



DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER POLLUTION CONTROL
6TH FLOOR, L&C ANNEX, 401 CHURCH ST, NASHVILLE, TN 37243

NOTICE OF INTENT (NOI)
for discharges of treated groundwater associated with
UNDERGROUND STORAGE TANK (UST) REMEDIATION

This application is for: ☐ New Permit ☒ Permit Reissuance ☒ Permit Modification

(If this NOI is submitted for Permit Modification provide the existing permit tracking number: **TNG830086**)

Site Name: Hwy 64 West Somerville Project (CAS#1)	County: Fayette
Street Address or Location: 16595 U.S. Hwy 64, Somerville, TN	*Latitude: 35.2437
	*Longitude: -89.3527
UST Site ID Number: 8-249002	Attach a site location (topographic) map <input checked="" type="checkbox"/> Map attached

Owner or Operator: (the person or legal entity which controls site's operation; this may or may not be the same as the site name or the official contact name)

TDEC / SEMS, Inc.

1	Official Contact Person Name: (individual responsible for a site) Mr. Stan Boyd	Title or Position: Director, TDEC-UST		
	Mailing Address: 401 Church Street, 4th Floor L&C Tower	City: Nashville	State: TN	Zip: 37243
	Phone: (615) 532-0945	E-mail: Stan.Boyd@state.tn.us		
2	Local Contact Person Name: (if appropriate, write "same as #1") Roger Paulson	Title or Position: Project Manager		
	Site Address: (this may or may not be the same as street address) 1683 N. Shelby Oaks Drive, Suite #1	Site City: Memphis	State: TN	Zip: 38134
	Phone: (901) 381-5225	E-mail: rpaulson@semsinc.net		

Write in the box (to the right) or circle the number (above) to indicate where to send correspondence

1

UST REMEDIATION FACILITY DESCRIPTION

Treated groundwater from site enters following stream(s) and/or lake(s): (for each outfall, give names and stream miles) Unnamed Tributary of Town Branch flowing to Loosahatchie River	No of outfalls: 1
List type of product(s) currently or previously stored in tanks located at the site: Gasoline	
Description of contamination, assessment study, extent of contamination, etc. Attach additional pages if necessary: Free product and dissolved gasoline constituents located on the property.	
Description and design capacity of treatment process and facilities: See attached.	
Select discharge type (continuous means more than 4 days at a time): <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	
Expected starting date for groundwater treatment, and estimated life of remediation project: The corrective action system commenced operation on March 29, 2012 - 4 years	

CERTIFICATION AND SIGNATURE

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed Name: **Stanley R. Boyd** Official Title: **Director, TDEC-UST** Signature: *[Signature]* Date: **6-19-13**

STATE USE ONLY

Received Date	Reviewer	EEO	NOC Date	Tracking No. TNG83
	Impaired Receiving Stream	High Quality Water		T & E Aquatic Fauna

Submit the original of the completed and signed form to:
UST NOI Processing
Tennessee Division of Water Pollution Control
6th Floor L&C Annex, 401 Church Street
Nashville, TN 37243

(continued)

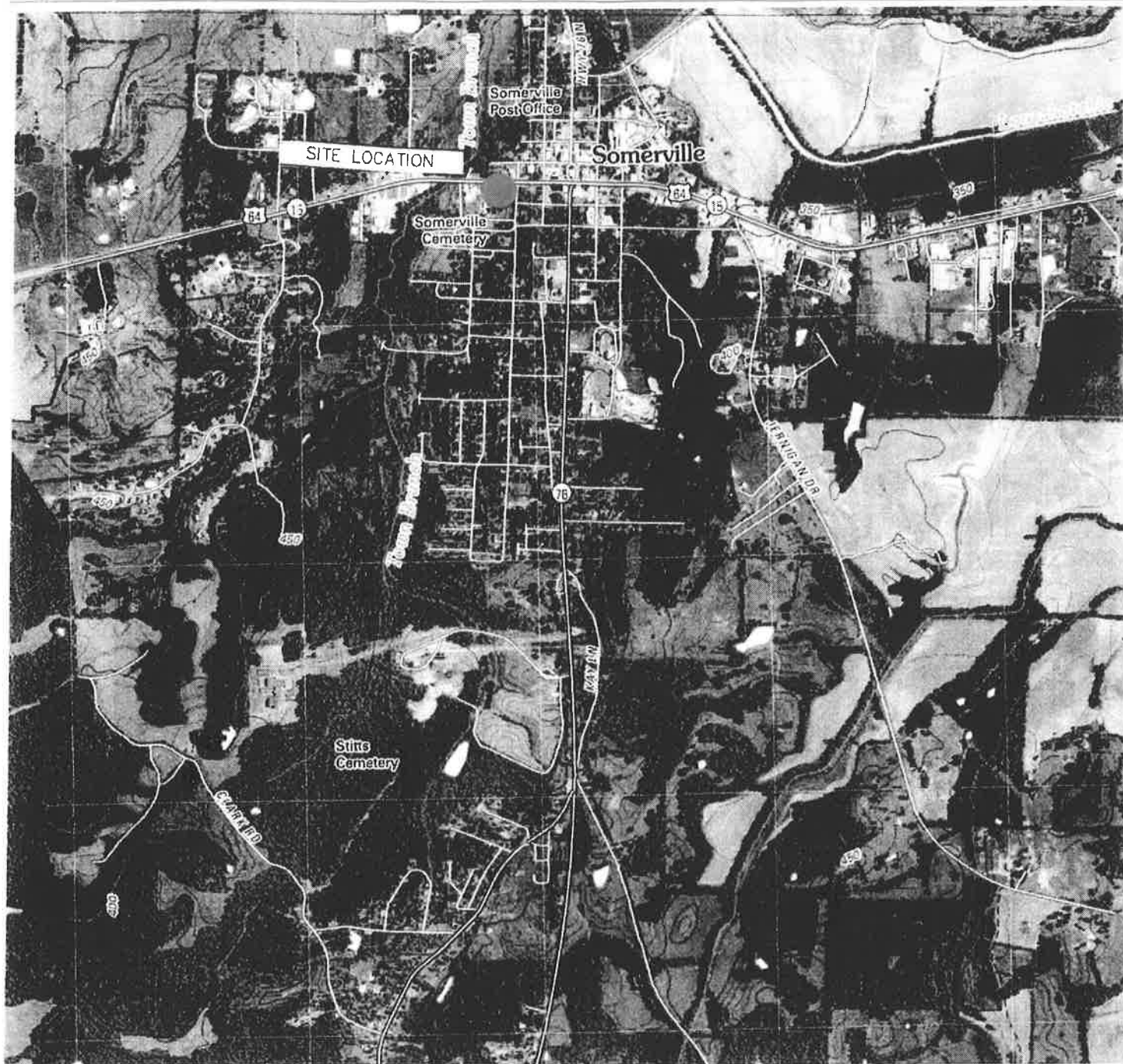
RDAs 2109 and 2400

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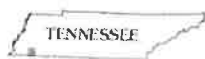
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CN-1217 (Rev. 09-07)

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REFERENCE: MAP TAKEN FROM
7.5 MINUTE SOMERVILLE QUADRANGLE

QUADRANGLE LOCATION

Lambert	Laconia	Whiteville
Macon	Somerville	Hickory Valley
Moscow	Moscow SE	Grand Junction

ADJOINING 7.5' QUADRANGLES



2000 0 2000
SCALE IN FEET

FIGURE 1
TOPOGRAPHIC MAP
Hwy 64 W Somerville Project
Somerville, TN
Facility ID #8-249002



DRAWN BY	RJP	CHECKED BY		DRAWING #
BY	06/24/12	APPROVED BY		TOPO

Water Treatment Equipment – CAS#1
Hwy 64 West – Somerville Project
Hwy 64 West
Somerville, TN
TDEC Facility ID #8-249002
TNG830086

The operating corrective action system groundwater treatment equipment consists of a 21,000 gallon frac tank, 50 gpm oil/water separator-air stripper, four bag filter vessels, and two 2,000 lb granular activated carbon vessels. Information concerning the remedial system components is attached.

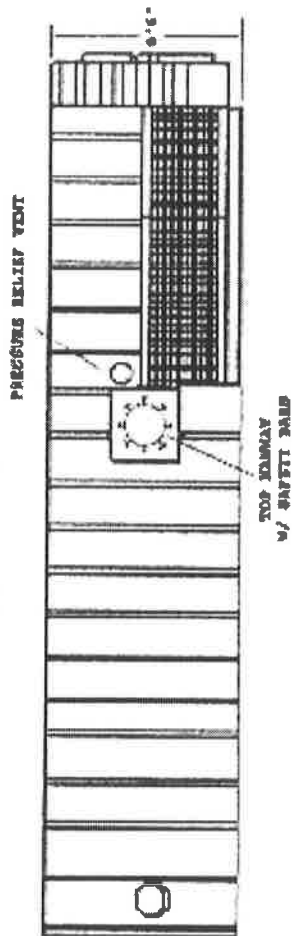
Captured groundwater and free product recovered by the corrective action system are first processed by a 21,000 gallon frac tank to capture any recovered free product. Recovered groundwater is pumped from the frac tank to a 50 gpm oil/water separator-air stripper. The water then passes through the filter vessels (plumbed in parallel), each containing one 25 micron bag filter. The filter vessels are used to remove particulate matter prior to granular activated carbon polishing. After filtering, the water is passed through two 2,000 lb carbon vessels plumbed in series, and then discharged to an unnamed tributary of Town Creek.

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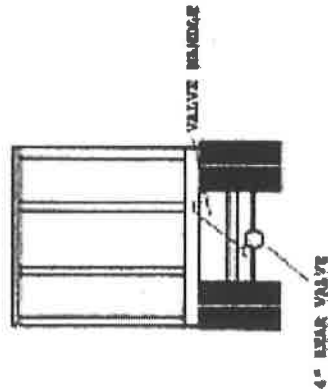
"V" Bottom Mobile Frac Tank, 500 bbl

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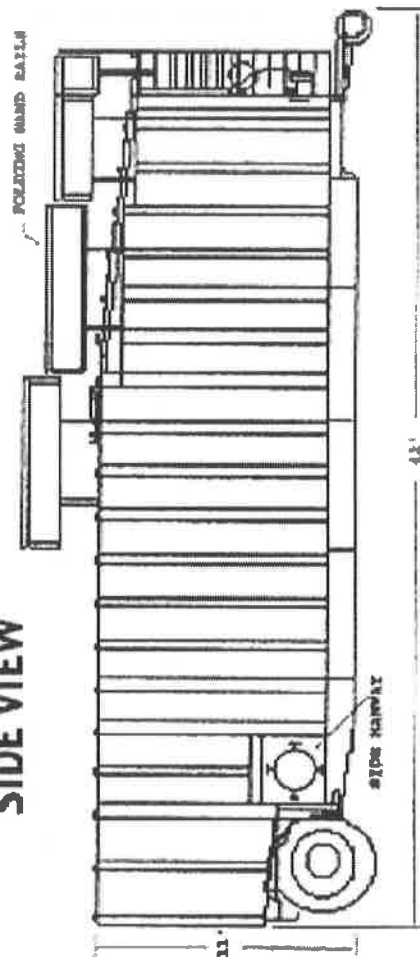
TOP VIEW



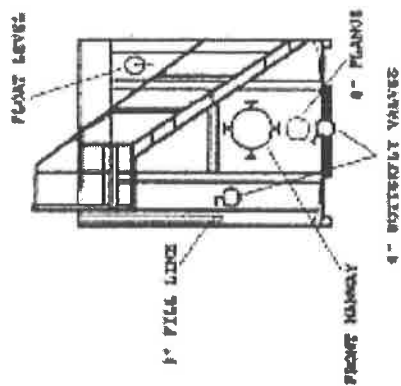
REAR VIEW



SIDE VIEW



FRONT VIEW



1.0 SYSTEM COMPONENTS

The MKE Stripperator is a single process unit which integrates oil/water separation and air stripping. The Stripperator consists of five major components: the oil/water separation chamber, the air stripping chamber, effluent sump, lid and blower. The units are engineered to treat most groundwater applications with flow rates from 15 to 50 GPM.

