfill #2 used to store equipment and empty drums & drums containing
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 00-5394-RP
Funds Expended in FY08: $ 28.00 **Total Site Expenditures:** $2,817.00
Actions Taken in FY08: JP Stevens continued operation of their remediation system, which includes several extraction wells at the facility's boundary and down-gradient from the property boundary. The Department reviewed and commented on pertinent monitoring reports. Design was completed and approved for the installation of additional wells near potential source areas. Additional treatability testing of in-situ chemical oxidation and soil vapor extraction was performed around one source area. JP Stevens is currently evaluating options for one additional source area that was identified and investigated. Soil and groundwater samples were collected and soil has been removed from the uppermost portion of the source area.

JESCO

Location: 235 E INDUSTRIAL PARK BLVD FLORENCE, SC
Description: Former manufacturer of foam insulation utilizing a urea-formaldehyde reaction. Site closed for ~1 year and contained improperly stored drums of hazardous chemicals.
Lead Designation: State Funded
Funds Expended in FY08: $ 478.00 **Total Site Expenditures:** $478.00
Actions Taken in FY08: On June 17, 2008, the Department performed an emergency removal action in which 23 roll-off boxes were used to remove the numerous drums, contaminated soils, and waste formaldehyde. Also, 22 drums of acids and waste resins were over-packed and removed. All waste removed were properly disposed.

KELLETT PROPERTY

Location: 230 E STANDING SPRINGS RD SIMPSONVILLE, SC
Description: Unpermitted area where approximately 4000 drums of industrial wastes were buried. During a removal action, the drums were unearthed and the contents disposed off-site. Remedial Investigation is ongoing with delineation of groundwater contamination.
Lead Designation: State Funded, 12/02/02 Settlement Agreement; Probated Estate Distribution, NonResponsible Party 01-5225-01NRP
Funds Expended in FY08: $ 39.00 **Total Site Expenditures:** $4,755,902.00

Actions Taken in FY08: The Settling Parties began to draft the Remedial Investigation/Feasibility Study Report. Data from the quarterly groundwater and surface water monitoring will be incorporated with previously collected site data in order to complete this report.

KINGS LABORATORY INC

Location: 1/4 MI E OF I-77 N OF BLYTHEWOOD RD BLYTHEWOOD, SC
Description: Former specialty chemical company with groundwater contamination.
Lead Designation: Responsible Party Funded Administrative Consent Order 90-18-SW, W 03/26/1990
Funds Expended in FY08: $ 1,267.00 **Total Site Expenditures:** $36,392.00
Actions Taken in FY08: In March 2008, the Department met with Kings Lab. A proposal for monitoring groundwater sampling was approved by the Department in May 2008. Fieldwork to sample groundwater and install new groundwater monitoring wells will begin in early FY09.

LEXINGTON COMPOST LANDFILL (TOWN OF)

Location: 374 RAILROAD AVE LEXINGTON, SC
Description: Old town dump approximately 10 acres used of the 22.72 acres tract. Household garbage, maybe industrial waste, but town claims not much industry around when dump was used. Closed about 30 years ago. (RP contract)
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 07-5450-RP
Funds Expended in FY08: $ 739.00 **Total Site Expenditures:** $860.00
Actions Taken in FY08: On January 24, 2008, the Responsible Party executed a voluntary cleanup contract. The Workplan included plans to delineate the boundaries of the disposal area, install and sample groundwater monitoring wells, perform methane monitoring, and assess the surficial soils. The Department provided its comments to the Workplan; and a revised Workplan was submitted in April 2008. The Department approved the revised Workplan. Field work will begin in FY09.

LINEAR PRECISION PRODUCTS

Location: 1298 THUNDERBOLT DR WALTERBORO, SC
Description: leaking drums in drum storage area
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 05-5627-RP
Funds Expended in FY08: $ 849.00 **Total Site Expenditures:** $11,336.00
Actions Taken in FY08: A Certificate of Completion was issued on September 26, 2007.

MACALLOY CORPORATION

Location: 1800 PITTSBURGH AVE CHARLESTON, SC, SC
Description: Ferro-chrome alloy producer using submerged electric arc furnaces. Chromium contamination from air pollution (precip. dust & tower sludge)
Lead Designation: EPA Lead
Funds Expended in FY08: $ 1,805.00 **Total Site Expenditures:** $35,827.00
Actions Taken in FY08: This site is an EPA-lead project under the Federal Superfund Program. The HWCF supported the Department's participation in several conferences with the Natural Resource Trustees regarding natural resource damages.

MCELVEEN PROPERTY

Location: 6 - 14 BARTLETTE ST SUMTER, SC
Description: Former gas station/automotive garage. Transfer from UST.

Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 06-5661-RP
Funds Expended in FY08: $ 1,323.00 **Total Site Expenditures:** $1,323.00
Actions Taken in FY08: On January 8, 2008, the Department provided comments on the Revised Remedial Investigation Feasiblity Study Work Plan. The Department expects the revised report in FY09.

NORFOLK SOUTHERN GRANITEVILLE DERAILMENT

Location: MARSHALL ST GRANITEVILLE, SC
Description: Freight train collision caused release of 11,500 gallons of chlorine gas resulting in 9 deaths, 529 injuries, and evacuation of 5,500 people.
Lead Designation: Responsible Party Funded RP PAID PAST COSTS IN RESPONSE TO DEMAND-W/O VCC
Funds Expended in FY08: $ 36.00 **Total Site Expenditures:** $38,071.00
Actions Taken in FY08: On January 14, 2008, the Department provided a general notice of potential liability and demand for payment to Norfolk Southern. On February 20, 2008, Norfolk Southern reimbursed the Department's past costs.

NYTRONICS COMPONENTS GROUPS INC

Location: 700 ORANGE ST DARLINGTON, SC
Description: A former electronics manufacturing facility with soil, sediment, groundwater, and surface water contamination from polychlorinated biphenyls, volatile organic compounds, metals, and pesticides.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 99-5124-RP
Funds Expended in FY08: $ 14,758.00 **Total Site Expenditures:** $74,552.00
Actions Taken in FY08: On April 15, 2008, the Department provided a Fact Sheet, which explained that the historical buildings had to be demolished because past operations had contaminated the buildings. On May 1, 2008, the Department held a public meeting to inform the residents of the investigation findings and to respond to any questions or concerns. Vishay, the Responsible Party, began cleanup activities shortly after the public meeting.

OLD ADAMSVILLE SCHOOL

Location: 2619 BRADLEY RD (INT WITH ADAMSVILLE RD) MCCOLL, SC
Description: Abandoned School. 300-400 unmarked drums containing unknown liquid. 1000-2000 one and five gallon containers also present.
Lead Designation:
Funds Expended in FY08: $ 319,334.00 **Total Site Expenditures:** $319,334.00
Actions Taken in FY08: In coordination with other Department areas, a response action was performed to, among other things, characterize waste at the site.

OLD KINGSTREE AREA DUMP

Location: OFF OF HWY 52 KINGSTREE, SC
Description: Old dump located in the flood plain of the Black River. Operated until the 1970's. Also known as Beaco Road Site.
Lead Designation: State Funded
Funds Expended in FY08: $ 4,122.00 **Total Site Expenditures:** $10,105.00
Actions Taken in FY08: The Department sampled a private well and conducted a removal site evaluation. Based on the evaluation, the Department determined the site should be referred to another program area.

OLD ORCHARDS MEADOWS

Location: HOOD RD GREER, SC
Description: Former solvent recovery facility that was purchased by Hoechst, Inc. and used as parking lot. Site contains high levels of vadose zone Volatile Organic Compounds (VOCs) as well as VOC-contaminated groundwater that migrated off-site.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 98-55-HW; Responsible Party Funded Consent Agreement 98-55-HW 10/01/1998
Funds Expended in FY08: $ 2,092.00 **Total Site Expenditures:** $71,645.00
Actions Taken in FY08: The automated ERD mixing and injection system is operating on a continuous basis. Two to three operating cycles are completed each week. During each cycle, individual injection wells are transferring between 100 and 500 gallons of the 4% molasses reagent into the groundwater depending on the tightness of the soil around individual wells. The monitoring data continues to show that anaerobic conditions are being maintained in the treatment area and that the chlorinated contaminants of concern along with their daughter products are being biodegraded.

PACIFIC GUANO

Location: 1505 KING ST EXT CHARLESTON, SC
Description: Former fertilizer company. Soil and groundwater contaminated with lead.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 00-5296-RP
Funds Expended in FY08: $ 1,923.00 **Total Site Expenditures:** $32,604.00
Actions Taken in FY08: The Department reviewed and approved the remedial design. AmerisourceBergen, the Responsible Party, constructed the asphalt and brick pavers cover as outlined in the remedial design. The Department conducted a final inspection of the cap and reviewed the Remedial Action Report in March of 2008.

