

**Record of Decision**

**Philip Services Corporation Site (PSC) State Superfund Site**

**York County, South Carolina**

**South Carolina Department of Health and Environmental Control**

**Bureau of Land and Waste Management**

**June 2016**

**DECLARATION  
RECORD OF DECISION  
PSC SITE**

**Site Name and Location**

The Philip Services Corporation Site (PSC) Site (“the Site”) is located at 2324 Vernsdale Road, approximately 4.5 miles southwest of the City of Rock Hill, South Carolina (Figure 1). Robertson Road borders the property to the northeast, and the Norfolk Southern Railroad forms the northwestern boundary. Wildcat and Fishing Creeks border the industrial property on the southeast and southwest, respectively. The former PSC Property (the Site) consists of approximately 44.5 acres of industrial property on the west side of Wildcat Creek and approximately 108 acres of undeveloped woodland on the east side of Wildcat Creek.

**Statement of Basis and Purpose**

This Decision Document presents the Selected Remedy for the PSC Site, in York County, South Carolina, which was chosen in accordance with the Comprehensive Environmental Response Compensation and Liability Act (“CERCLA”), and to the extent practicable, the National Contingency Plan (“NCP”). The decision is based on the Administrative Record for the Site.

**Assessment of the Site**

The response action selected in the record of decision (“ROD”) is necessary to protect the public health and welfare or the environment from actual or threatened releases of hazardous substances into the environment.

**Description of Selected Remedy**

The Department has identified Combined Alternative 3 - Hydraulic Containment, Soil Vapor Extraction (“SVE”), Thermal Enhanced Multi-Phase Extraction (“MPE”) and In Situ Thermal Treatment as the selected remedy for the site.

This alternative involves hydraulic containment in the regolith and bedrock zones (if necessary), SVE in the Burn Pit Area (if necessary), Thermal Enhanced MPE in the Fuel Oil Area, and in situ thermal treatment for both soil and groundwater. Specifically, this alternative includes the following components:

- Excavation and offsite disposal of soils with metals exceeding Remedial Goals (Table 3-5) outside of VOC treatment areas.
- SVE in the Burn Pit Area, if necessary based on the results of the preliminary design investigation and additional assessment of this area.
- Thermal-enhanced MPE for the Fuel Oil Area.

groundwater.

- Hydraulic containment with onsite physical/chemical treatment for the regolith and bedrock hydraulic zones, if necessary to limit the migration of COCs.
- Groundwater and surface water monitoring.
- Institutional controls.

Figure 5-6 outlines the approximate treatment areas for this alternative and the associated technologies. These areas will be refined during remedial design. The implementation of this alternative will include sequencing of various elements so that the anticipated benefits associated with one element can be evaluated and taken into account in the implementation of subsequent stages. The precise sequencing will be described and justified during the design process conducted prior to remedy implementation.

Capital costs for this alternative include the installation of extraction wells, thermal wells, and SVE wells, thermal treatment system installation; groundwater treatment system upgrades; institutional controls; and limited excavation. Although relatively short term, O&M costs also exist and include media monitoring and O&M for the thermal remediation system. The present worth of this alternative is \$35,854,000.

### **Statutory Determination**

The Selected Remedy attains the mandates of CERCLA § 121 and to the extent practicable the NCP. The remedy is protective of human health and the environment, complies with ARARs, is cost effective, and utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. The remedy also satisfies the statutory preference for treatment as a principal element of the remedy, which permanently and significantly reduces the toxicity, mobility, and volume of hazardous substances, pollutants or contaminants.

Because this remedy will result in hazardous substances, pollutants or contaminants remaining onsite above levels that allow for unrestricted exposure, a statutory review will be conducted within five years after initiation of remedial action to ensure the remedy is, or will be, protective of human health and the environment.

### **ROD Data Certification Checklist**

The following information is included in the Decision Summary section of this Record of Decision. Additional Information can be found in the Administrative Record for the site

- Chemicals of concern and their respective concentrations.
- Baseline risk represented by the chemicals of concern.
- Cleanup levels established for chemicals of concern and the basis for these levels.

- How source materials constituting principal threats are addressed.
- Current and reasonably anticipated future use assumptions and current future beneficial use of ground water used in the baseline risk assessment and ROD.
- Potential land and groundwater use that will be available at the site as a result of the Selected Remedy.
- Estimated capital, annual operation and maintenance costs, discounted rate, and the number of years over which the remedy costs estimates are projected.
- Key factors that led to selection of the remedy.

Daphne D. Neel

Daphne G. Neel, Chief  
Bureau of Land and Waste Management  
South Carolina Department of Health and Environmental Control

6/22/16

Date

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## **1.0 Site Name and Location**

The Philip Services Corporation (PSC) Site (“the Site”) is located at 2324 Vernsdale Road, approximately 4.5 miles southwest of the City of Rock Hill, South Carolina (Figure 1). Robertson Road borders the property to the northeast, and the Norfolk Southern Railroad forms the northwestern boundary. Wildcat and Fishing Creeks border the industrial property on the southeast and southwest, respectively. The former PSC Property consists of approximately 44.5 acres of industrial property on the west side of Wildcat Creek and approximately 108 acres of undeveloped woodland on the east side of Wildcat Creek.