1.1 Oil/Water separation chamber

Contaminated ground water and free phase hydrocarbon enter the Stripperator through a NPT coupling located in the separation chamber. Fluid passes through a flow disperser and directly through a foul-resistant coalescing pack. The free phase hydrocarbon coalesces and accumulates a layer on top of the contaminated water. The water flows by gravity through a water leg into the air stripping chamber. Any free phase hydrocarbon is removed by an adjustable product effluent weir and flows by gravity into an optional external product storage tank.

1.2 Air Stripping chamber

The water from the oil/water separation chamber enters the first of the aeration channels in the air stripping chamber. The channels are connected in a continuous serpentine pattern. Fresh air from the blower is introduced through 5/16 inch holes located in flexible nylon aeration tubes. The aeration tubes distribute air uniformly throughout each channel. Effluent air accumulates in the headspace above the tray where it passes through a 10-inch air exhaust port. Depending on model ordered the air stripper may have a second tray to increase air stripping capacity.

The contaminants are removed from the water as it flows through the aerated channels. The resulting clean water exits the last channel through an effluent weir that is factory set to maintain level in the air stripping chamber.

1.3 Effluent sump

Treated water from the air stripping chamber flows by gravity into the effluent sump. The final Stripperator effluent exits the effluent sump through a gravity drain or optional water effluent transfer pump. A 10-inch diameter inspection hatch is included.

1.4 Lid

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A gasketed lid allows for easy access to the separation (OWS) and air stripping chambers. The lid is secured with quick release latches and may be removed without interference of influent and effluent piping and ducting. In all models, the lids are hinged for easy access to the Stripperator and OWS internals.

1.5 Blower

Fresh air enters a 2⁵ hp radial-blade type pressure blower for the SA⁵⁴ through a dynamically balanced inlet damper and screen. The standard blower has an electrical requirement of 230 volts three phase. See Blower curves in appendix. A pressure gauge is included to monitor blower pressure.

SA50 models operate in the same fashion but include a 5hp radial-blade type blower.

2.0 INSTALLATION, OPERATION AND MAINTENANCE

2.1 Installation

A. General

The Stripperator must be placed on a level surface. Failure to do this will adversely affect the removal efficiency of the unit. The oil water separation chamber must also be primed with approximately 100 gallons of clean water to prevent contamination of the outlet piping. Make sure that all clean-out drains and valves are closed. Piping and ducting locations should not interfere with access to the unit or the removal of the lid.

B. Oil/water influent and effluent lines

The Stripperator can accommodate gravity or pumped influent through a NPTF coupling. It should be noted that unlike air stripping towers, a minimum flow rate is not necessary to assure effective operation of the Stripperator. In fact, flow rates less than the rated flow result in even higher levels of contaminant removal.

Product flows through the 1 1/2 inch NPT Product effluent weir by gravity. Connections and piping to an external product storage drum (if required) must be made at or below the elevation of the product effluent weir. The product effluent weir may be adjusted to allow for various product specific gravities. A minimum product thickness of 1/2 inch is recommended in the separation chamber.

The effluent water exits the sump through a pump or coupling where gravity flow to a sewer or infiltration gallery is permissible. We recommend a 2 inch minimum diameter piping. Restrictions such as valves, flow meters, filters and uphill piping runs should be avoided for proper operation. Excessive restrictions may cause flooding of the air stripping chamber and reduced levels of contaminant removal.

Optional 1.5 or 3hp effluent transfer pump with controls is provided for conditions where gravity flow is not feasible. An effluent connection is provided.

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C. Exhaust air vent system

The Stripperator is designed to operate at 600-800 SCFM at a maximum pressure of 8 inch water column. Excessive restrictions in the air exhaust piping may reduce levels of contaminant removal. Exhaust air should be directed through a minimum 10 inch diameter pipe section. Air influent piping (6 inch minimum diameter) may be used where desired. The damper is preset at the factory to supply the system with the proper air flow. The damper position is appropriate for a simple duct system. Adding longer distances or elbows in order to route the exhaust air around physical constraints requires consideration of increased friction losses. Additional friction losses due to the installed vent system will result in increased back pressure at the blower discharge, and therefore reduced air flow. Appendix A contains design data and blower performance curves. After the exhaust system is installed, air flow rate measurements can be taken at the vent with a pitot tube and gauge. The damper can also be reset.

D. Separation Chamber Vent

A vent connection is integral to the design. No additional piping is required

E. Power Supply

The Stripperator requires three phase unless otherwise specified. The blower motor is 2 or 5 hp. A motor starter with thermal overload protection is required. If this option was selected for your unit, power is connected through the seal on top of the motor starter. See appendix C for additional information.

2.2 Operation

The Stripperator operates without a great need for constant attention. The pressure gauge should be monitored periodically. A gradual increase in back pressure indicates a buildup of scale blocking the holes in the tubes and therefore reduced air flow to the system. The rate at which the aerator tubes become coated with scale and/or other contaminants can vary widely depending on the water quality and flow rate at each particular site.

2.3 Maintenance

A. Aerator tubes

When inspection or cleaning is required the lid must be removed to access aerator tubes. It may be desirable to drain the tray before cleaning the tubes. The lid should remain in place during operation. The scale can be removed from the tubes by tapping the end of the tube on the ground and/or rubbing the tube with your hand. Remove all accumulated scale on the air tubes and loose sediment. Cleaning of the tank walls is not necessary unless it interferes with the water flow or flakes off excessively. Cleaning of the tank walls serves no real purpose.

The Stripperator has been designed for easy disassembly to facilitate maintenance. The lid gasket material should never be glued or otherwise permanently sealed.

B. Motor (for blower)

Dirt accumulations can cause the motor to overheat as well as causing a fire hazard. Motors can be cleaned with air jet (wear eye protection). Periodically inspect the installation. Check for dirt accumulations; unusual noises or vibration; overheating; worn or loose couplings; high motor current; poor wiring or overheating connections; loose mounting bolts or guards; and worn motor starter contacts. Ball-bearing motors with lubrication provisions are provided and require periodic re-lubrication.

C. Separator maintenance

The corrugated plate oil/water separator contains no moving parts and the adjustable product draw off elbows is set at the time of start-up; therefore, there is very little maintenance required. Once the separator is put into operation, it should never be allowed to stand dry. If the unit is to be taken out of service or cleaned, the following procedures should be used to minimize the amount of contamination of the outlet side of the unit.

1. Turn the product draw off elbows down to skim off all product.
2. Open the drain valve to remove any sediment and the water in the separator.
(Note: The water in the separator may contain dissolved contaminants and should be dealt with in an appropriate manner.
3. A high pressure water hose may be used to clean sludge from the separator. The packing can be removed for further cleaning and inspection.
4. Replace all packing, close all valves and fill with clean, cold water.

3. OPTIONS

3.1 Transfer Pump (with controls)

The pump is a horizontal sump pump. The transfer pump is controlled by conductivity probe level sensors that signal the pump when to turn off and on. The probes require intrinsically-safe power which is accomplished with the use of an intrinsically safe relay

Probes are also provided to sense a high level in the sump which would cause the system to flood. These probes are located in the same controller as those that signal the pump.

On the transfer pump discharge, a pressure gauge and sample port are provided. The gauge can help diagnose obstructions in the discharge line.

Inspect the condition of the sump pump basin and clean out the bottom as required. This is aided by the easy removal of the hatch on the sump. If sediment is allowed to accumulate at the bottom of basin, the pump will eventually become clogged and undue wear will occur on the pump impeller and housing.

3.2 Air Pressure Alarm

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STRIPPERATOR SA50

The system uses a MKE Stripperator (SA-50), which is an air stripper with an integral oil/water separator. The maximum hydraulic capacity of the SA50 is 50 gpm. The Stripperator SA50 is a complete process treatment unit for hydrocarbon-contaminated water.

Contaminated groundwater and free phase hydrocarbon enter the Stripperator through a coupling located on the side of the separator chamber. Fluid passes through a flow disperser and directly through a foul-resistant coalescing pack. The free phase hydrocarbon coalesces and accumulates in a layer on top of the contaminated water. The water flows by gravity through a water leg into the air stripping chamber. Free phase hydrocarbon, were, present, is removed by and adjustable product effluent weir and flows by gravity into an external product storage tank.

The water from the oil/water separation chamber enters the first of six channels in the stripping chamber. The channels are connected in a continuous serpentine pattern. Fresh air from the blower is introduced through 5/16" holes located in flexible nylon aeration tubes. Each channel contains an aeration tube that distributes air uniformly throughout each channel. Waste air is allowed to pass through a 8" air exhaust port in the top of the air stripping chamber. The contaminants are removed from the water as it flows through the aerated channels. The resulting clean water exits the last channel into the effluent sump.

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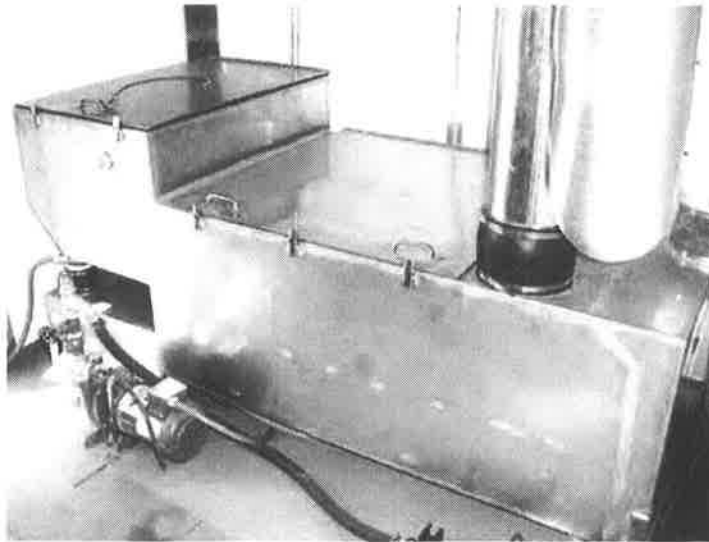
Product Specifications



Environmental Inc.