On June 25, 2008, Amerisource filed the Restrictive Covenant. Deed restrictions include no disturbance to the cap and no groundwater usage on the property. Groundwater will continue to be monitored on an annual basis and semiannual inspections will be conducted to insure the integrity of the cover system. The Department will issue a Certificate of Completion in FY09.

PALMETTO ANTIQUE FLOORING AND SALVAGE

Location: 1125 JOE LOUIS DR COLUMBIA, SC
Description: The facility planes antique heart pine lumber reclaimed from pre-1970's construction. Bulk quantities of wood shavings and sawdust have accumulated outside the process building. Samples indicated lead (at leachable levels) is present in the sawdust.
Lead Designation: State Funded
Funds Expended in FY08: $ 179.00 **Total Site Expenditures:** $44,194.00
Actions Taken in FY08: A removal action was completed in FY07. During FY08, a request for payment of the Department's costs associated with the removal activity was forwarded to the facility owner/operator.

PALMETTO WOOD PRESERVING INC

Location: 1.5 MI S ON SR 129 FROM INT US 21 CAYCE, SC
Description: Spillage of Copper Chromium Arsenic (CCA) solution used for lumber treatment.
Lead Designation: State Funded
Funds Expended in FY08: $ 2,469.00 **Total Site Expenditures:** $130,157.00
Actions Taken in FY08: A pilot study was conducted to evaluate the effectiveness of in-situ bioremediation and pH adjustment. The Department and EPA completed the third Five-Year ROD Review, which included among other things, groundwater sampling, site inspections, and conferences between the parties. The Department approved the abandonment of six monitoring wells and a 12" diameter PVC pipe.

In the spring, EPA proposed a revision to the Cleanup Plan in response to the Department's recommendations. EPA and the Department held a public meeting on April 3, 2008, to inform the public of the proposed change. At the meeting, residents expressed concern regarding their domestic water supply wells and periodic sampling of the residential wells was included the revisions to the Cleanup Plan.

PHILIP SERVICES CORPORATION

Location: 2324 VERNSDALE RD ROCK HILL, SC
Description: Formerly a RCRA TSD under interim status for solvent reclamation and incineration.
Lead Designation: State Funded
Funds Expended in FY08: $ 533,878.00 **Total Site Expenditures:** $2,995,253.00
Actions Taken in FY08: The Department completed the Remedial Investigation. A comprehensive soil, surface water and groundwater assessment was conducted over three phases. The Remedial Investigation report divided the site into four main areas of concern: (1) the Incinerator/Drum repackaging area which consisted of the highest levels of Chlorobenzenes; (2) the Solvent Ditch Area which contained the highest concentrations of chloronated ethenes in soil and groundwater; (3) the Burn Pits where VOCs in groundwater were remediated during the 1980s removal action; and (4) the Fuel Oil Area where a large amount of free product exists.

A risk assessment was conducted to evaluate human health risks. A Feasibility Study will be conducted during the next year to evaluate remedial alternatives. The Department also provided a public notice that the facility's Custodial Trustee intended to harvest the timber on a parcel of the site that has not shown any contamination.

PORT OF BALDWIN MINES

Location: LADYS ISLAND DR BRIDGE PORT ROYAL, SC
Description: Superphosphate production facility and mining operation that used sulfuric acid to produce fertilizers. Slag wastes still onsite containing high amounts of lead, arsenic & cobalt.
Lead Designation: EPA Lead
Funds Expended in FY08: $ 8,654.00 **Total Site Expenditures:** $14,830.00
Actions Taken in FY08: The Department participated in several conferences with the Natural Resource Trustees regarding natural resource damages.

PROVIDENCE ENVIRONMENTAL INC (PEI)

Location: 312 SHARPE RD COLUMBIA, SC
Description: Environmental consulting service which uses the property as the base of operations for collection & temporary storage of product inventory & nonhazardous wastes.
Lead Designation: Responsible Party Funded
Funds Expended in FY08: $ 264.00 **Total Site Expenditures:** $14,905.00
Actions Taken in FY08: Based on a review of the Phase I Removal Report, the Department is evaluating the need for the collection of onsite soil samples.

RAILROAD AVENUE SITE

Location: RAILROAD AVE HARTSVILLE, SC
Description: Railroad spur and switching yard with possible petroleum constituents from railroad operations.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 02-5496-RP
Funds Expended in FY08: $ 173.00 **Total Site Expenditures:** $7,572.00
Actions Taken in FY08: In October 2007, the Supplemental groundwater assessment information was submitted and the Soil Cap Work Plan was approved on October 4, 2007. The permit to install additional

groundwater wells was issued February 4, 2008. After a March 12, 2008 conference with the Responsible Party's contractor, the Department approved the construction drawings for the Hartsville Vista Project. On April 30, 2008, the Department observed the installation of the soil cap and, the next day, the Department had a conference with the City of Hartsville. Capping activities are expected to be completed in FY09.

RENTAL UNIFORM SERVICE SITE

Location: 415 KEITH DR GREENVILLE, SC
Description: Former industrial laundry facility with soil and groundwater contamination with acetone, PCE, toluene, 1,2,4-trimethylbenzene, naphthalene, xylene, and benzene.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 04-5487-RP
Funds Expended in FY08: $ 595.00 **Total Site Expenditures:** $1,680.00
Actions Taken in FY08: The Department conducted a file review to determine the need for further assessment of groundwater contamination and discussed the further assessment needs with the RP and NRP. The Department anticipates a proposal letter illustrating additional groundwater sample locations in FY09.

RMAX

Location: 1649 BATESVILLE RD GREENVILLE, SC
Description: Facility manufactures foam insulation panels. Groundwater contaminated with trichloroethene.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 00-5361-RP
Funds Expended in FY08: $ 2,998.00 **Total Site Expenditures:** $15,938.00
Actions Taken in FY08: On September 7, 2007, the Department received the June 2007 Phase II-Task I Groundwater Monitoring Report. Based on analytical results from previous groundwater sampling reports, the Department requested a work plan for Monitored Natural Attenuation, which was approved on January 4, 2008, and required biennial sampling and analyses on groundwater monitoring wells 1, 3, 4, 6, 10, 11 and 12. On June 2, 2008, the Department received the monitored natural attenuation Groundwater Monitoring Report for March 2008. The Department expects the next biennial MNA sampling event to take place in March 2010.

ROBERT BOSCH TOOL CORPORATION SITE

Location: 800 WOODSIDE AVE FOUNTAIN INN, SC
Description: Former manufacturer of small tools. Possible metals and VOCs. RP & NRP contracts.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 05-5613-RP
Funds Expended in FY08: $ 845.00 **Total Site Expenditures:** $2,197.00
Actions Taken in FY08: On July 23, 2007, the Department provided comments on the Remedial Investigation/Feasibility Study work plan. On March 11, 2008, the Department provided comments on the second revisional draft. The Department expects to receive a third revision of the work plan in FY09.

SANGAMO/LAKE HARTWELL OPERABLE UNIT 2

Location: TWELVE MILE CREEK & LAKE HARTWELL PICKENS, SC
Description: Historic release of PCBs from Sangamo Plant into Twelve Mile Creek have contaminated sediment & fish tissue.
Lead Designation: EPA-lead
Funds Expended in FY08: $ 2,548.00 **Total Site Expenditures:** $24,000.00
Actions Taken in FY08: This site is an EPA-lead project under the Federal Superfund Program. The HWCF supports the Department's participation in negotiations regarding natural resource damages claims.

SANGAMO/TWELVE-MILE/HARTWELL

Location: SANGAMO RD(S-190) 0.5 MI FROM US 178 PICKENS, SC
Description: On-site capacitor burial, soil and stream sediment PCB contamination. Operable Unit 1 (OU-1)
Lead Designation: Federal and State Funded
Funds Expended in FY08: $ 289.00 **Total Site Expenditures:** $23,648.00
Actions Taken in FY08: This site is an EPA-lead project under the Federal Superfund Program. The HWCF supports the Department's participation in negotiations regarding natural resource damages claims.

SCA-CHARLESTON DISPOSAL

Location: N SIDE OF CO-76 1/2 MILE E OF US-78 LADSON, SC
Description: Privately operated landfill that accepted all types of wastes, some possibly hazardous. No longer in operation.
Lead Designation: Responsible Party Funded Consent Agreement 95-07-HW 04/10/1995
Funds Expended in FY08: $ 401.00 **Total Site Expenditures:** $6,815.00
Actions Taken in FY08: Three monitoring wells, which are no longer used in the groundwater-monitoring network, were abandoned. A groundwater sampling report is expected in FY09.