The Site is immediately surrounded by undeveloped land and commercial/industrial properties. Osmose Wood Preserving, Inc., is located directly across the railroad to the northwest. Low-density residential properties and a high school are located in the vicinity of the Site. Higher density residential areas are located to the southeast and northeast toward the City of Rock Hill.

The Site includes several buildings: a former office on the northern portion of the property close to Robertson Road, a large warehouse building along the northwest portion of the property bordered by the railroad, a wastewater treatment building located in the southwest portion of the property, and several other small buildings across the property.

## **2.0 Site History**

### **2.1 Operational History**

The PSC facility is a former Resource Conservation Recovery Act (RCRA) hazardous waste treatment, storage, and disposal facility. Beginning in 1966, Quality Drum Company and, later, Industrial Chemical Company conducted operations consisting of waste storage, treatment, and recycling. The facility received spent solvents from offsite facilities, stored the solvents at the facility in drums and tanks, and recovered these solvents through distillation. Until 1981, wastes from the distillation process (e.g., still bottoms) were sent to a local landfill. In 1981, a hazardous waste incinerator was installed at the facility for still bottoms treatment and the facility began to process a broader variety of waste streams. Quality Drum and Industrial Chemical merged in December 1982.

In May 1983, Stablex South Carolina, Inc. acquired the facility. At that time, approximately 26,000 drums and 200,000 gallons of bulk liquid waste stored in tanks were present at the facility. In 1986, NUKEM purchased the stock of Stablex. Stablex South Carolina, Inc., changed its name to ThermalKem, Inc., in January 1987. ThermalKem operated the facility as a hazardous waste incinerator and storage facility under RCRA interim status (EPA I.D. No. SCD 044 442 333).

PSC purchased the stock of ThermalKem through ThermalKem's subsidiary, Petro-Chem, and took over operation and management of the facility in November 1995. PSC ceased operation of the incinerator one month later and submitted an incinerator closure plan in 1998. PSC continued to operate the facility as a fuel blending, storage, and transfer facility until 1999. PSC filed for bankruptcy protection in June 2003.

During the years of operation, the facility sustained two large structural fires. The facility also experienced a subsurface diesel fuel release, with the quantity of fuel spilled estimated to be greater than 200,000 gallons, as well as various releases of hazardous substances.

## **2.2 Enforcement History**

In 1966, Quality Drum Company and Industrial Chemical Company began operations consisting of waste storage, treatment, and recycling. The facility received spent solvents from offsite facilities, stored the solvents on site in drums and tanks, and recovered these solvents through distillation. Until 1980, wastes from the distillation process (still bottoms) were sent to a local landfill. In 1980, a hazardous waste incinerator was installed for still bottoms treatment.

In May 1983, Stablex Inc. acquired the facility. At that time, approximately 26,000 drums and 200,000 gallons of bulk liquid waste (stored in tanks) were present on site. In 1983, groundwater monitoring was initiated through the DHEC RCRA program. In 1985 the burn pit was excavated. In 1986, studies were conducted to design and implement a groundwater treatment system to contain contaminated groundwater from impacting the creek. In 1986, ownership of the property was transferred to NUKEM, who changed its company name to ThermalKEM in 1987. ThermalKEM operated as a hazardous waste incinerator and storage facility under RCRA interim status. In 1991, a diesel fuel release was detected and the pump and treat system was modified to address containment of this area. PSC took over operation and management of the site in November 1995 and ceased operation of the incinerator one month later.

In June 2, 2003, PSC and its related debtors filed a petition for relief under Chapter 11 of the Bankruptcy Code. In December 2003, DHEC and the United States Environmental Protection Agency (“EPA”) entered into a settlement agreement with PSC and its related debtors. Reorganized PSC placed funds (approximately \$4.2 million) in a bankruptcy custodial trust account managed by Restoration & Redevelopment Solutions, LLC (“R&R”), a court-appointed trustee. DHEC and the EPA are the beneficiaries of the custodial trust account. The bankruptcy settlement agreement specifically authorizes use of funds in the custodial trust account for investigation and remediation actions, and closure and post-closure actions selected and approved by DHEC and/or EPA. A memorandum of understanding between DHEC and EPA established DHEC as the lead governmental agency for managing the environmental response actions.