MK Environmental Inc.
7150 S. Madison Street
Willowbrook, IL. 60527
630-920-1104 Phone
630-920-8013 Fax

STRIPPERATOR SA50



The Stripperator SA50 is a complete process treatment unit for hydrocarbon-contaminated water. It integrates both coalescing oil/water separator and the Cascade low profile Air Stripper into one component. The unit will separate free product, coalesce suspended or colloidal hydrocarbons and settle solids.

- Integrates a coalescing oil/water separator and cascade low profile air stripper and effluent sump into a single component (3 tanks built into 1)
- Gravity flow from oil/water separator to the air stripper (NO PUMP REQUIRED)
- Fully gasketed lids with quick release adjustable latches
- Small footprint
- Fits through a double door – minimal space required
- Easy access to separator and air stripper as well as simple to maintain
- Allows quick inspection and viewing of operation
- Field upgradeable to 2 tray for twice the stripping efficiency
- 15, 20 and 50 GPM capacities
- One or two tray designs

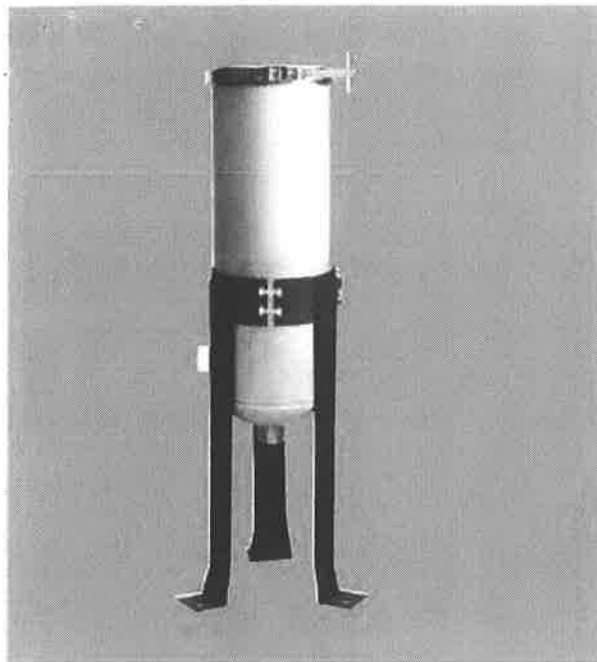
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ELECTRIC CONTROL

- 304 stainless steel interior and exterior
- 150 gallon 304 stainless effluent sump
- Approximate weight = 1,500 lbs.
- 60 micron droplet product removal in OWS
- Cast aluminum air stripper blower wheel
- 5.0 hp, 3 ph, TEFC motor is standard
- Influent 2" FNTF
- 2" FNTF effluent port
- Effluent sump included
- 1" Drain valves included
- 800 SCFM blower
- Hinged, gasketed lid for ease of access and maintenance
- Large sludge holding capacity with bottom drain
- Low maintenance conductivity probe level sensors

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City of Water
(City of Control)



HOUSING OPERATION

Unfiltered liquid enters the housing above the filter bag or strainer basket; fills the interior of the housing and continues through the bag or strainer basket. Solids are trapped inside the filter bag or strainer and are easily removed when the housing is serviced.

HOUSING OPTIONS

- Mesh-lined strainer baskets
- Alternative o-ring materials

BL44, BL88 & BLM88

Single Liquid BAG HOUSINGS

BL44, BL88 and BLM88 Single Liquid Bag Housings effectively remove dirt, pipe scale, and other contaminants from process liquids. Quality construction and design assure protection for all downstream equipment.

APPLICATIONS

- Chemical
- General Industrial
- Oil and Gas
- Water

FEATURES

- Flow rates up to 50 gpm (BL44), 220 gpm (BL88), or 250 gpm (BLM88)
- Four lengths available, 6-, 12-, 15-, and 30-inch, depending upon the required surface area and volume of fluid to be filtered
- Carbon steel and 304 or 316 Stainless Steel material
- Each vessel is factory hydro-tested
- Low pressure drop
- Quick-swing strap band closure
- Buna-N® lid seal
- Differential, drain, and vent ports
- 304 Stainless Steel strainer basket
- Accepts #1, #2, #3, #4 and #12-size bag filters, depending on model
- Two-part epoxy paint finish on carbon vessels
- Adjustable support legs included

SPECIFICATIONS

Pressure Rating	150 PSI at 300° F (up to 500 PSI optional)
Connections	.75-, 1.0-, 1.25-, 1.5-, or 2-inch (NPT) (FLG)
Housing Lid	Quick swing strap band closure
Lid Seal	Buna-N® o-ring
Inlets/Outlets	Side inlet/bottom outlet; side inlet/side outlet
Construction/Finish	Carbon steel w/two-part epoxy finish; 304 or 316 Stainless Steel w/satin finish
Basket Material	304 Stainless Steel with 9/64-inch perforations
Bags Sizes	#1, #2, #3, #4 and #12 liquid bags accepted, depending on model
Base	Adjustable tripod leg assembly standard

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City Division Of Water
Filtration Control



**Pentair
Industrial**

BL44, BL88 & BLM88 Single Bag Housings

ORDERING INFORMATION

Custom configurations available; please contact Customer Service.

		BL44	6	1.25	N	A	C	15
HOUSING	BASKET SIZE (IN.)	CONNECTION SIZE (IN.)	CONNECTION TYPE	OUTLET LOCATION	MATERIAL	PRESSURE RATING (PSI)		
BL44	6 (#3)	0.75	NPT = N	Bottom = A	Carbon = C	150 = 15		
	12 (#4)	1	Flange = F	Side = B	304 SS = 4			
		1.25			316 SS = 6			
		1.50						
		2						

		BL88	15	2	N	A	C	15
HOUSING	BASKET SIZE (IN.)	CONNECTION SIZE (IN.)	CONNECTION TYPE	OUTLET LOCATION	MATERIAL	PRESSURE RATING (PSI)		
BL88	15 (#1)	2	NPT = N	Bottom = A	Carbon = C	150 = 15		
BLM88	30 (#2)	3	Flange = F	Opposite = AB	304 SS = 4			
	30 (#12)*	4			316 SS = 6			

*BLM88 only

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TM Division of Water
Pollution Control



**Pentair
Industrial**

502 Indiana Avenue, Sheboygan, WI 53082-1047

800.869.0325 574.278.7161 FAX 574.278.7115

Section 5: Water Treatment support@pentairindustrial.com www.pentairindustrial.com

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Pollution Control

Notes:

- 1) Vessel will be Hydrostatically Tested at 195 psig.
- 2) No NDE, Heat Treatment or Impact Testing.

This drawing, including all information contained thereon, is the exclusive proprietary property of Kroyal Klear Div. of GMD Inc. It is disclosed with the understanding it will be retained in confidence and will neither be duplicated or copied in whole or in part nor used for any purpose other than that for which disclosed.

APPROVER BY: DATE:

Assembly Number: 2027-BL88301N

DESCRIPTION: BL88301NB415 w/ (1) ke25k2s shipped in Dry Weight (approx.) 35 LBS.

DESIGN CONDITIONS

VESSEL

M.A.W.P. = 150 PSI @ 250 F

M.D.M.T. = 20 F. @ 150 PSI.