SCE&G FLEET MAINTENANCE SITE

Location: 1409 HUGER ST COLUMBIA, SC
Description: Current City bus terminal. Former MGP from 1906-1954. Coal tar and PAH contamination in soil and groundwater.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 02-5295-RP
Funds Expended in FY08: $ 2,461.00 **Total Site Expenditures:** $19,605.00
Actions Taken in FY08: The Department provided comments on the draft Remedial Investigation Report and draft Supplemental Delineation Work Plan. The Department met with SCANA to discuss moving forward with an interim removal action. The Department expects that the site buildings will be removed early next fiscal year and that the additional characterization will be conducted at that time.

SCE&G SUMTER MGP SITE

Location: 238 HAUSER ST SUMTER, SC
Description: Former Manufactured Gas Plant. Soil and groundwater impacted.
Lead Designation:
Responsible Party Funded, Voluntary Cleanup Contract 98-5343-RP
Funds Expended in FY08: $ 1,433.00 **Total Site Expenditures:** $40,976.00
Actions Taken in FY08: The Department reviewed four quarterly groundwater monitoring reports. Contaminant concentrations stayed relatively unchanged over the year. The Department requested a focused Feasibility Study be developed to analyze potential remedial options for groundwater remediation.

SIMMONS TRUCK STOP

Location: HWY 68 RTE 2 PO BOX 200 YEMASSEE, SC
Description: Truck stop salvage yard waste burned in drums.
Lead Designation: State Funded
Funds Expended in FY08: $ 22,988.00 **Total Site Expenditures:** $22,988.00
Actions Taken in FY08: In coordination with other Department areas, a response action was performed to characterize waste at the site.

SIMPSONVILLE (OLD) DUMP

Location: 3 MILES FROM INT.S-55 OFF S-453 SIMPSONVILLE, SC
Description: Former county-operated sanitary landfill. Groundwater contaminated with Volatile Organic Compounds.
Lead Designation: Responsible Party Funded Consent Agreement 95-34-SW 09/25/1995
Funds Expended in FY08: $ 184.00 **Total Site Expenditures:** $201,593.00
Actions Taken in FY08: The 2007 Semi-annual Groundwater, Surface Water & Methane Monitoring Report was reviewed. Also, a 2007 Annual Groundwater Monitoring Report was reviewed in January 2008. The landfill continues to have very low levels of several volatile organics detection slightly exceeding drinking water standards in a limited number of groundwater monitoring wells. However, routine groundwater monitoring results for these contaminants indicate that concentrations are decreasing over time.

SOUTH LAKE DRIVE/OLD ORANGEBURG ROAD

Location: S LAKE DR & OLD ORANGEBURG RD S LEXINGTON, SC
Description: One to one-and-one-half mile area of commercial and private property where groundwater is contaminated with Volatile Organic Compounds.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract LETTER OF AGREEMENT
Funds Expended in FY08: $ 309,624.00 **Total Site Expenditures:** $2,069,997.00
Actions Taken in FY08: The Department collected additional groundwater samples from temporary wells to more accurately define the limits of the groundwater plume. A work plan for the pilot study to inject a chemical oxidant, potassium permanganate, into the primary source area for the groundwater plume was approved by the Department and implemented in December 2007. Additional groundwater sampling was conducted to monitor the effectiveness of the potassium permanganate injection. Other options for groundwater remediation in non-source areas of the plume are being considered and a plan for testing the most likely remediation method is expected in FY09.

The Department conducted additional groundwater investigation near the downgradient edge of the plume on the Lexington County Recreation and Red Bank Elementary School properties. All samples collected at these locations were below the MCLs for all contaminants.

Five additional monitoring wells were installed to replace ones abandoned because they fell within the footprint of a new building on the former Carolina Steel & Wire property. The Department reviewed the Technical Memorandum of Evaluation of Remedial Technologies and Design of a Pilot Study for Controlling the PCE Plume Migration. The Department recommended the evaluation of a permeable reactive barrier along the plume using zero valence iron. A pilot study may be conducted next fiscal year to evaluate zero valence iron.

SPARTAN INDUSTRIES INC

Location: HWY 176 PACOLET, SC
Description: Chrome plating facility with groundwater contamination.
Lead Designation:
Funds Expended in FY08: $ 134.00 **Total Site Expenditures:** $3,761.00
Actions Taken in FY08: On July 25, 2007, the Department received a Semi-Annual Ground Water Quality Report for June 2007. Groundwater samples were collected from on-site monitoring wells and analyzed for chromium. On February 26, 2008, the Department received an additional report for sampling performed in February. The analytical results for both sampling events compared to the past sampling events indicated an increase of the level of chromium in several of the wells.

STARMET CMI

Location: 365 METAL DR HWY 80 BARNWELL, SC
Description 8,000 metric tons of uranium waste on site. 20,000 drums.
Lead Designation: Responsible Party agreements
Funds Expended in FY08: $ 399,820.00 **Total Site Expenditures:** $1,351,966.00
Actions Taken in FY08: Results from the additional soil and groundwater assessment activities (conducted March 2007) were received. Although toluene, TCE, and xylene were detected in the groundwater, the concentrations did not exceed their respective Maximum Contaminant Levels. Therefore, the presence of these volatile organic compounds does not pose a risk to human health. Also, since elevated concentrations of aluminum and manganese in site soils appear to be naturally occurring and do not exceed the residential preliminary remediation goal, the concentrations of these elements in the groundwater are also believed to be naturally occurring and do not represent a release of constituents to the environment. Based on these findings, a Feasability Study was conducted. The Department is currently evaluating the proposed alternatives to address the residual contamination onsite. The Department's selected remedy will be presented in the forthcoming proposed plan. The Department continued to maintain radiological monitoring. The Department updated its Potentially Responsible Parties investigation.

STOLLER CHEMICAL CO - CHARLESTON

Location: U.S HWY 17 7477 SAVANNAH HIWAY CHARLESTON, SC
Description: Former fertilizer manufacturing company. Sediment, soil, and groundwater impacted. Operable Unit One = Plant Site and groundwater; Operable Unit Two = Caw Caw Swamp.
Lead Designation: Responsible Party Funded Consent Agreement 97-29-HW; SA 2:97-726-12 (RSG); Reliance Insurance CP-40-1434, 03/01/1997
Funds Expended in FY08: $ 71,572.00 **Total Site Expenditures:** $4,768,076.00
Actions Taken in FY08: The Department continued operation of the pump and treat system to treat contaminated groundwater. Contamination continued to decrease in onsite monitoring wells that were being affected by the pump and treat system. The results are outlined in the Interim Groundwater Treatment Monitoring Report.

A Pilot Study was completed during the previous fiscal year to test the Sulfate Reducing Bacteria Bioreactor. The technology proved effective at treating the groundwater. The Department updated the Feasibility Study to include the evaluation of groundwater pump and treat and the Bioreactor and a combination of the two technologies.

The Department drafted a proposed plan to modify the existing treatment system and replace it with the Sulfate Reducing Bacteria Bioreactor. On September 11, 2007, the Department conducted a public meeting and presented the proposed modification to the groundwater remedy. The public provided no comments during the public comment period. A Record of Decision was signed on June 1, 2008, to install the sulfate reducing bacteria Bioreactor.

The Groundwater pump and treat system will be shutdown in the coming fiscal year and the new groundwater remedy implemented. The remedy includes the construction of three sulfate reducing bacterial bioreacter trenches to treat the groundwater.

STONO PHOSPHATE WORKS

Location: 2079 AUSTIN AVE CHARLESTON, SC
Description: Former phosphate fertilizer plant now occupied by Dolphin Cove Marina. Lead and arsenic present in the soil and groundwater. Low pHs present in the groundwater.
Lead Designation: State Funded
Funds Expended in FY08: $ 4,049.00 **Total Site Expenditures:** $5,917.00
Actions Taken in FY08: The Department participated in several conferences with the Natural Resource Trustees and ExxonMobil Corporation regarding natural resource damages.

SUFFOLK CHEMICAL CO

Location: .5 MILES N OF US-76 ON CO RD 82 CHAPIN, SC
Description: Abandoned industrial chemical repackaging plant with groundwater contaminated with chlorinated compounds.
Lead Designation: Responsible Party 96-4992-01 07/10/96; Responsible Party 01/20/98 CR-4992-01; Responsible Parties 02/13/98 CR-4992-02
Funds Expended in FY08: $ 33,298.00 **Total Site Expenditures:** $1,007,555.00
Actions Taken in FY08: An assessment of groundwater quality during the sixth year of operation of the groundwater extraction system was completed in January 2008. The remedial system is functioning properly and recovering VOC-impacted groundwater from beneath the site. Effluent discharged to the Chapin wastewater treatment plant is passing toxicity testing and has not shown evidence of contaminant concentration spikes during long-term operation. It is estimated that approximately 12,655,000 gallons of groundwater have been recovered by the two extraction wells and 8.667 pounds of VOCs have been removed by the extraction system since April 2002. Continued monitoring will allow evaluation of any changes to the contaminant concentrations and distribution.