Between November 2004 and May 2005, DHEC provided General/Special Notice of Potential Liability letters to 98 Potentially Responsible Parties (PRPs) under CERCLA. These were believed to be the largest contributors by volume of waste during the period of 1993 through 1999. Hazardous waste manifests and other documents identify over 7,000 generator PRPs at the Site. DHEC held PRP meetings on December 7, 2004 and again on May 17, 2005. Based on a good-faith offer of settlement to fund and perform work associated with the remedial investigation and feasibility study at the Site, DHEC entered into settlement negotiations with a number of those PRPs, which later formed a single cohesive PRP Group (“PRP Group”) to participate effectively in settlement negotiations. A timely settlement for performance of the RI/FS could not be reached so DHEC initiated a fund-lead RI/FS. On August 5, 2014, DHEC

sent letters to approximately 1,700 additional parties notifying them of their potential liability (this letter also included notice of an August 26, 2014 public meeting).

### **2.3 Environmental Response History**

Several soil and groundwater investigations were conducted during the operation of the facility. Based on these investigations a groundwater extraction and treatment system was installed in 1988 to address petroleum contamination. Additional extraction components (groundwater extraction wells EW-2 and EW-3 and a fuel interceptor trench) were installed in the mid-1990s. The incinerator was shut down and dismantled in the late 1990s, and soil was excavated beneath the incinerator leaving an open pit.

In 2004, the open pit was backfilled and the incinerator building was demolished under the direction of DHEC. DHEC also completed upgrades to the groundwater treatment system in 2005.

DHEC began a Remedial Investigation in 2004 consisting of several phases of soil and groundwater investigation to determine the nature and extent of contamination. The Remedial Investigation Report (RI) was completed in September 2008. A Feasibility Study (FS) which evaluated remedial alternatives was completed on July 22, 2011.

### **3.0 Public Relations**

The Department held a public meeting on May 25, 2006 to announce the start of the Remedial Investigation and provide an opportunity for public input into the remedial investigation. An update fact sheet was provided to the attendees on May 30, 2007. The fact sheet is included in Appendix (C).

The Department held a public meeting on August 26, 2014 to present the Proposed Plan. The meeting opened a thirty (30) day public comment period that the Department chose to extend to ninety (90) days at the request of the public. Overall there were few comments directed to the preferred remedy and there was no major opposition. The majority of the public's comments were focused on a recently permitted construction and debris landfill located in close proximity of the site. Several residents expressed concern because they had drinking water wells and were downgradient of the PSC Site. The Department agreed to investigate this issue further. A more detailed discussion is in the Responsiveness Summary of this report. A transcript of the public meeting is included in Appendix B.

### **4.0. Scope and Role**

As with many Superfund sites the problems at the PSC Site are complex. As a result the remedy for cleanup has been broken down into several distinct areas for the purpose of developing a comprehensive cleanup alternative. The selected alternative involves hydraulic containment in the regolith and bedrock zones, SVE in the Burn Pit Area, thermal-enhanced MPE in the Fuel Oil Area, and in situ thermal treatment for both soil and groundwater. Specifically, this alternative includes the following components:

- Excavation and offsite disposal of metals exceeding RGs outside of VOC treatment areas.
- Thermal-enhanced MPE for the Fuel Oil Area.
- In situ thermal treatment for select areas to treat for VOCs in soil and regolith groundwater.
- Upon evaluation of the thermal treatment, hydraulic containment with onsite physical/chemical treatment for the regolith and bedrock hydraulic zones, could be necessary, to limit the migration of COCs.
- SVE in the Burn Pit Area, if necessary based on the results of the preliminary design investigation and additional assessment of this area.
- Institutional controls.
- Groundwater and surface water monitoring. The selected remedial alternative is anticipated to be the final remedy for the site.

The selected alternative includes both soil and groundwater treatment. The remedy will be evaluated annually after completion to assure that the remedial action objectives have been met following completion of the remediation.

## **5.0 Site Characteristics**

### **5.1 Topography and Drainage**

The PSC Site is located in the Piedmont Physiographic Province of South Carolina. This province is characterized by gently rolling hills and ridges intersected by stream and river valleys. Within the vicinity of the site, land surface elevations range from about 650 feet east of the site down to about 480 feet on Fishing Creek south of the Site. Elevations on the site average from about 510 feet to 530 feet. The surface drainage basin for the site vicinity covers approximately 55 acres including the site and areas to the east.

Two surface water features are adjacent to the Site. Fishing Creek flows from the northwest to form the south boundary of the Site and continues to flow to the south downstream of the Site. Wildcat Creek flows from the north to form the east boundary of the operations area of the former facility. Wildcat Creek flows into Fishing Creek along the south boundary of the Site. Most surface drainage from the operations area of the former facility is directed to the east into Wildcat Creek through several stormwater outfalls. One stormwater outfall also directs surface runoff from the southwest corner of the former operations area to Fishing Creek.

### **5.2 Hydrogeology**

The geology of the Piedmont Physiographic Province includes crystalline bedrock of metamorphic and igneous origin. The metamorphic rocks range from coarsely-crystalline, weather-resistant gneiss to easily weathered mica schist and the finer-grained form called