Corrosion Allowance = None

Hydro Test = 150 PSI in Vertical Position

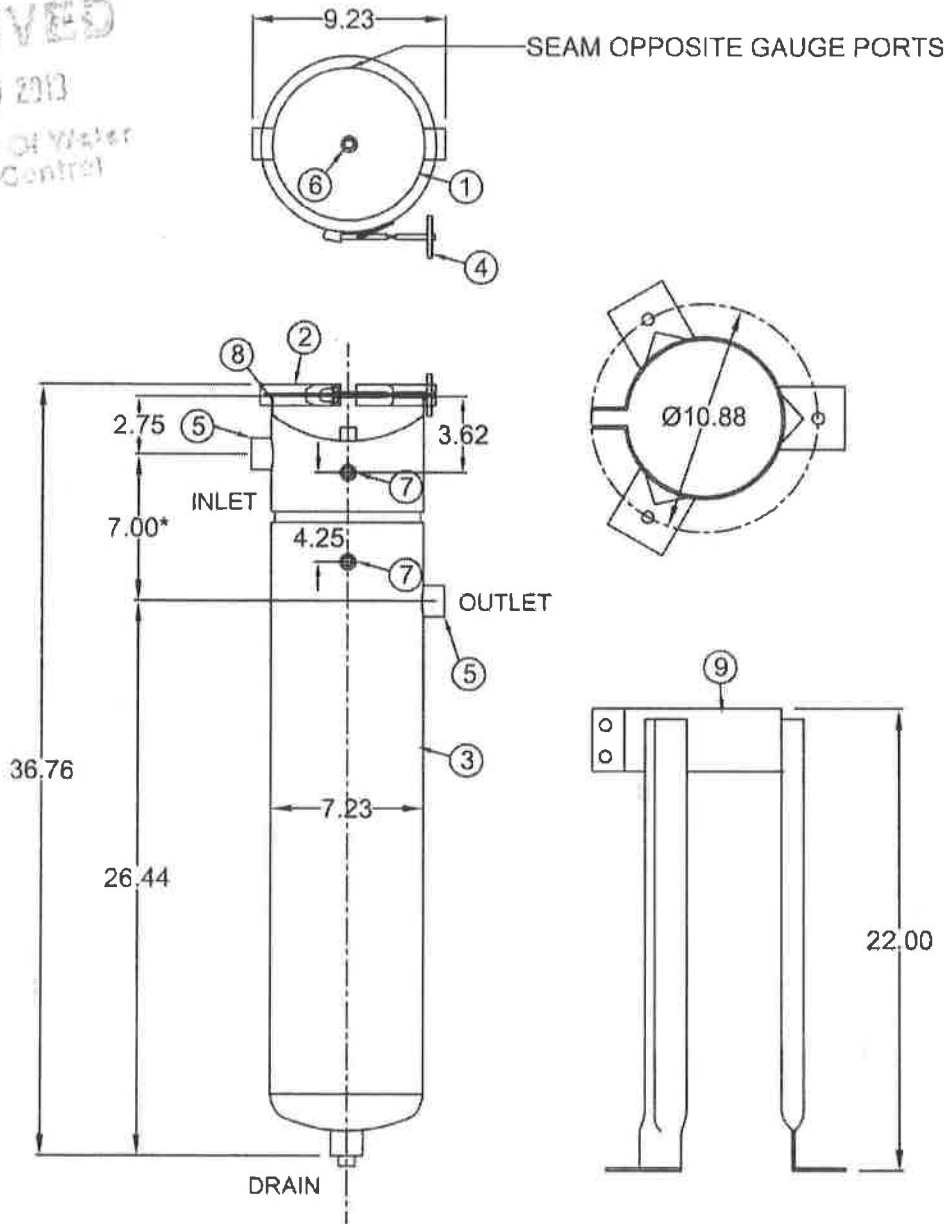
SPECIAL INSTRUCTIONS

Sandblast = clean & pressure wash

PAINT = silver p-coat outside only

Element = Bag

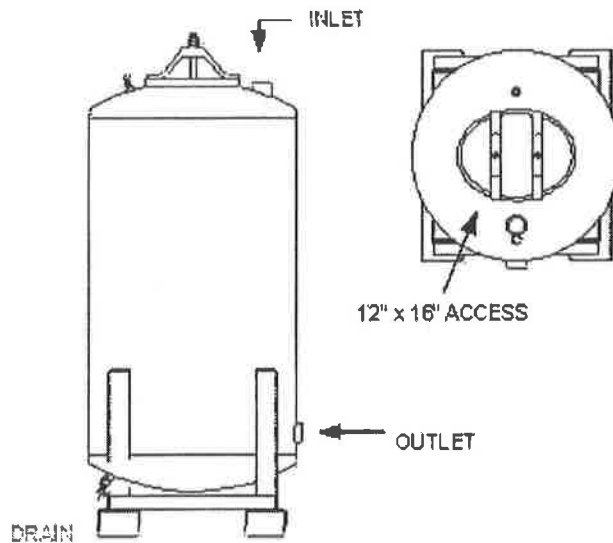
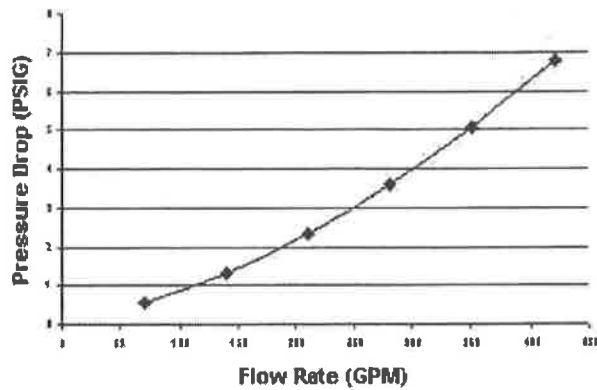
ALL DIMENSIONS ARE APPROXIMATE +/- .25"



1) TOP HEAD: (1) 8", 150#, Inverted Dome Plate 12 Ga. 304SS Part# 32127-2-4	6) VENT CON.: (1) 1/4", 3000#, Threaded Full Coupler w/ Plug, SA-182 Gr. 304	11) BASKET#: BT-B-2-SR-S (Not Shown)
2) CLOSURE BAND: (1) V0236200N-0812-T	7) GAUGE PORT & PLUG: (2) ea. 1/4", 3000# Half Coupler w/Plug SA-182 Gr. 304	12) FILTER BAG: (1) KE25K2S SHIPPED LOOSE
3) SHELL: (1) Rolled Body Seam, Welded 14 Ga. 304SS Part# 32127-1-4	8) GASKET: (1) Buna Lid "O" Ring	
4) HANDLE: T-Handle Nut for Closure Band	9) LEG ASSEMBLY: (1) 7.23" Tri Stand 14 Ga. C/S	
5) IN/OUT CON.: (2) 1" 150#, NPT SA-182 Gr. 304	10) BASKET "O" RING: (1) Part# B88BB (Not Shown)	

PRESSURE DROP GRAPH

(As Filled - 8"30 GAC)



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2

HPAF-1000 SPECIFICATIONS

Overall Height	7'2"	Vessel/Internal Piping Materials	CS (SA-36) / SCH 40 PVC
Diameter	48 36"	Internal Coating	Polyamide Epoxy Resin
Inlet / Outlet (FNPT)	2"	External Coating	Epoxy Mastic
Drain / Vent (FNPT)	1/2" / 1/4"	Maximum Pressure / Temp	75 PSIG / 140° F
GAC Fill (lbs)	2 1,000	Cross Sectional Bed Area	7 FT²
Shipping / Operational Weight (lbs)	1,535/3,295	Bed Depth/Volume	5 FT / 33 FT³



DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER POLLUTION CONTROL
6TH FLOOR, L&C ANNEX, 401 CHURCH ST, NASHVILLE, TN 37243

NOTICE OF INTENT (NOI)

for discharges of treated groundwater associated with
UNDERGROUND STORAGE TANK (UST) REMEDIATION

This application is for: ☐ New Permit ☐ Permit Reissuance ☒ Permit Modification

(If this NOI is submitted for Permit Modification provide the existing permit tracking number: **TNG830086**)

Site Name: Gurkin's #6		County: Fayette	
Street Address or Location: 16595 Highway 64, Somerville, Tennessee 38068		*Latitude:	
UST Site ID Number: 8-240093		*Longitude:	
Attach a site location (topographic) map		<input checked="" type="checkbox"/> Map attached	

Owner or Operator: (the person or legal entity which controls site's operation; this may or may not be the same as the site name or the official contact name)

SCS Environmental Group, LLC

1	Official Contact Person Name: (individual responsible for a site) Shawn Stewart-Pool	Title or Position: President		
	Mailing Address: 114 Bailey Drive	City: Olive Branch	State: MS	Zip: 38654
	Phone: 662-893-6700	E-mail: spool@scsenv.com		
2	Local Contact Person Name: (if appropriate, write "same as #1") George Gurkin	Title or Position: Owner		
	Site Address: (this may or may not be the same as street address) 16595 Highway 64	Site City: Somerville	State: TN	Zip: 38068
	Phone: 901-465-3153	E-mail: N/A		

Write in the box (to the right) or circle the number (above) to indicate where to send correspondence:

1

UST REMEDIATION FACILITY DESCRIPTION

Treated groundwater from site enters following stream(s) and/or lake(s): (for each outfall, give names and stream miles) Town Creek - 0.19 mile from Outfall 001	No. of outfalls: 1
List type of product(s) currently or previously stored in tanks located at the site: Unleaded Gasoline	
Description of contamination, assessment study, extent of contamination, etc. Attach additional pages if necessary. See Attachment	
Description and design capacity of treatment process and facilities. Second Dual-Phase Soil/Groundwater Remediation System - approximately 125 gallons per hour	
Select discharge type (continuous means more than 4 days at a time): <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	
Expected starting date for groundwater treatment, and estimated life of remediation project: November 1, 2009 - Three to Five Years	

CERTIFICATION AND SIGNATURE

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SHAWN STEWART-POOL	PRESIDENT		10-26-09
Printed Name	Official Title	Signature	Date

STATE USE ONLY

Received Date	Reviewer	EFO	NOC Date	Tracking No.
	Impaired Receiving Stream	High Quality Water		TNG83
				T & E Aquatic Fauna

Submit the original of the completed and signed form to:

UST NOI Processing
Tennessee Division of Water Pollution Control
6th Floor L&C Annex, 401 Church Street

UNDERGROUND STORAGE TANK (UST) REMEDIATION NOTICE OF INTENT (NOI) - INSTRUCTIONS

Complete the form Type or print clearly, using black or blue ink; not markers or pencil. Answer each item or enter "N/A," for not applicable. If you need additional space, attach a separate piece of paper to the UST NOI. **Requesting coverage under this permit means that an applicant has obtained and examined a copy of this permit, and thereby acknowledges applicant's ability to be in compliance with permit terms and conditions.** This permit is required for discharges of effluent from the treatment of groundwater that has been contaminated by petroleum from an underground storage tank to surface waters. This form should be submitted at least 30 days prior to the commencement of operation of the UST remediation facility.

Permittee Identification/Facility Identification Describe and identify the project location, use the legal or official name of the facility or site. ***Provide the latitude and longitude, expressed in decimal degrees**, of the center of the site, which can be located on USGS quadrangle maps. Attach a copy of a portion of a 7.5 minute quad map, showing location of site, with boundaries at least one mile outside the site boundaries.

Give the name(s) of receiving waters Trace the route of effluent discharge runoff from the site and determine the name of the river(s), stream(s), creek(s), wetland(s), lake(s) or any other water course(s) into which the storm water drains. Note that the receiving water course may or may not be located on the site. If the first water body receiving discharge is unnamed ("unnamed tributary"), determine the name of the water body which the unnamed tributary enters.

Submitting the form Note that this form must be signed by the company President, Vice-President, or a ranking elected official in the case of a municipality, for details see subpart 7.7 of the general permit. Submit the completed NOI form (keep a copy for your records) to the division at the following address:

UST NOI Processing
Division of Water Pollution Control
6th Floor L & C Annex
401 Church Street
Nashville, TN 37243

Notice of Coverage The division will review the NOI for completeness and accuracy and transmit to the permittee a Notice of Coverage (NOC).

Obtaining more information/assistance For more information or assistance, contact your local Environmental Field Office (EFO), toll-free, at 1-888-891-8332 (TDEC) or at the number listed below.

EFO	Street Address	City	Zip Code	Telephone
Chattanooga	540 McCallie Avenue STE 550	Chattanooga	37402	(423) 634-5745
Columbia	2484 Park Plus Drive	Columbia	38401	(931) 380-3371
Cookeville	1221 South Willow Ave.	Cookeville	38506	(931) 432-4015
Jackson	1625 Hollywood Drive	Jackson	38305	(731) 512-1300
Johnson City	2305 Silverdale Road	Johnson City	37601	(423) 854-5400
Knoxville	3711 Middlebrook Pike	Knoxville	37921	(865) 594-6035
Memphis	2510 Mt. Moriah Road STE E-645	Memphis	38115	(901) 368-7939
Nashville	711 R S Gass Boulevard	Nashville	37216	(615) 687-7000

SITE OVERVIEW

The Gurkin's # 6 service station (subject site) is located at 16595 Highway 64 in Somerville, Fayette County, Tennessee. The site is currently equipped with two 10,000 gallon UST's and one 6,000 gallon UST containing various grades of gasoline. In addition, the site is developed with four gasoline dispenser islands with a fueling canopy and a convenience store.

On May 10, 2005, liquid phase hydrocarbons (LPH) were discovered in the northeast and northwest observation wells located in the underground storage tank (UST) tankfield at thicknesses of 0.21 foot and 0.15 foot, respectively, during a compliance inspection conducted by Mr. Chuck Nance of the Tennessee Department of Environment and Conservation (TDEC).

As a result, the LPH was pumped from the two observation wells utilizing a hand pump. On July 21, 2005, LPH was measured at thicknesses of 0.18 foot and 0.05 foot in the northeast and northwest observation wells, respectively. The wells were then equipped with a high pressure air system and the water and LPH were extracted from the wells in fifteen minute increments over a four hour period. The water and LPH were captured in a 55-gallon drum.

On July 22, 2005, a clean disposable bailer was used to bail the groundwater and residual LPH from the northeast and northwest observation wells until dryness was achieved. Groundwater and any residual LPH was allowed to recharge into the wells and the process was repeated on a daily basis through August 11, 2005. All of the LPH and purge water was placed into a 55-gallon drum.