SUN CHEMICAL CORPORATION

Location: ONE SEQUA DR CHESTER, SC
Description: A manufacturing facility that makes specialty chemical products. Soil contaminated with Polychlorinated Biphenyls (PCBs) and Volatile Organic Compounds (VOCs); groundwater contaminated with VOCs.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 99-39-HW; Responsible Party Funded Consent Agreement 99-39-HW 08/30/1999
Funds Expended in FY08: $ 11,096.00 **Total Site Expenditures:** $61,867.00
Actions Taken in FY08: In September 2007, the Department received the Remedial Design/Remedial Action Work Plan (Design Report) for the In Situ Chemical Oxidation [ISCO] Remedy and approved the Work Plan in March 2008. The remedial work is in process.

SURRETT GREENWOOD DRUM SITE

Location: 2008 HWY 72-221 E GREENWOOD, SC
Description: Approximately 40 drums of plating waste containing corrosives and heavy metals. Several drums have small leaks. Drums are not in a secure location. Criminal investigation.
Lead Designation:
Funds Expended in FY08: $ 48,755.00 **Total Site Expenditures:** $48,755.00
Actions Taken in FY08: In coordination with other Department areas, a response action was performed to characterize waste at the site.

THOMAS & BETTS - INMAN FACILITY

Location: 10390 U.S HWY 176 (ASHEVILLE HWY) INMAN, SC
Description: PCE, toluene & heavy metals in two on-site sanitary septic systems, on-site oil/water separator & on-site infiltration gallery.
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 04-5483-RP
Funds Expended in FY08: $ 5,289.00 **Total Site Expenditures:** $19,151.00
Actions Taken in FY08: On August 13, 2007, the Department provided a Removal Activities Fact Sheet. On August 21, 2007, the Department approved the work plan for Interim Remedial Action, which included the removal of several underground septic systems believed to be the primary sources of contamination. Site work began the week of September 3, 2007. Three tanks and contaminated soil around the tanks were removed. The excavations were backfilled to the original grade. Tyco submitted a draft Feasibility Study

(FS) and additional sampling was requested to determine the extent of contamination prior to the approval of the FS.

UNDEVELOPED PROPERTY ADJACENT TO AMPHENOL SITE

Location: INT OF LEANING TREE RD AND OLDE STILL RD COLUMBIA, SC
Description: Groundwater contamination migrating from Amphenol site. PCE & TCE > MCLs in former MW on-site.
Lead Designation: State Funded
Funds Expended in FY08: $ 654.00 **Total Site Expenditures:** $654.00
Actions Taken in FY08: On April 11, 2008, ARM Environmental has submitted the required monitoring well installation report, which indicated that the groundwater is impacted and cannot be used. A restrictive covenant will be filed with the county.

VELCOREX/GREENWOOD MILLS EDISTO PLANT

Location: 2500 ROWESVILLE RD ORANGEBURG, SC
Description: Textile dyeing and finishing plant operated by Greenwood Mills (1970-1988) and Velcorex Inc. (1988-2006). Spill of fuel oil being remediated under BOW. Phase II pre-buy found trace levels of PCE in groundwater. VCP
Lead Designation: Responsible Party Funded, Voluntary Cleanup Contract 07-5693-RP-2
Funds Expended in FY08: $ 194.00 **Total Site Expenditures:** $1,381.00
Actions Taken in FY08: On November 11, 2007, the Department discussed with the RP the submission of a Remedial Investigation work plan. The NRP's Exterior Soil Contamination Assessment Work Plan was approved on February 22, 2008, and the associated Assessment Report is being reviewed. The Department visited the site on May 15, 2008.

VIRGINIA-CAROLINA CHEMICAL COMPANY

Location: ANDERSON RD AND SOMERSET ST GREENVILLE, SC
Description Former fertilizer plant. Exxon Mobil Corporation conducting PA/SI. Site is generally undeveloped.
Lead Designation: EPA Lead
Funds Expended in FY08: $ 1,066.00 **Total Site Expenditures:** $3,995.00
Actions Taken in FY08: The Department requested EPA to assess this site as a possible federal-lead site. In October 2007, this site was designated as an NPL site. The Responsible Party, ExxonMobil Corporation, is performing a non-time critical removal action. The HWCF funds the Department's supporting activities to EPA as to the removal action.

WEEKS LIQUID FERTILIZER INC

Location: AIR BASE RD COUNTY RD #769 CONGAREE, SC
Description Bankrupt facility used for blending fertilizer, herbicides, and pesticides.
Lead Designation: Responsible Party Funded Administrative Consent Agreement 93-29-SW 07/06/1993
Funds Expended in FY08: $ 522.00 **Total Site Expenditures:** $21,299.00
Actions Taken in FY08: The Department reviewed an annual monitoring report and 5-Year Review. Although reported nitrate concentrations are decreasing, concentrations still exceed the clean-up goals. The existing monitoring well network indicates nitrate is not migrating off-site in shallow groundwater. Long-term monitoring will continue.

WHITMIRE CITY LANDFILL

Location: CO RD S-36-585 WHITMIRE, SC, SC
Description: City operated landfill in conjunction with the owner, JP Stevens.
Lead Designation: State Funded
Funds Expended in FY08: $ 26,159.00 **Total Site Expenditures:** $26,200.00
Actions Taken in FY08: The Department conducted soil and groundwater sampling and requested that the City officials supply public water to a resident within potential area of concern.

Appendix B

State Superfund Process

THE STATE SUPERFUND PROGRAM
A Brief Description of the State Superfund Process

DHEC's Bureau of Land and Waste Management is responsible for implementing the HWMA. The process for addressing contamination mirrors EPA's Superfund process and includes short-term removal actions and complex and lengthy remedial investigations and cleanups, when necessary. The process begins with site discovery or notification of possible releases of hazardous substances. If a site requires immediate attention, DHEC will direct actions to address immediate threats to public health or the environment. If a site does not pose an imminent threat, it is screened to determine whether it warrants further evaluation for remedial (or long-term) measures. If a site's condition does not qualify for placement on the Federal Superfund Program's National Priorities List (NPL), then investigation and cleanup activities are addressed by DHEC following a priority system.

If a site warrants additional action, a Remedial Investigation/Feasibility Study (RI/FS) is conducted. A Remedial Investigation (RI) is an in-depth investigation to determine the nature and extent of contamination at a site. The Feasibility Study (FS) provides a comparison of various cleanup options that would make the site safe for the public and the environment. From the information in the FS, a Proposed Plan is developed offering a preferred remedial option. The public is given a 30-day comment period on the Proposed Plan during which a public meeting is held to encourage community input and participation concerning the suggested options for cleanup. After the comment period, a Record of Decision (ROD) is written to formally document the cleanup technology that will be implemented.

After the ROD, the project enters the Remedial Design/Remedial Action (RD/RA) phase, where the site's actual remedy is designed and implemented. Ongoing monitoring of site conditions occurs to ensure that the remedy is protective of public health and the environment. If the Department determines that no further response action is required to protect human health and the environment, the technical response matter is in effect closed.

The Department encourages potentially responsible parties (PRPs) to pay for cleanups. One or several PRPs may participate. These are called state enforcement-lead sites. At other sites, however, there may be no known PRPs, or the PRP may not be able to afford the necessary cleanup actions. When a PRP-financed cleanup is not possible, the site may be addressed using the HWCF. Sites that are remediated using the HWCF are called Fund-lead sites. Where PRPs are unwilling to perform cleanup activities, DHEC pursues PRPs for cost recovery through administrative and legal actions.

Appendix C
The State Superfund Program – Public Participation

A Brief Description of Public Participation

CERCLA incorporated public involvement into the Superfund process. Congress intended to ensure that the people whose lives were affected by abandoned and uncontrolled hazardous waste sites have a voice in how their communities were addressed and cleaned ups. DHEC adopted these values and is committed to early and meaningful community involvement during State Superfund cleanup. The State Superfund Program educates, informs, and involves the citizens, elected officials, and the local government officials of a Superfund community on the issues that pertain to that particular site.

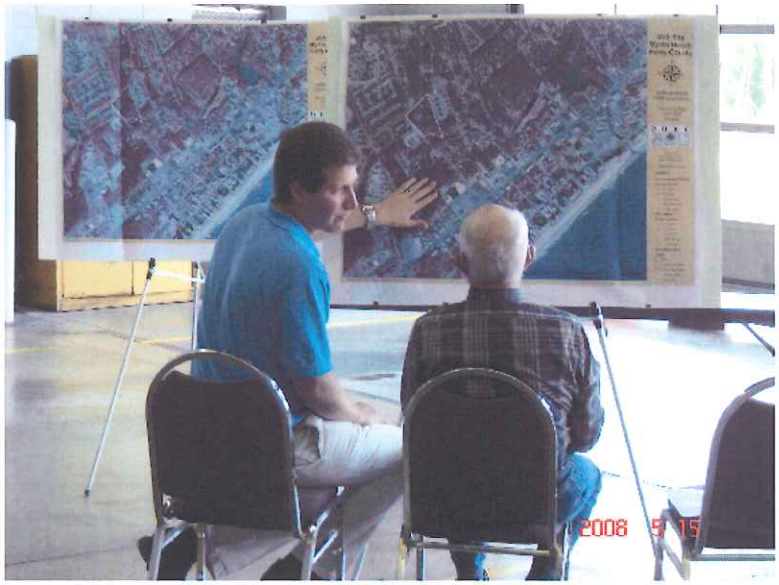
The State Superfund Program has historically strived to inform the public of environmental impacts of contamination in their communities and to involve the communities with decision-making opportunities. Depending on local needs of the community and pursuant to HWMA, CERCLA, and the NCP, the State Superfund Program may:

- provide fact sheets written for the public;
- hold public meetings, availability sessions, and one-on-one meetings with community members at different phases of response;
- provide the public with 30-day comment periods for proposed cleanup activities of which such notice is mailed to area residents and published in a local newspaper of general circulation within the affected community, and
- provide 30-day periods to comment on various documents such as cost recovery settlement agreements and judicially-approved settlements with RPs, of which notice is mailed to all known PRPs and published not only in the local newspaper but also in the South Carolina State Register;
- establish a local repository in which the State Superfund Program provides copies of the administrative record (AR), which contains documents the Department relied on in making any technical decisions at a site. The AR is updated at different phases of cleanup;
- establish a community relations plan for state-lead sites as deemed appropriate; and,
- participate in press conferences and a variety of other activities designed specifically for the community.

Further, the State Superfund Program provides site-specific information, such as public notices, fact sheets, public meeting transcripts, environmental and decision documents, on DHEC's website at:

www.dhec.sc.gov/environment/lwm/html/superfund_info.htm

Where a private party has entered into an agreement or contract with DHEC, DHEC requires these public participation costs to be reimbursed by the responsible or non-responsible parties. Contact persons from the State Superfund Program are always available to answer citizens and media inquiries about Superfund sites.



On May 15, 2008, the Department's State Remediation Section held an afternoon and evening availability session to update the public on groundwater activities at the AVX Corporation--Myrtle Beach Site. Pictured above, DHEC's Lucas Berresford uses maps to respond to a local resident's concerns and explains the science behind the recent activities. Below, DHEC's Carol Minsk and Donna Moye listen intently to a resident's concerns.

Appendix D

Emergency Response Actions for Fiscal Year

08-01-200802143. Per Waste Assessment Section's request, Shealy Environmental Services, Inc., subcontracted by Nu-Way, provided industrial services and labor for sampling and analytical services at 3R of Spartanburg-Clouds Sanitation on September 12, 2007, from the contractor work that was leftover from FY07 job.
Nu-Way Industrial Services.....$439.00

08-02-200705933 (Region 6) Horry County. The fire department reported odor in storm drain and later determined to be 50-gallon diesel spilled in a drainage ditch located in downtown Conway, SC. The contractor was able to use a vacuum truck and absorbent boom and pads to prevent material from reaching the Waccamaw River.
Moran Environmental Recovery.....$2,116.55

08-03-200706455 (Region 3) Lancaster County. There was an inappropriate disposal of household garbage, a quantity of oil was released onto a roadway and into a dry creek bed. The container's content was released on the bridge as well. It was necessary to clean using fresh absorbent pads. The contaminated soil was containerized in six 55-gallon drums.
Advanced Environmental Options.....$2,182.65

08-04-200706984 (Region 7) Charleston County. An individual citizen reported a 55-gallon drum washed up on Rat Island that was half full of and unknown liquid. Upon further inspection, it was discovered that the drum contained oily seawater. The contractor picked up the drum and contents for proper disposal.
Moran Environmental Recovery.....$900.00

08-05-200800427 (Region 1) Anderson County. There was a release of oil due to illegal dumping, impacting the Six and Twenty Creek, a tributary of the Anderson Reservoir. Approximately 30 gallons of oil dumped at the site. Pads were used across affected area and to maintained boom at the site to contain the product.
Advanced Environmental Options.....$6,362.27

08-06-200800908 (Region 3) Richland County. There was a release of diesel fuel in a ditch that leads to Reeder Point Branch, a creek that flows into the Congaree River. The extent of the fuel contamination in the ditch was greater than a 1,000 feet. Soil excavation along the entire area was necessary to keep fuel out of the creek and river. The material was removed and disposed of.
Nu-Way Industrial Services.....$22,418.57

08-07-200801098 (Region 3) Richland County. There was a 150-gallon underground tank on the side of the road. Approximately 50 gallons of product was contained in the tank. Some of the products spilled onto the ground into the ditch leading to Crane Creek. A vacuum truck was used to remove the liquids from the ditch.
Nu-Way Industrial Services.....$4,806.9

08-08-200801182 (Region 1) Anderson County. There was a release of oil due to illegal dumping in a dry creek bed that leads to an un-named creek that empties into Lake Hartwell. Soil excavation was necessary to remove contamination before it was washed into the creek. Pads were placed across affected area and maintained boom at the site to contain the product.
Advanced Environmental Options.....$4,747.89

08-09-200801326 (Region 2) Greenville County. Approximately 100 gallons of an unknown oil product spilled along the roadway. Approximately 10 gallons was released into a storm drain that leads to a tributary of the Enoree River. In order to stop oil from reaching the creek, the Department of Transportation put sand around the storm drain and vacuumed out the drain. The contaminant was removed.
Advanced Environmental Options.....$4,989.20

08-10-200802549 (Region 2) Greenville County. There was illegal dumping of waste oil products. Soil excavation was necessary to remove contaminant before it was washed into the creek. Pads were placed across affected area and maintained boom at the site to contain the product.
Advanced Environmental Options.....$21,050.89

08-11-200802551 (Region 2) Spartanburg County. Abandoned 500-gallon propane tank was found on Liberty Hill Road in Greer. Although only the residual material was released from the tank, it was materials required proper disposal. AEO treated the tank using nitrogen to insure the integrality and content of the tank prior to removal. The tank was cut as specified for disposal.
Advanced Environmental Options.....$1,506.50

08-12-200802984 (Region 6) Horry County. Seven 5-gallon bucket containers of unknown oil along with car parts were dumped illegally on Whispering Hills Road. The buckets' contents were sampled and the buckets were removed. The contents was determined to be hazardous waste and was disposed of properly.
Moran Environmental Recovery.....$1,082.50

08-13-200803000 (Region 2) Spartanburg County. Due to a fire involving a tractor trailer accident, diesel fuel was spilled contaminating the soil approximately up to ¼ mile on Westbound I-26 between mile marker 21 and 22 in Spartanburg County. No fuel/oil could be detected in the storm drain. Boom/oil dry dam was placed in front of the storm drain as a precaution. The suspected responsible party refused to clean up the material claiming that they had not caused the accident.
Advanced Environmental Options.....$4,412.50

08-14-200803826 (Region 4) Florence County. The regional office followed up on a complaint that 20 or more drums of an unknown strongly odorous liquid had been dumped at the local (solid waste only) landfill at 235 E. Industrial Park Blvd. Site contained an open pit of liquid waste with a Ph of Zero. DHEC stepped in since the owner of the site was unable to comply. Approximately, 2,800 gallons of liquid was pumped from the pits. All free standing liquid puddles were removed. Impacted soil, drums, and totes were secured and covered with poly tarps. The site was then returned into the custody of the owner.
Nu-Way Industrial Services.....$10,950.18

Appendix E

Sites on the National Priorities List (NPL)

Sites shown in this list are being addressed under the authority of the Federal Superfund Program. SAR staff provides technical and administrative assistance to USEPA on those sites. Most of those sites are on the NPL, or have been recommended for listing. Sites on the NPL are eligible to receive Federal Superfund money for remedial activities. Revenues from the uncontrolled sites portion of the State's Hazardous Waste Contingency Fund are used to provide the state's cost share for Fund-lead NPL sites. As the current Federal law is written, the state's cost share for remedial action at Fund-lead sites is a minimum of ten percent (10%) but may be as high as fifty percent (50%) for sites owned or operated by the state or any of its political subdivisions. The state is also responsible for the same cost share percentage for the first year of any long term monitoring. Thereafter, the state becomes responsible for one hundred percent (100%) of the costs for Operation and Maintenance (O&M). Furthermore, if any remedial action requires more than ten years (e.g., groundwater recovery and treatment operations), the state is required to fund one hundred percent (100%) of the cost after the first ten years. The table below is a complete NPL list for South Carolina.