From August 2005 through November 2005, the observation wells were monitored on a monthly basis. LPH was observed at thicknesses ranging from not detected to 0.36 foot in the two northern observation wells, while no LPH was measured in the two southern observation wells until the November 30, 2005 gauging event.

The TDEC was notified of the suspected release on September 28, 2005. On October 28, 2005, no LPH was measured in any of the observation wells and the daily purging of the LPH was again suspended.

On November 30, 2005, LPH was measured in the northeast, southeast, and southwest observation wells at thicknesses ranging from 0.01 foot to 0.05 foot. This event marked the first appearance of LPH in the southeast and southwest observation wells. In addition, the Initial Abatement Report (IAR) was submitted on November 30, 2006.

On November 21 and 22, 2005, four monitor wells (MW-1 through MW-4) were installed under SCS supervision to determine if the soil and groundwater beneath the subject site had been impacted by the LPH present in the UST tankfield. Soil samples were collected from various depth intervals and submitted for laboratory analyses of benzene, toluene, ethylbenzene, and total xylenes (BTEX), methyl tertiary butyl ether (MTBE), and naphthalene by EPA Method 8260B. The laboratory analyses of the soil samples submitted indicated benzene concentrations ranging from not detected above method detection limits to 1.34 milligrams per kilogram (mg/kg), toluene concentrations ranging from not detected to 25.2 mg/kg, ethylbenzene concentrations ranging from not detected to 17.9 mg/kg, total xylenes concentrations ranging from not detected to 89.4 mg/kg, MTBE concentrations ranging from not detected to 0.289 mg/kg, and naphthalene concentrations ranging from not detected to 6.95 mg/kg. The soil

sample collected from boring MW-3 at the 26.0 foot depth interval exhibited benzene and total xylenes concentrations above the risk based cleanup levels (RBCLs) for indoor inhalation by a commercial worker.

On December 1, 2005, a comprehensive groundwater sampling event was conducted and groundwater samples were collected from wells MW-1, MW-2, and MW-4 and submitted for laboratory analyses of BTEX, MTBE, and naphthalene. The analytical results indicated benzene concentrations ranging from 0.836 milligrams per liter (mg/L) to 9.28 mg/L, toluene concentrations ranging from 0.0776 mg/L to 10.9 mg/L, ethylbenzene concentrations ranging from 0.347 mg/L to 0.659 mg/L, total xylenes concentrations ranging from 0.382 mg/L to 4.02 mg/L, MTBE concentrations ranging from not detected above method detection limits to 0.371 mg/L, and naphthalene concentrations ranging from 0.0880 mg/L to 0.173 mg/L. Benzene, naphthalene, and MTBE concentrations detected in the groundwater samples collected from wells MW-1 through MW-4, toluene concentrations detected in the groundwater samples collected from wells MW-2 and MW-4, and total xylenes concentrations detected in the groundwater sample collected from well MW-2 exceeded the RBCLs for ingestion of groundwater by a residential child. On the day of the sampling event, 1.93 feet of LPH was measured in well MW-3 and no groundwater sample was collected. It should be noted that unlike the very dark and weathered LPH present in the UST tankfield observation wells, the LPH in well MW-3 was observed to be pale golden in color and did not exhibit evidence of weathering.

On January 6, 2006, a groundwater sample was collected from well MW-4 and submitted for laboratory analyses of iron and manganese. The analytical results indicated an iron concentration of 77.881 mg/L and a manganese concentration of 6.699 mg/L which exceed the TDEC Drinking Water Standards of 0.30 mg/L and 0.05 mg/L, respectively.

Per the request of the TDEC, the LPH was purged from well MW-3 and a groundwater sample was collected on January 6, 2006, to determine the source area constituent of concern (COC) concentrations in groundwater. The analytical results indicated a benzene concentration of 14.6 mg/L, a toluene concentration of 35.1 mg/L, an ethylbenzene concentration of 3.35 mg/L, a total xylenes concentration of 19.4 mg/L, an MTBE concentration of 0.396 mg/L, and a naphthalene concentration of 0.631 mg/L, which all exceed the RBCL values for ingestion by a residential child.

On March 21, 2006, a Mobile Enhanced Multi-phase Extraction (MEME) event was conducted at the subject site. Well MW-3 and the four tankfield observation wells were used as extraction points. According to the MEME results, LPH was detected in well MW-3 at a thickness of 1.47 feet and in the northeast observation well at a thickness of 0.07 foot, while no LPH was detected in any of the remainder of the monitor and/or observation wells on the day of the event. A total of 530 pounds of carbon, which is the equivalent of 100 gallons of gasoline and 606 pounds of petroleum hydrocarbons, was removed during this event. Approximately 1,974 gallons of fluids (including 110 gallons of purge water) were measured in the vacuum truck upon completion of the event and were transported to Classic Petroleum, located in Selmer, Tennessee, for disposal.

On July 14, 2006, SCS submitted an Exposure Assessment Report to the TDEC requesting the following site specific cleanup levels (SSCLs) for soil and groundwater:

CHEMICALS OF CONCERN	Maximum Groundwater Concentration (ppm)	Maximum Soil Concentration (ppm)
Benzene	0.383	4.24
Toluene	24.6	62.5
Ethylbenzene	10.3	1,320
Total Xylenes	20.6	98.2
MTBE	175	366
Naphthalene	9.81	403

In a letter dated November 21, 2006, the TDEC approved the requested SSCLs and, based upon the exceedance of the SSCLs for benzene and toluene in groundwater and the presence of LPH, requested that an option for corrective action be selected of the site.

Based upon the laboratory results from the December 2005 comprehensive groundwater sampling event, the TDEC approved a request to install two additional monitor wells in order to define the hydrocarbon plume to the west and south of the subject site. However, attempts to obtain offsite access for the installation of the monitor wells were not successful until February 2007, following the intervention of the TDEC.

While awaiting offsite access for the installation of the two additional monitor wells, two mobile enhanced multi-phase extraction (MEME) events were conducted at the site on March 21, 2006, and January 30, 2007. Cumulative totals of 1,122 pounds of carbon and 3,778 gallons of extracted fluids were removed during the two MEME events.

On February 12, 2007, SCS installed wells MW-5 and MW-6 at the subject site. Well MW-5 was installed in the parking lot of the Hair Gallerie located across Highway 64 to the south of the site. Well MW-6 was installed in the parking area at the southwest corner of the site west of the tankfield.

On February 20, 2007, comprehensive groundwater samples were collected and analyzed for BTEX, MTBE, and naphthalene by EPA Method 8260B and PAHs by EPA Method 8270c/sim. Groundwater levels were measured in all monitor and observation wells and samples were collected from wells MW-1 through MW-6. Analytical results indicated benzene, toluene, ethylbenzene, total xylenes, and 2-methylnaphthalene (PAH) concentrations in all of the wells sampled. MTBE concentrations were detected above method detection limits in the groundwater samples collected from wells MW-2, MW-3, and MW-4. Naphthalene concentrations were detected above method detection limits in the groundwater samples collected from wells MW-1, MW-4, and MW-6. In addition, PAH concentrations were detected above method detection limits in wells MW-1 (acenaphthene, benzo[a]pyrene, chrysene, and pyrene), MW-3 (acenaphthene and pyrene), MW-4 (acenaphthene), and MW-5 (anthracene and phenanthrene).

In a letter dated May 9, 2007, the TDEC requested that a Corrective Action Plan be prepared and submitted for the site. Due to the presence of LPH and the location of underground utilities across the site, excavation of impacted soils is not a viable option for corrective action. Therefore, at the direction of the TDEC, it was determined that a CAS would be installed at this site for corrective action purposes.

In July 2008, SCS began recovery well installations, trenching, and system piping and pad installations at the site. The remediation system was delivered on August 12, 2008. Upon completion of system connections to the recovery wells, delivery of electrical service, and the construction of a compound to house the system, the TDEC directed SCS to conduct a baseline comprehensive monitoring event at the site prior to system start-up.

On October 8, 2008, fluid levels were measured in all recovery, monitor, and observation wells and samples were collected from wells MW-1 through MW-6 and observation well OW-SW. The samples were submitted for BTEX, MTBE, and naphthalene by EPA Method 8260B and polycyclic aromatic hydrocarbons (PAHs) by 8270SIM.

Upon completion of the baseline monitoring event, SCS and TDEC personnel supervised the system start-up of the DPVE system on the morning of October 10, 2008. At 9:26 p.m. in the evening on October 10, 2008, SCS was contacted by the Fayette County Emergency Management Agency (FCEMA) and notified that hydrocarbon vapors were emanating from storm drain being used to discharge treated effluent. This discharge to the storm drain is permitted per a National Pollutant Discharge Elimination System (NPDES) permit obtained from the TDEC, Division of Water Pollution Control (DWPC). SCS personnel arrived onsite at 10:26 p.m. and shut down the system. The response required SCS to work in conjunction with the Somerville Fire Department and FCEMA to inspect, assess, and remediate the release, which was contained in the storm sewer system. SCS used a vacuum truck and steam cleaner to remove the residual hydrocarbons from the sewer from the concrete drainage area to ensure that the potential for vapor problems had been eliminated. Upon completion of the clean-up, FCEMA inspected the site on October 11, 2008, and determined that all hazards had been abated to the maximum extent feasibly possible. On October 14, 2008, SCS submitted an Incident Report to TDEC-DWPC and TDEC-UST detailing the event and the clean-up procedures.

Following this incident, it was determined the system recovered approximately 500 gallons of LPH in a 12 hour period. An inspection of the DPVE system by SCS and system manufacturer MK Environmental determined that the system was not capable of handling the volume of LPH being pumped from the subsurface. In addition, the amount of LPH present in recovery wells MW-3 and MW-6 had increased to more than five feet in the estimated 12 hours following

system startup. As such, additional assessment activities were required to delineate the extent of LPH and determine if off-site sources were an issue.

Following the startup incident and during this assessment process, the system remained inactive, while plans were initiated to upgrade the system. A 21,000-gallon heavy duty vertical storage tank (frac tank) was delivered to the site on October 29, 2008 and connected to the effluent piping. This retrofit enabled SCS to "pump and hold" recovered fluids, allowing for observations of the system operation to determine flow rates, LPH content, and dissolved hydrocarbon concentrations of the fluids being pumped from the subsurface and through the DPVE system, without actually discharging to the storm sewer. SCS, the TDEC, and MK Environmental personnel met onsite to perform testing and to discuss possible resolutions to the situation in November 2008.

Following these meetings, three carbon vessels were transferred to the Gurkin's location from another UST site and added to the off-gas effluent. In addition, a series of bag filters, an additional oil/water separator tray, and carbon vessels were added to treat and process the effluent water discharge. In addition, switches, floats, and alarms were replaced and adjusted within the system to account for the LPH and to prevent by-pass conditions.

Following offsite access negotiations, a total of five additional monitor wells were installed to delineate the extent of the LPH and dissolved hydrocarbon plume(s). In November 2008 and February 2009, one well was installed on each of the following properties: well MW-8 on the Reuben Rhea property (BP service station) to the south across Highway 64; well MW-9 on the Allen Yancy (Pro-Shine/former service station) to the west; well MW-10 on the Robert Doll (former service station) to the east; and well MW-11 on the Connie Wright property (apartment complex) to the north. In addition, well MW-7 was installed to the south of onsite well MW-1 to delineate the onsite LPH plume located along the right-of-way of Highway 64. A report summarizing the well installation activities

was submitted to the TDEC on June 22, 2009.

On February 11, 2009, SCS conducted a step test at the site using the retrofit DPVE system, frac tank, and sample parts, with the approval of the TDEC. The step test was conducted to determine the rate at which the DPVE system could effectively treat the LPH and high dissolved hydrocarbon concentrations without discharging LPH or treated water above the permit limits through the effluent discharge line. Each step test was run for one hour after a stabilized flow rate was established. The third step test could not be completed on February 11, 2009, due to a float switch in the air/water separator. SCS repaired this problem and attempted to run the system at full capacity. However, SCS could not get a stabilized flow and maintain the system operations in the late afternoon hours due to a faulty float switch. On February 12, 2009, the testing revealed the remediation system would shut down at flow levels higher than 20 gallons per minute (gpm) after five to 15 minutes following the establishment of the flow rate. The test results indicated the remediation system and the bag and carbon filter upgrades were effectively removing dissolved hydrocarbons at concentrations sufficient to meet the NPDES discharge permit parameter requirements. However, this testing was performed after the free product had been skimmed from the frac tank. The results of the step test were submitted in a letter to the TDEC dated March 5, 2009.

Following this step test, the remediation system was repiped to allow for discharge to be redirected to the storm drain. In addition, the frac tank was "hard piped" to the remediation system, while sensor and telemetry upgrades were made to allow for monitoring of the frac tank system.

Also on February 11, 2009, a soil delineation event was conducted around the dispenser islands of the Gurkin's site. A total of six soil borings (GP-1 through GP-6) were advanced and soil samples collected. A report summarizing the results of the assessment was submitted to the TDEC on June 22, 2009.

At the request of the TDEC, SCS conducted a second comprehensive monitoring event on February 19, 2009 that included 12 monitor, recovery, and observation wells. SCS requested that the comprehensive groundwater samples collected be analyzed for total petroleum hydrocarbons (TPH) for gasoline range organics (GRO) and diesel range organics (DRO), along with BTEX, MTBE, and naphthalene by EPA Method 8260B. Groundwater levels were measured in all recovery, monitor, and observation wells and samples were collected from wells MW-1 through MW-11 and observation well OW-SW.

The remediation system was started on April 13, 2009. Whole Effluent Toxicity (WET) testing was conducted on April 28 through April 30, 2009, and on May 26 through May 28, 2009. Laboratory test results were all within the limits established by the NPDES permit. Effluent discharge sampling was also conducted on May 5 and June 8, 2009, and submitted to the laboratory for BTEX, MTBE, naphthalene, total lead, total suspended solids and pH analyses. No BTEX, MTBE, naphthalene, or total lead concentrations were detected above method detection limits in the samples collected. In addition, total suspended solids and pH results were within the NPDES permit parameters.

The proposed second CAS selected for this site is a soil-vapor extraction system utilizing a liquid ring vacuum pump to extract hydrocarbon vapors, LPH, and groundwater from the soils surrounding the extraction points/recovery wells at the site. The CAS will remove LPH from the extracted fluids by way of an oil-water separator and the LPH will be stored in a holding tank until it is removed from the site by a TDEC-approved transport and disposal contractor. SCS proposes to discharge treated groundwater into the storm sewer drain located on the property of the Gurkin's #6 facility that is currently used as the outfall for the existing CAS.

According to Tommy Harris of the Town of Somerville Department of Public Works, the storm sewer drain at the subject site flows northwesterly approximately 1,000 feet to Town Creek. Mr. Harris further stated that Town Creek flows to the north to the Loosahatchie River.

A site map showing monitor well locations, the location of the existing system, the location of the proposed second system, and the specific discharge location is presented as **Figure 1**. Groundwater analytical results are summarized in **Table 1**.



SCALE IN FEET

0 60

ROADWAY ENDS

DRAINAGE DITCH
DITCH:
CLAY WALLS
AND FLOOR

CULVERT

USED
OIL
TANK

OE

S

GRASS
AREA

URAL
NAGE

LEGEND :

MW ○ = MONITOR WELL

OW ⊙ = OBSERVATION WELL

GP □ = GEOPROBE BORING

—x—x— = FENCE LINE

G = GAS

W = WATER MAIN

PL = PRODUCT LINES

SS = STORM SEWER

LP = LIGHT POLE

PP = POWER POLE

VL = VENT LINES

OE = OVERHEAD ELECTRIC

SCS

ENVIRONMENTAL GROUP, LLC

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FIGURE

1

TABLE 3A
SUMMARY of GROUNDWATER ANALYSES
GURKIN'S # 8
16595 HIGHWAY 64
SOMERVILLE, TENNESSEE
TN FACILITY I.D. NO. 8-240093

Well Boring No.	Date	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/L)	Total Xylenes (mg/L)	Total BTEX (mg/L)	MTBE (mg/L)	Naphthalene (mg/L)	TPH (GRO) (mg/L)	TPH (DRO) (mg/L)	TOTAL TPH (GRO & DRO) (mg/L)
MW-1	12/01/05	0.838	0.0776	0.347	0.382	1.6426	<0.0100	0.0880	NT	NT	NT
	01/06/06	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT
	02/20/07	0.714	0.0337	0.146	0.170	1.0637	<0.00500	0.121	NT	NT	NT
	10/08/08	4.03	1.97	1.06	2.86	9.92	<0.0100	0.168	NT	NT	NT
	02/19/09	2.34	0.0916	0.380	0.517	3.3286	0.0530	0.0734	8.86	0.897	9.757
MW-2	12/01/05	9.28	10.9	0.659	4.02	24.859	0.0442	0.169	NT	NT	NT
	01/06/06	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT
	02/20/07	23.6	29.6	2.08	12.2	67.48	0.308	<1.00	NT	NT	NT
	10/08/08	9.50	12.2	0.642	4.28	26.622	<0.100	<0.500	NT	NT	NT
	02/19/09	23.0	28.7	1.78	10.1	63.58	0.387	0.221	123	2.69	125.69
MW-3	12/01/05	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	01/06/06	14.6	35.1	3.35	19.4	72.45	0.396	0.631	NT	NT	NT
	02/20/07	24.6	39.2	3.30	19.2	86.30	0.697	<1.00	NT	NT	NT
	10/08/08	58.7	90.6	6.10	34.6	190.0	1.12	0.848	NT	NT	NT
	02/19/09	25.4	62.8	11.3	72.6	172.1	0.307	1.63	210	72.7	282.7
MW-4	12/01/05	5.45	6.80	0.528	2.91	15.688	0.355	0.127	NT	NT	NT
	01/06/06	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT
	02/20/07	15.5	19.8	1.87	9.83	47.00	1.35	<1.00	NT	NT	NT
	10/08/08	23.6	39.7	6.89	34.7	104.89	1.27	<1.00	NT	NT	NT
	02/19/09	14.3	20.0	1.63	8.46	44.39	0.808	0.241	86.4	3.10	89.50
MW-4(DUP)	02/20/07	15.7	19.5	1.92	9.99	47.11	1.17	0.570	NT	NT	NT
	02/19/09	13.9	18.4	1.62	8.46	42.38	0.873	<0.250	103	3.40	106.40
MW-5	02/20/07	1.25	2.32	0.258	1.38	5.208	<0.0200	<0.100	NT	NT	NT
	10/08/08	10.6	47.8	6.75	45.5	110.65	<0.500	3.08	NT	NT	NT
	02/19/09	6.00	30.9	5.17	35.5	77.57	<0.0500	0.858	295	156	451
MW-6	02/20/07	35.6	50.0	5.27	29.9	120.77	<0.200	1.53	NT	NT	NT
	10/08/08	72.1	168	27.4	158	425.5	<2.00	<10.0	NT	NT	NT
	02/19/09	32.2	51.0	4.16	24.1	111.46	0.0769	0.623	202	293	495
MW-7	02/19/09	14.2	48.4	10.7	56.2	127.5	<0.0200	2.33	672	1630	2302
MW-8	02/19/09	24.9	58.1	29.7	171	283.7	<0.0200	1.96	104	2220	2324
MW-9	02/19/09	11.5	35.7	2.93	20.8	70.93	<0.0200	0.449	150	131	281
MW-10	02/19/09	<0.00100	<0.00500	<0.00100	<0.00100	ND	<0.00100	<0.00500	<0.100	0.0968	0.0968
MW-11	02/19/09	11.9	9.61	1.18	6.81	29.50	0.337	<0.250	77.8	1.73	79.53
OW-SW	10/08/08	4.04	5.34	2.69	17.5	29.57	<0.0200	1.45	NT	NT	NT
	02/19/09	0.534	0.862	0.791	6.74	8.927	<0.0100	0.786	27.0	18.7	45.7
TDEC SSCLs		0.383	24.6	10.3	20.6	--	175.0	9.81			

BOLD = indicates concentrations above TDEC SSCLs

SSCLs = site specific Clean-up Levels

MW = monitor well

ND = not detected

mg/L = milligrams per Liter

SB = soil boring

(DUP) = duplicate sample for QA/QC

MTBE = methyl tertiary butyl ether

NT = not tested

TABLE 3B
SUMMARY OF GROUNDWATER ANALYSES - PAHs
GURKIN'S # 6
16595 HIGHWAY 64
SOMERVILLE, TENNESSEE
TN FACILITY I.D. NO. 8-240093