Key to the Acronyms on the NPL list:

NPL means the site is listed on the National Priorities List

NPL-D means the site has been "delisted" or removed from the National Priorities List

NPL-P means the site is proposed for the National Priorities List

NPL-R means the site is on the National Priorities List, but is being addressed under RCRA.

NPLS means the site is a satellite site of a National Priorities List site

NPL-E (equivalent) or SACM (Superfund Accelerated Cleanup Model) means the site is being addressed as if on the NPL, even though it has not been formally listed for the NPL.

Site Name EPA ID # City Name	County	NPL – Status	Description
ADMIRAL HOME APPLIANCES SCD047563614 WILLISTON	Barnwell	NPL-E	The site, also known as the Dixie Narco Plant, involves a former wastewater plant located adjacent to Admiral Home Appliances. Investigations detected chromium, zinc, nickel, and lead contamination in the soils of the wetland discharge area, and in sediments in Spur Branch. Carbon tetrachloride and TCE were also detected in the groundwater adjacent to the plant.
ARKWRIGHT DUMP SC0002333227 SPARTANBURG	Spartanburg	NPL-E	The site is a former landfill approximately 30 acres in size operated during the 1950s and 1960s by the City of Spartanburg. The site contains areas of exposed municipal waste and medical waste as well as discolored soil and ponded water.

Site Name EPA ID # City Name	County	NPL – Status	Description
ASHEPOO PHOSPHATE/ FERTILIZER WORKS SC0001645373 CHARLESTON	Charleston	NPL-E	Charleston Container Co. is a portion of this site and is being worked on in the VCP. A phosphate fertilizer granulation plant operated at this location. Lead and arsenic are present in the soil and groundwater. Groundwater has low pH.
ATLANTIC PHOSPHATE WORKS/SCE&G HAGOOD ST SCD000822171 CHARLESTON, SC	Charleston	NPL-E	Former phosphate fertilizer plant. Documented low pH groundwater and heavy metal contamination.
BEAUNIT CORP-CIRCULAR KNIT & DYEING PL SCD000447268 FOUNTAIN INN	Greenville	NPL	On-site wastewater lagoon.
BRASWELL SHIPYARDS INC/FED-SERV SCD061528956 CHARLESTON	Charleston	NPLS	Six large aboveground storage tanks containing creosote and bermed areas around the tanks. Contaminated soil has already been removed by the PRP's . Part of Koppers Charleston.
BRAY PARK DUMP SCD980844500 CAYCE	Lexington	NPLS	Old uncontrolled town dump. Heavy metal contamination present in groundwater. Part of Lexington County 321 Landfill site.
BREWER GOLD MINE DAM FAILURE SCD987577913 JEFFERSON	Chesterfield	NPL	Dam failure at the mine released acid mine drainage to nearby creek. EPA did emergency response.
CALHOUN PARK AREA SITE SCD987581337 CHARLESTON	Charleston	NPL-E	A former manufactured gas plant and Ansonborough Homes, a public housing unit.
CAROLAWN SCD980558316 FORT LAWN	Chester	NPL	Waste stored for planned on-site incineration in large above ground bulk tanks and drums. The site is split into two operable units. OU-2 is a no further action.
COLUMBIA NITROGEN SC0001040393 CHARLESTON	Charleston	NPL-E	The site operated from 1905 to 1966 as a phosphate fertilizer granulation plant.
DODGENS PROPERTY SCD980847230 PICKENS	Pickens	NPLS	Former dump site, with PCB contamination. PART OF SANGAMO SITE.
ELMORE (FRANK) SITE SCD980839542 GREER	Spartanburg	NPL	Drum disposal site and abandoned underground storage tank. Site has been subdivided and is now owned by 2 different property owners.
GEIGER (C & M OIL) SITE SCD980711279 RANTOWLES	Charleston	NPL	Waste oil incinerator with eight on-site storage lagoons.
GOLDEN STRIP SEPTIC TANK SCD980799456 SIMPSONVILLE	Greenville	NPL-D	Lagoons containing industrial waste water pumped from area industries. Site has been delisted. File indicates a YMCA Recreation Park was proposed for this site.

Site Name EPA ID # City Name	County	NPL – Status	Description
GROCE LABORATORIES INC (AQUA-TECH) SCD058754789 GREER	Spartanburg	NPL	Closed RCRA treatment, storage, and disposal facility. Approximately 7,000 drums, 97 above-ground tanks, 1,200 gas cylinders.
HELENA CHEMICAL CO – FAIRFAX SCD058753971 FAIRFAX	Allendale	NPL	On-site landfilling of pesticides.
HENRY'S KNOB AKA HENRY KNOB SCN000407376 CLOVER	York	NPL-E	Former open kyanite mine with low pH in surface water and contaminated soils and groundwater. Elevated metals in soil and groundwater.
INDEPENDENT NAIL CO SCD004773644 BEAUFORT	Beaufort	NPL-D	Wastewater discharged to on-site (no discharge) lagoon. Removal conducted on the lagoon. EPA delisted site. Currently under long term groundwater monitoring.
INTERNATIONAL MINERALS AND CHEMICALS SCD003350493 SPARTANBURG	Spartanburg	NPL-E	Facility produced phosphate fertilizer until closed out under RCRA in 1987.
KALAMA SPECIALITY SCD094995503 BURTON	Beaufort	NPL	Specialty chemical manufacturer discharged wastewater to on-site lagoon.
KOPPERS CO INC SCD003353026 FLORENCE	Florence	NPL-R	Abandoned creosote & PCP lagoons.
KOPPERS CO/TREATING PLANT SCD980310239 CHARLESTON	Charleston	NPL	Large wood treatment plant that used creosote, pentachlorophenol, and chromated copper arsenate (CCA).
LEONARD CHEMICAL CO INC SCD991279324 CATAWBA	York	NPL	Solvent reclaimer, landfilled distillation still bottoms on-site & drum storage.
LEXINGTON COUNTY LANDFILL SCD980558043 CAYCE	Lexington	NPL	County operated landfill that accepted industrial and domestic wastes. Also includes Old Cayce Dump Site and the Bray Park Dump.
LYMAN DYEING & FINISHING LANDFILL SCD987584653 LYMAN	Spartanburg	NPL-E	Old dump used from 1924 to mid 1960's for industrial waste containing PAHs and metals. EPA entered into negotiations to conduct a RI/FS. The site contains numerous empty and crushed drums.
MACALLOY CORPORATION SCD003360476 CHARLESTON, SC	Charleston	NPL	Ferro-chrome alloy producer using submerged electric arc furnaces. Chromium contamination from air pollution (precip. dust & tower sludge)
MEDLEY FARMS SCD980558142 GAFFNEY	Cherokee	NPL	Drum disposal and lagoons filled with hazardous substances.

Site Name EPA ID # City Name	County	NPL – Status	Description
OLD CAYCE DUMP SITE SCD980844328 CAYCE	Lexington	NPLS	Old uncontrolled town dump with heavy metal contamination in groundwater. Part of Lexington County Landfill Site.
PALMETTO RECYCLING INC SCD037398120 COLUMBIA	Richland	NPL-D	Battery recycling operation, acid(H2SO4) stored in a below ground sump, the lead plates were shipped out of state for recycling.
PALMETTO WOOD PRESERVING INC SCD003362217 CAYCE	Lexington	NPL	Spillage of Copper Chromium Arsenic (CCA) solution used for lumber treatment.
PARA-CHEM SOUTHERN INC SCD002601656 SIMPSONVILLE	Greenville	NPL	Synthetic organic chemical manufacturer who buried solvents on-site behind the plant.
ROCHESTER PROPERTY SCD980840698 TRAVELERS REST	Greenville	NPL	Burial of industrial waste brought here from off site.
ROCK HILL CHEM-RUTLEDGE (BILL) PROPERTY SCD980844005 ROCK HILL	York	NPL	Aboveground storage tanks containing hazardous waste (methylene chloride) also soil contamination from spillage. Site was formerly a reclaimer in early 1960's.
SANGAMO / BRAZEALE PROPERTY SCD980847297 PICKENS	Pickens	NPLS	PCB contamination from burial of transformers & capacitors. Part of the Sangamo Site. Also see 57011.
SANGAMO / CROSS ROADS CHURCH SCD980847354 PICKENS	Pickens	NPLS	Roadside dump w/PCB contamination from capacitor dumping. Part of Sangamo site.
SANGAMO / ERNEST NIX PROPERTY SCD980847172 PICKENS	Pickens	NPLS	Large gully where PCB wastes were disposed of, 1964-65. Part of the Sangamo Site.
SANGAMO / HAGOOD RESERVOIR SCD981470206 PICKENS	Pickens	NPLS	PCB stream sediment contamination. Part of Sangamo Operable Unit Two.
SANGAMO / MAW BRIDGE ROAD SCD981470255 PICKENS	Pickens	NPLS	PCB stream sediment contamination. Part of Sangamo Operable Unit Two.
SANGAMO / WELBORN PROPERTY SCD980847115 PICKENS	Pickens	NPLS	PCB waste materials allegedly dumped into a gully. Part of Sangamo OU-1.
SANGAMO TROTTER-DODGENS SCD981474836 SUNSET	Pickens	NPLS	This site is part of the Sangamo PCB investigations.

Site Name EPA ID # City Name	County	NPL – Status	Description
SANGAMO/LAKE HARTWELL OPERABLE UNIT 2 SCS123456847 PICKENS	Pickens	NPL	Historic release of PCBs from Sangamo Plant into Twelve Mile Creek have contaminated sediment & fish tissue.
SANGAMO/TWELVE-MILE/HARTWELL SCD003354412 PICKENS	Pickens	NPL	On-site capacitor burial, soil and stream sediment PCB contamination. Operable Unit 1 (OU-1)
SCR&D BLUFF ROAD SITE SCD000622787 COLUMBIA	Richland	NPL	Drum storage facility where wastes were originally planned to be recycled.
SCR&D DIXIANA SCD980711394 CAYCE	Lexington	NPL	Drum storage site. Wastes originally planned for recycling.
SHURON TEXTRON INC SCD003357589 BARNWELL	Barnwell	NPL	Plant operated from 1958 to 1992. Sludge lagoons and two drying basins containing VOCs and metals. Two debris areas containing drums and plant waste are present. The RI/FS was completed for the site. ROD was written for the site.
STONO PHOSPHATE WORKS SC0002316404 CHARLESTON	Charleston	NPL-E	Former phosphate fertilizer plant now occupied by Dolphin Cove Marina. Lead and arsenic present in the soil and groundwater. Low pHs present in the groundwater.
SWIFT AGRI-CHEM CORP SCD058181991 CHARLESTON	Charleston	NPL-E	A phosphate fertilizer granulation plant operated at this location. Lead and arsenic present in the soils and groundwater. Low pHs in the groundwater.
TIN PRODUCTS - RED BANK CREEK SCSFN0407133 LEXINGTON	Lexington	NPL-E	Chemical production plant that released an unknown volume of chemicals (organotin) to its wastewater discharge line. The release disabled the city's wastewater treatment plant at Two Notch Rd & resulted in fish kills along Red Bank Creek & Crystal Lake
TOWNSEND SAW CHAIN CO SCD980558050 PONTIAC	Richland	NPL	Chromium plating waste discharged onto the ground surface.
TROTTER HILL RD SCD981750334 PICKENS	Pickens	NPLS	Part of Sangamo Site.
US DOE SRS / SAVANNAH RIVER PLANT SC1890008989 AIKEN	Aiken	NPL	Federal site currently being handled on federal level. (01/28/88)
USMC MARINE CORPS RECRUIT DEPOT SC6170022762 PARRIS ISLAND	Beaufort	NPL	Federal site currently being handled on federal level. (01/28/88)

WAMCHEM INC SCD037405362 BURTON	Beaufort	NPL	Specialty chemical manufacturer discharged wastewater to spray irrigation fields

Appendix F

List of Standard Acronyms

ACA	Administrative Consent Agreement
ACO	Administrative Consent Order
AST	Aboveground Storage Tank
AR	Administrative Record
BRA	Baseline Risk Assessment
BTEX	Benzene, Toluene, Ethylbenzene and Xylene
CA	Consent Agreement
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CO	Consent Order
COE	U.S. Army Corps of Engineers
DHEC	South Carolina Department of Health and Environmental Control
DOD	U.S. Department of Defense
DOE	U.S. Department of Energy
DOJ	U.S. Department of Justice
EE/CA	Engineering Evaluation/Cost Analysis
EPA	U.S. Environmental Protection Agency
ESI	Expanded Site Investigation
FFA	Federal Facilities Agreement
FOIA	Freedom of Information Act
FS	Feasibility Study
FY	Fiscal Year
HRS	Hazard Ranking System
MCL	Maximum Contaminant Level
NCP	National Contingency Plan
NPDES	National Pollution Discharge Elimination System
NPL	National Priorities List
NRDs	Natural Resource Damages
NRP	Non-Responsible Party
NOSW	Notification of Site Work
O&M	Operation and Maintenance
OSHA	Occupational Safety and Health Administration
OU1	Operable Unit 1
OU2	Operable Unit 2
PA	Preliminary Assessment
PAHs	Polynuclear Aromatic Hydrocarbons

PCB	Polychlorinated Biphenyl
PCE	Perchloroethylene, Tetracloroethylene
PER	Preliminary Engineering Report
PIP	Project Information Package
POTW	Publicly Owned Treatment Works
PRP	Potentially Responsible Party
RA	Remedial Action
RCRA	Resource Conservation and Recovery Act of 1976
RD	Remedial Design
RD/RA	Remedial Design/Remedial Action
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RP	Responsible Party
RPM	Remedial Project Manager
RQ	Reportable Quantity
SARA	Superfund Amendments and Reauthorization Act of 1986
SI	Site Investigation
SOW	Scope of Work
SVOCs	Semi-Volatile Organic Compounds
TBSA	Targeted Brownfields Site Assessment
TCA	Trichloroethane
TCE	Trichloroethene
TCLP	Toxicity Characteristic Leaching Procedure
TSDF	Treatment, Storage and Disposal Facility
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VCC	Voluntary Cleanup Contract
VCP	Voluntary Cleanup Program
VOCs	Volative Organic Compound

Appendix G

Glossary of Terms

Abatement - Reducing the degree or intensity of, or eliminating, pollution.

Acute exposure – A single exposure to a toxic substance, which may result in severe biological harm or death.

Administrative Consent Agreement - A legally binding and enforceable agreement between the South Carolina Department of Health and Environmental Control and potentially responsible parties to perform or pay for site studies or cleanups.

Administrative Record - All documents which USEPA or the Department considered or relied upon in selecting the response action at a Superfund site, culminating in the record of decision for remedial action or an action memorandum for removal actions.

Aeration - A process that promotes breakdown of contaminants in soil or water by exposing them to air.

Air Stripping - A process whereby volatile organic compounds (VOCs) are removed from contaminated water by forcing a stream of air through it in a pressurized vessel. The contaminants evaporate into the air stream. The air may be further treated before it is released into the atmosphere.

Aquifer - An underground layer of rock, sand or gravel capable of storing water within cracks and pore spaces (i.e. between grains). The water contained in the aquifer is called groundwater.

Backfill – An excavated area that is refilled with earth; or the material itself that is used to refill an excavated area.

Background Level - The naturally occurring level of an element or compound in the environment.

Brownfields – Properties where expansion, reuse, or redevelopment is complicated by real or perceived environmental contamination.

Cap - A layer of material, such as clay or a synthetic material, used to prevent direct contact with waste materials or to prevent rainwater from penetrating through a contaminated area and spreading contaminated materials. The surface cap is generally mounded or sloped so water will drain off of the cap.

Carcinogen - Any substance that can cause or aggravate cancer.

Closure - The process by which a landfill stops accepting wastes and is shut down under guidelines that ensure that public health and the environment are protected.

Coal Gasification Conversion of coal to a gaseous product by one of several available technologies.

Consent Agreement - A legally binding and enforceable agreement between DHEC and potentially responsible parties to perform or pay for site studies or cleanups.

Consent Decree - A legal document, approved and issued by a judge, formalizing an agreement between USEPA or the Department and the parties potentially responsible for site contamination. The decree usually describes cleanup actions that the potentially responsible parties are required to perform.

Contaminant - Any physical, chemical, biological, or radiological substance or matter that has an adverse effect on air, water, or soil.

Contamination - Introduction into water, air, and soil of microorganisms, chemicals, toxic substances, wastes, or wastewater in a concentration that makes the medium unfit for its next intended use. Also applies to surfaces of objects, buildings, and various household and agricultural use products.

Cost Recovery - A legal process by which potentially responsible parties who contributed to contamination at a Superfund site can be required to reimburse the Hazardous Waste Contingency Fund for money spent during any cleanup actions by the state.