Well Boring No.	Date	Acenaphthene	Anthracene	Benzo(a)anthracene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Benzo(a)pyrene	Chrysene	Fluoranthene	Fluorene	2-Methyl-naphthalene	Phenanthrene	Pyrene
MW-1	12/01/05	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
	01/06/06	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
	02/20/07	0.000503	<0.000200	0.000956	<0.000200	<0.000200	<0.000200	<0.000200	0.000291	<0.000200	<0.000200	0.00675	<0.000200	0.000214
	10/08/08	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
MW-2	02/19/09	<0.000204	<0.000204	<0.000204	<0.000204	<0.000204	<0.000204	<0.000204	<0.000204	<0.000204	<0.000204	0.0182	<0.000204	<0.000204
	12/01/05	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
	01/06/06	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
	02/20/07	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.0317	<0.000200	<0.000200
MW-3	10/08/08	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
	02/19/09	0.000216	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.0618	<0.000200	<0.000200
	12/01/05	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
	01/06/06	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
MW-4	02/20/07	0.0155	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	0.522	<0.000800	0.00920
	10/08/08	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
	02/19/09	0.00958	0.00236	0.00158	0.000558	0.000385	0.00124	0.000791	0.00180	0.00538	0.0121	3.09	0.0259	0.00986
	12/01/05	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
MW-4(DUP)	01/06/06	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
	02/20/07	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.0457	<0.000200	<0.000200
	10/08/08	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
	02/19/09	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.0631	<0.000200	<0.000200
MW-5	02/20/07	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.0415	<0.000200	<0.000200
	02/19/09	<0.000201	<0.000201	<0.000201	<0.000201	<0.000201	<0.000201	<0.000201	<0.000201	<0.000201	<0.000201	0.0563	<0.000201	<0.000201
	02/20/07	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.00497	<0.000200	<0.000200
	10/08/08	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
MW-6	02/19/09	0.00705	0.00165	0.00109	0.000426	<0.000200	0.000495	0.000426	0.00120	0.00354	0.00934	2.37	0.0173	0.00592
	02/20/07	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.212	<0.000200	<0.000200
	10/08/08	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
	02/19/09	0.00708	0.00152	0.000710	0.000480	<0.000200	0.000500	0.000410	0.000960	0.00316	0.00985	3.39	0.0169	0.00537
MW-7	02/19/09	0.173	0.0592	0.0408	0.0214	<0.000200	0.0204	0.0367	0.0571	0.111	0.256	52.6	0.534	0.211
	02/19/09	0.158	0.0588	0.0299	<0.000200	<0.000200	<0.000200	<0.000200	0.0309	0.0857	0.209	65.2	0.465	0.164
	02/19/09	0.00162	0.000559	0.000270	<0.000200	<0.000200	<0.000200	<0.000200	0.000240	0.000679	0.00189	0.626	0.00320	0.00111
	02/19/09	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.0000310	<0.000200	0.0000810B	0.0000400	0.0000270
MW-11	02/19/09	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	0.0778	<0.000203	<0.000203
	02/19/09	0.00310	0.000860	0.000460	0.000630	<0.000200	<0.000200	0.000560	0.000260	0.00130	0.00465	0.553	0.00755	0.000257
	02/19/09	0.00310	0.000860	0.000460	0.000630	<0.000200	<0.000200	0.000560	0.000260	0.00130	0.00465	0.553	0.00755	0.000257
	02/19/09	0.00310	0.000860	0.000460	0.000630	<0.000200	<0.000200	0.000560	0.000260	0.00130	0.00465	0.553	0.00755	0.000257
TDEC RBCLs		0.939	0.0434	0.00117	0.00117	0.0008	0.0007	0.0002	0.0016	0.206	0.626	NA	0.469	0.135

* = Increased detection limits due to dilution
B = Analyte detected in the associated method blank

PAHs = polycyclic aromatic hydrocarbons
BOLD = indicates concentrations above TDEC RBCLs

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October 27, 2009

"Partners with Industry in Preserving Our World"

Ms. Maylynne Pynkala
Tennessee Department of Environment
and Conservation
Division of Underground Storage Tanks
2510 Mt. Moriah, Suite E-645
Memphis, Tennessee 38115-1520



**RE: Permit Modification Application – NPDES Permit No. 830086
Gurkin's #6
16595 Highway 64
Somerville, Fayette County, Tennessee
TN Facility I.D. No. 8-240093**

Dear Ms. Pynkala:

On behalf of George Gurkin, SCS Environmental Group, LLC (SCS), is submitting the attached Notice of Intent (NOI) application for the modification of National Pollutant Discharge Elimination System (NPDES) Permit No. 830086 for the discharge of treated groundwater associated with underground storage tank (UST) remediation at the above-referenced site. This modification is being requested because a second dual-phase vapor extraction (DPVE) is being added to address the liquid phase hydrocarbon and dissolved phase hydrocarbon plumes at the site. The added DPVE system will extract fluids from the same hydrocarbon plume as the first DPVE system activated on April 13, 2009. In addition, groundwater treated by the added system is proposed to be discharged to the same outfall being used for the discharge from the first DPVE system.

If you have any questions or require additional information, please call me at (662) 893-6700.

Sincerely,
SCS Environmental Group, LLC

William A. Spieer
Senior Environmental Specialist

Attachments

cc: Charles Gurkin
Sharon Harrison – TDEC/Memphis
Technical Review Section – TDEC/Nashville
SCS (file) – Gurkin's #6



DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER POLLUTION CONTROL
6TH FLOOR, L&C ANNEX, 401 CHURCH ST, NASHVILLE, TN 37243

NOTICE OF INTENT (NOI)
for discharges of treated groundwater associated with
UNDERGROUND STORAGE TANK (UST) REMEDIATION

This application is for: ☐ New Permit ☒ Permit Reissuance ☐ Permit Modification

(If this NOI is submitted for Permit Modification provide the existing permit tracking number: **TNG830086**)

Site Name: Gurkin's #6		County: Fayette	
Street Address or Location: 16595 U.S. Highway 64, Somerville, TN		*Latitude: 35° 14' 37"	*Longitude: 89° 21' 9.66"
UST Site ID Number:		Attach a site location (topographic) map <input type="checkbox"/> Map attached	
Owner or Operator: (the person or legal entity which controls site's operation; this may or may not be the same as the site name or the official contact name) SCS Environmental Group, LLC			
1	Official Contact Person Name: (individual responsible for a site) Mr. Shawn Stewart-Pool	Title or Position: President	
	Mailing Address: 114 Bailey Drive	City: Olive Branch	State: MS Zip: 38654
	Phone: 662-893-6700	E-mail: spool@scsenv.com	
2	Local Contact Person Name: (if appropriate, write "same as #1") CHARLES GURKIN	Title or Position: OWNER	
	Site Address: (this may or may not be the same as street address) 16595 U.S. HIGHWAY 64	Site City: SOMERVILLE	State: TN Zip: 38068
	Phone: 901-877-3313	E-mail: N/A	

Write in the box (to the right) or circle the number (above) to indicate where to send correspondence:

1

UST REMEDIATION FACILITY DESCRIPTION

Treated groundwater from site enters following stream(s) and/or lake(s): (for each outfall, give names and stream miles) TOWN CREEK - 0.19 MILE FROM OUTFALL 001	No. of outfalls: 1
List type of product(s) currently or previously stored in tanks located at the site: UNLEADED GASOLINE	
Description of contamination, assessment study, extent of contamination, etc. Attach additional pages if necessary. SEE ATTACHMENT	
Description and design capacity of treatment process and facilities. DUAL-PHASE / SOIL - GROUNDWATER REMEDIATION SYSTEM 3.5 GALLONS PER HOUR	
Select discharge type (continuous means more than 4 days at a time): <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	
Expected starting date for groundwater treatment, and estimated life of remediation project: FEBRUARY 15, 2008 - TWO YEARS	

CERTIFICATION AND SIGNATURE

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.		
SHAWN STEWART-POOL Printed Name	PRESIDENT Official Title	11-29-07 Date

STATE USE ONLY

Received Date	Reviewer	EFO Memphis	NOC Date	Tracking No. TNG830086
	Impaired Receiving Stream	High Quality Water	T & E Aquatic Fauna	

Submit the original of the completed and signed form to:

UST NOI Processing
Tennessee Division of Water Pollution Control
6th Floor L&C Annex 401 Church Street

UNDERGROUND STORAGE TANK (UST) REMEDIATION NOTICE OF INTENT (NOI) - INSTRUCTIONS

Complete the form Type or print clearly, using black or blue ink; not markers or pencil. Answer each item or enter "N/A," for not applicable. If you need additional space, attach a separate piece of paper to the UST NOI. **Requesting coverage under this permit means that an applicant has obtained and examined a copy of this permit, and thereby acknowledges applicant's ability to be in compliance with permit terms and conditions.** This permit is required for discharges of effluent from the treatment of groundwater that has been contaminated by petroleum from an underground storage tank to surface waters. This form should be submitted at least 30 days prior to the commencement of operation of the UST remediation facility.

Permittee Identification/Facility Identification Describe and locate the project, use the legal or official name of the facility or site. ***Provide the latitude and longitude, expressed in decimal degrees,** of the center of the site, which can be located on USGS quadrangle maps. Attach a copy of a portion of a 7.5 minute quad map, showing location of site, with boundaries at least one mile outside the site boundaries.

Give the name(s) of receiving waters Trace the route of effluent discharge runoff from the site and determine the name of the river(s), stream(s), creek(s), wetland(s), lake(s) or any other water course(s) into which the storm water drains. Note that the receiving water course may or may not be located on the site. If the first water body receiving discharge is unnamed ("unnamed tributary"), determine the name of the water body which the unnamed tributary enters.

Submitting the form Note that this form must be signed by the company President, Vice-President, or a ranking elected official in the case of a municipality, for details see subpart 7.7 of the general permit. Submit the completed NOI form (keep a copy for your records) to the division at the following address:

UST NOI Processing
Division of Water Pollution Control
6th Floor L & C Annex
401 Church Street
Nashville, TN 37243

Notice of Coverage The division will review the NOI for completeness and accuracy and transmit to the permittee a Notice of Coverage (NOC).

Obtaining more information/assistance For more information or assistance, contact your local Environmental Field Office (EFO), toll-free, at 1-888-891-8332 (TDEC) or at the number listed below.

EFO	Street Address	City	Zip Code	Telephone
Chattanooga	540 McCallie Avenue STE 550	Chattanooga	37402	(423) 634-5745
Columbia	2484 Park Plus Drive	Columbia	38401	(931) 380-3371
Cookeville	1221 South Willow Ave.	Cookeville	38506	(931) 432-4015
Jackson	1625 Hollywood Drive	Jackson	38305	(731) 512-1300
Johnson City	2305 Silverdale Road	Johnson City	37601	(423) 854-5400
Knoxville	3711 Middlebrook Pike	Knoxville	37921	(865) 594-6035
Memphis	2510 Mt. Moriah Road STE E-645	Memphis	38115	(901) 368-7939
Nashville	711 R S Gass Boulevard	Nashville	37216	(615) 687-7000

SITE OVERVIEW

The Gurkin's # 6 service station (subject site) is located at 16595 Highway 64 in Somerville, Fayette County, Tennessee. The site is currently equipped with two 10,000 gallon UST's and one 6,000 gallon UST containing various grades of gasoline. In addition, the site is developed with four gasoline dispenser islands with a fueling canopy and a convenience store.

On May 10, 2005, liquid phase hydrocarbons (LPH) were discovered in the northeast and northwest observation wells located in the underground storage tank (UST) tankfield at thicknesses of 0.21 foot and 0.15 foot, respectively, during a compliance inspection conducted by Mr. Chuck Nance of the Tennessee Department of Environment and Conservation (TDEC).

As a result, the LPH was pumped from the two observation wells utilizing a hand pump. On July 21, 2005, LPH was measured at thicknesses of 0.18 foot and 0.05 foot in the northeast and northwest observation wells, respectively. The wells were then equipped with a high pressure air system and the water and LPH were extracted from the wells in fifteen minute increments over a four hour period. The water and LPH were captured in a 55-gallon drum.