Downgradient - The direction that groundwater flows; similar to "downstream" for surface water.

Dredging - Removal of mud from the bottom of water bodies.

Effluent - Wastewater, treated or untreated, that flows out of a treatment plant, sewer or industrial outfall.

Emergency Planning and Community Right-To-Know Act (EPCRA) - Also know as Superfund Amendments and Reauthorization Act (SARA) title III, provides an infrastructure at the state and local levels to plan for chemical emergencies. Facilities that store, use, or release certain chemicals, may be subject to various reporting requirements under EPCRA. Reported information is then made publicly available so that interested parties may become informed about potentially dangerous chemicals in their community.

Environment - The sum of all external conditions affecting the life, development and survival of an organism.

Environmental Justice (EJ) – This is the fair treatment and meaningful involvement of all people – regardless of race, color, national origin, or income – in the development, implementation, and enforcement of environmental laws, regulations, and policies.

Facility Evaluation - An inspection of a facility to confirm the release or imminent threat of release of hazardous substances, to develop information to evaluate the threat to public health and/or the environment, and to determine the relative priority of a facility.

Facility Identification - The identification of facilities using the existing reporting requirements for release of hazardous substances, complaints from the public and reports from other agencies or parties.

Feasibility Study (FS) - A detailed evaluation of alternatives for cleaning up a site. A feasibility study follows the remedial investigation phase.

Geographic Information System (GIS) – This system electronically manages geographically referenced data. Through GIS, such data can be displayed, assembled, stored, and manipulated, and is frequently displayed in a map format. Examples of the use of GIS include county boundaries, land use, and pollution-monitoring locations.

Hazard Ranking System – This is the principle screening tool used by USEPA to place waste sites on the National Priorities List (NPL). It is a numerically based screening system that uses information from initial, limited investigations – the preliminary assessment and the site inspection – to assess the relative potential of sites posing a threat to human health or the environment.

Heavy Metals - Metallic elements with an atomic weight greater than sodium.

Hydrocarbons - Chemical compounds that consist entirely of carbon and hydrogen.

Identification and Notification of Potentially Responsible Parties (PRPs) - Upon site identification, the Department will initiate actions to identify and notify the PRPs associated with a facility where a release or imminent threat of a release has been confirmed.

Initial Investigation - An initial investigation will determine if a release or imminent threat of release of hazardous substances may have occurred that warrants further action, such as a field visit and examination of existing records.

Inorganic Compound - Generally encompasses elements and substances that do not contain carbon.

Interim Action - An action which may be required at any time before the selection of final remedial action to prevent, minimize, or mitigate harm to public health and/or the environment.

Lagoon - A shallow pond where sunlight, bacterial action, and oxygen work to purify wastewater.

Landfill - A disposal facility where waste is placed in or on land.

Leachate (n) - The liquid that trickles through or drains from waste, carrying soluble components from the waste. Leach, Leaching (v.t.) - The process by which soluble chemical components are dissolved and carried through soil by water or some other percolating liquid.

Letter of Agreement - A letter, in contractual form, that commits the signing party to demonstrate that any groundwater contamination on his property has an off-site source. In exchange for this demonstration, the Department agrees not to hold the property owner liable for the groundwater contamination.

Maximum Contaminant Level (MCL) - The maximum permissible level of a contaminant in water delivered to any user of a public system. MCLs are enforceable standards.

Migration - The movement of oil, gas, contaminants, water or other liquids through porous and permeable rock.

Monitor Well – 1) A well used to obtain water quality samples or measure groundwater levels. 2) A well drilled at a hazardous waste management facility or Superfund site to collect ground-water samples for the purpose of physical, chemical, or biological analysis to determine the amounts, types, and distribution of contaminants in the groundwater beneath the site.

National Contingency Plan (NCP) – Also known as the National Oil and Hazardous Substances Pollution Contingency Plan, is the federal regulation required by Section 105 of the Comprehensive Environmental Response, Compensation and Liability Act that provides the organizational structure and procedures for preparing and responding to releases of hazardous substances into the environment.

National Priorities List (NPL) - USEPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under Superfund.

Non-Responsible Party (NRP) - Parties, including future property owners, who did not contribute to the contamination at a site and are not liable for costs related to response actions.

Occupational Safety and Health Administration (OSHA) – A Federal agency whose goals are to save lives, prevent injuries, and protect the health of America's workers. Staff establishes protective standards, enforces those standards, and reaches out to employers and employees through technical assistance and consultation programs.

Operation and Maintenance (O&M) – These activities protect the integrity of a Superfund site's cleanup plan. O&M measures are initiated by the Division after cleanup objectives have been reached, and the site is determined to be operational and functional.

Organic Compound - Generally encompasses substances that contain carbon.

Operable Unit (OU) - A portion of a Superfund site that is addressed separately from the rest to allow for easier management or a more timely response.

Plume - A body of contaminated groundwater flowing from a specific source.

Potentially Responsible Parties (PRPs) – Parties are individuals, companies, owners, or any other party who may have contributed to the contamination at a Superfund site and are liable for payment of costs related to response actions.

Preliminary Assessment (PA) - The process of collecting and reviewing available information about a known or suspected hazardous waste site or release.

Record of Decision (ROD) - A public document that explains which cleanup alternative(s) will be implemented at a contaminated site. It includes the official documentation of the cleanup technology that will be implemented.

Recovery Well - A well used to reclaim or capture contaminated groundwater.

Remedial Action (RA) - The implementation of the remedy outlined in the Record of Decision for a contaminated site.

Remedial Design (RD) - The phase of remediation that follows the selection of a remedy and includes development of engineering drawings and specifications for a site cleanup.

Remedial Investigation (RI) - Process of collecting data necessary to adequately characterize the site for the purpose of developing and evaluating remedial alternatives.

Remedial Investigation and Feasibility Study (RI/FS) - Its purpose is to assess site conditions and evaluate alternatives to the extent necessary to select a remedy.

Remediation – The process of providing a remedy to cleanup a site.

Resource Conservation and Recovery Act (RCRA) – protects human health and the environment from the potential hazards of waste disposal, conserves energy and natural resources, reduces the amount of waste generated, and ensures that wastes are managed in an environmentally sound manner.

Runoff - The discharge of water over land into surface waters. It can carry pollutants from the air and land into receiving waters.

Safe Drinking Water Act – This Act protects the quality of drinking water in South Carolina and the U.S. This law focuses on all waters actually or potentially designed for drinking use, whether from above ground or underground sources.

Scope of Work - A general description of the work intended at a site. It includes the media to be sampled and the constituents analyzed for, but not necessarily location and sample number.

Sediment - The layer of soil, sand, and minerals at the bottom of surface waters (such as streams, lakes and rivers) that absorb contaminants.

Site Inspection/Investigation (SI) - The collection of information from a Superfund site to determine the extent and severity of hazards posed by the site. It follows and is more extensive than a preliminary assessment.

Sludge - Semi-solid residues from industrial or water treatment processes that may be contaminated with hazardous materials.

Sparging – Injection of air below the water table to strip dissolved volatile organic compounds and/or oxygenate ground water to facilitate aerobic biodegradation of organic compounds.

Sump - A pit or tank that catches liquid runoff for drainage or disposal.

Surface Water - All water naturally open to the atmosphere (rivers, lakes, reservoirs, ponds, streams, impoundments, seas, estuaries, etc.)

Toxicity Characteristic Leaching Procedure (TCLP) - A laboratory test to determine whether a material must be handled as a hazardous waste.

Treatment, Storage and Disposal Facility (TSDF) - A facility where a hazardous substance is treated, stored, or disposed. TSD facilities are regulated by USEPA and the Department under RCRA.

Trichloroethylene (TCE) - A stable, colorless liquid with a low boiling point that has many industrial applications, including use as a solvent and metal degreasing agent.

Underground Storage Tank (UST) - A tank and any underground piping connected to the tank that is located at least partially (10%) underground and designed to hold gasoline or other petroleum products or chemicals.

Up gradient - An area or direction that is topographically and/or hydraulically higher than contaminated areas and, therefore, are not prone to contamination by the movement of polluted groundwater.

Volatile Organic Compounds (VOCs) - VOCs are made as secondary petrochemicals. They include light alcohols, acetone, trichloroethylene, perchloroethylene, dichloroethylene, benzene, vinyl chloride, toluene and methylene chloride. These potentially toxic chemicals are used as solvents, degreasers, paint thinners and fuels.

Voluntary Cleanup Program - The State program designed to provide incentives for parties to voluntarily conduct response actions at sites by providing liability protection and/or covenants not to sue.

Wetlands - An area that is regularly saturated by surface or groundwater and, under normal circumstances, is capable of supporting vegetation typically adapted for life in saturated soil conditions.