On July 22, 2005, a clean disposable bailer was used to bail the groundwater and residual LPH from the northeast and northwest observation wells until dryness was achieved. Groundwater and any residual LPH was allowed to recharge into the wells and the process was repeated on a daily basis through August 11, 2005. All of the LPH and purge water was placed into a 55-gallon drum.

From August 2005 through November 2005, the observation wells were monitored on a monthly basis. LPH was observed at thicknesses ranging from not detected to 0.36 foot in the two northern observation wells, while no LPH was measured in the two southern observation wells until the November 30, 2005 gauging event.

The TDEC was notified of the suspected release on September 28, 2005. On October 28, 2005, no LPH was measured in any of the observation wells and the daily purging of the LPH was again suspended.

On November 30, 2005, LPH was measured in the northeast, southeast, and southwest observation wells at thicknesses ranging from 0.01 foot to 0.05 foot. This event marked the first appearance of LPH in the southeast and southwest observation wells. In addition, the Initial Abatement Report (IAR) was submitted on November 30, 2006.

On November 21 and 22, 2005, four monitor wells (MW-1 through MW-4) were installed under SCS supervision to determine if the soil and groundwater beneath the subject site had been impacted by the LPH present in the UST tankfield. Soil samples were collected from various depth intervals and submitted for laboratory analyses of benzene, toluene, ethylbenzene, and total xylenes (BTEX), methyl tertiary butyl ether (MTBE), and naphthalene by EPA Method 8260B. The laboratory analyses of the soil samples submitted indicated benzene concentrations ranging from not detected above method detection limits to 1.34 milligrams per kilogram (mg/kg), toluene concentrations ranging from not detected to 25.2 mg/kg, ethylbenzene concentrations ranging from not detected to 17.9 mg/kg, total xylenes concentrations ranging from not detected to 89.4 mg/kg, MTBE concentrations ranging from not detected to 0.289 mg/kg, and naphthalene concentrations ranging from not detected to 6.95 mg/kg. The soil

sample collected from boring MW-3 at the 26.0 foot depth interval exhibited benzene and total xylenes concentrations above the risk based cleanup levels (RBCLs) for indoor inhalation by a commercial worker.

On December 1, 2005, a comprehensive groundwater sampling event was conducted and groundwater samples were collected from wells MW-1, MW-2, and MW-4 and submitted for laboratory analyses of BTEX, MTBE, and naphthalene. The analytical results indicated benzene concentrations ranging from 0.836 milligrams per liter (mg/L) to 9.28 mg/L, toluene concentrations ranging from 0.0776 mg/L to 10.9 mg/L, ethylbenzene concentrations ranging from 0.347 mg/L to 0.659 mg/L, total xylenes concentrations ranging from 0.382 mg/L to 4.02 mg/L, MTBE concentrations ranging from not detected above method detection limits to 0.371 mg/L, and naphthalene concentrations ranging from 0.0880 mg/L to 0.173 mg/L. Benzene, naphthalene, and MTBE concentrations detected in the groundwater samples collected from wells MW-1 through MW-4, toluene concentrations detected in the groundwater samples collected from wells MW-2 and MW-4, and total xylenes concentrations detected in the groundwater sample collected from well MW-2 exceeded the RBCLs for ingestion of groundwater by a residential child. On the day of the sampling event, 1.93 feet of LPH was measured in well MW-3 and no groundwater sample was collected. It should be noted that unlike the very dark and weathered LPH present in the UST tankfield observation wells, the LPH in well MW-3 was observed to be pale golden in color and did not exhibit evidence of weathering.

On January 6, 2006, a groundwater sample was collected from well MW-4 and submitted for laboratory analyses of iron and manganese. The analytical results indicated an iron concentration of 77.881 mg/L and a manganese concentration of 6.699 mg/L which exceed the TDEC Drinking Water Standards of 0.30 mg/L and 0.05 mg/L, respectively.

Per the request of the TDEC, the LPH was purged from well MW-3 and a groundwater sample was collected on January 6, 2006, to determine the source area constituent of concern (COC) concentrations in groundwater. The analytical results indicated a benzene concentration of 14.6 mg/L, a toluene concentration of 35.1 mg/L, an ethylbenzene concentration of 3.35 mg/L, a total xylenes concentration of 19.4 mg/L, an MTBE concentration of 0.396 mg/L, and a naphthalene concentration of 0.631 mg/L, which all exceed the RBCL values for ingestion by a residential child.

On March 21, 2006, a Mobile Enhanced Multi-phase Extraction (MEME) event was conducted at the subject site. Well MW-3 and the four tankfield observation wells were used as extraction points. According to the MEME results, LPH was detected in well MW-3 at a thickness of 1.47 feet and in the northeast observation well at a thickness of 0.07 foot, while no LPH was detected in any of the remainder of the monitor and/or observation wells on the day of the event. A total of 530 pounds of carbon, which is the equivalent of 100 gallons of gasoline and 606 pounds of petroleum hydrocarbons, was removed during this event. Approximately 1,974 gallons of fluids (including 110 gallons of purge water) were measured in the vacuum truck upon completion of the event and were transported to Classic Petroleum, located in Selmer, Tennessee, for disposal.

On July 14, 2006, SCS submitted an Exposure Assessment Report to the TDEC requesting the following site specific cleanup levels (SSCLs) for soil and groundwater:

CHEMICALS OF CONCERN	Maximum Groundwater Concentration (ppm)	Maximum Soil Concentration (ppm)
Benzene	0.383	4.24
Toluene	24.6	62.5
Ethylbenzene	10.3	1,320
Total Xylenes	20.6	98.2
MTBE	175	366
Naphthalene	9.81	403

In a letter dated November 21, 2006, the TDEC approved the requested SSCLs and, based upon the exceedance of the SSCLs for benzene and toluene in groundwater and the presence of LPH, requested that an option for corrective action be selected of the site.

Based upon the laboratory results from the December 2005 comprehensive groundwater sampling event, the TDEC approved a request to install two additional monitor wells in order to define the hydrocarbon plume to the west and south of the subject site. However, attempts to obtain offsite access for the installation of the monitor wells were not successful until February 2007, following the intervention of the TDEC.

While awaiting offsite access for the installation of the two additional monitor wells, two mobile enhanced multi-phase extraction (MEME) events were conducted at the site on March 21, 2006, and January 30, 2007. Cumulative totals of 1,122 pounds of carbon and 3,778 gallons of extracted fluids were removed during the two MEME events.

On February 12, 2007, SCS installed wells MW-5 and MW-6 at the subject site. Well MW-5 was installed in the parking lot of the Hair Gallerie located across Highway 64 to the south of the site. Well MW-6 was installed in the parking area at the southwest corner of the site west of the tankfield.

On February 20, 2007, comprehensive groundwater samples were collected and analyzed for BTEX, MTBE, and naphthalene by EPA Method 8260B and PAHs by EPA Method 8270c/sim. Groundwater levels were measured in all monitor and observation wells and samples were collected from wells MW-1 through MW-6. Analytical results indicated benzene, toluene, ethylbenzene, total xylenes, and 2-methylnaphthalene (PAH) concentrations in all of the wells sampled. MTBE concentrations were detected above method detection limits in the groundwater samples collected from wells MW-2, MW-3, and MW-4. Naphthalene concentrations were detected above method detection limits in the groundwater samples collected from wells MW-1, MW-4, and MW-6. In addition, PAH concentrations were detected above method detection limits in wells MW-1 (acenaphthene, benzo[a]pyrene, chrysene, and pyrene), MW-3 (acenaphthene and pyrene), MW-4 (acenaphthene), and MW-5 (anthracene and phenanthrene).

In a letter dated May 9, 2007, the TDEC requested that a Corrective Action Plan be prepared and submitted for the site. Due to the presence of LPH and the location of underground utilities across the site, excavation of impacted soils is not a viable option for corrective action. Therefore, at the direction of the TDEC, a CAS will be installed at this site for corrective action purposes.

The proposed CAS selected for this site is a soil-vapor extraction system utilizing a liquid ring vacuum pump to extract hydrocarbon vapors, LPH, and groundwater from the soils surrounding the extraction points/recovery wells at the site. The CAS will remove LPH from the extracted fluids by way of an oil-water separator and the LPH will be stored in a holding tank until it is removed from the site by a TDEC-approved transport and disposal contractor. SCS proposes to discharge treated groundwater into a storm sewer drain located on the property of the Gurkin's #6 facility.

According to Tommy Harris of the Town of Somerville Department of Public Works, the storm sewer drain at the subject site flows northwesterly approximately 1,000 feet to Town Creek. Mr. Harris further stated that Town Creek flows to the north to the Loosahatchie River.

A site map showing monitor well locations is presented as **Figure 1**. Groundwater analytical results are summarized in **Table 1**. A facility location map showing the specific discharge location is presented as **Figure 2**.



A horizontal number line with arrows at both ends. It has three major tick marks labeled 0, 20, and 40. The line is divided into two equal segments by the tick mark at 20.



OE = OVERHEAD ELECTRIC
E = UNDERGROUND ELECTRIC
T = TELEPHONE
P = PROPERTY LINE
PL = PRODUCT LINES
SS = STORM SEWER
LP = LIGHT POLE

TABLE 1
SUMMARY of GROUNDWATER ANALYSES
GURKIN'S # 6
16595 HIGHWAY 64
SOMERVILLE, TENNESSEE
TN FACILITY I.D. NO. 8-240093

Well Boring No.	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Total BTEX (mg/L)	MTBE (mg/L)	Naphthalene (mg/L)	Acenaphthene (mg/L)	Anthracene (mg/L)	Benzo(a)anthracene (mg/L)	Chrysene (mg/L)	2-Methylnaphthalene (mg/L)	Phenanthrene (mg/L)	Pyrene (mg/L)
MW-1	12/1/2005	0.836	0.0776	0.347	0.382	1.6426	<0.0100	0.0880	NT	NT	NT	NT	NT	NT	NT
	1/6/2006	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT
	2/20/2007	0.714	0.0337	0.146	0.170	1.0637	<0.00500	0.121	0.000503	<0.00200	0.000956	0.000291	0.00675	<0.000200	0.00214
MW-2	12/1/2005	9.28	10.9	0.659	4.02	24.859	0.0442	0.169	NT	NT	NT	NT	NT	NT	NT
	1/6/2006	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT
	2/20/2007	23.6	29.6	2.08	12.2	67.48	0.308	<1.00	<0.00200	<0.00200	<0.00200	<0.00200	0.0317	<0.00200	<0.00200
MW-3	12/1/2005	LPH	LPH	LPH	LPH	LPH	LPH	LPH	NT	NT	NT	NT	NT	NT	NT
	1/6/2006	14.6	3.35	0.396	0.631	18.977	35.1	19.4	NT	NT	NT	NT	NT	NT	NT
	2/20/2007	24.6	39.2	3.30	19.2	86.30	0.697	<1.00	0.0155	<0.00800	<0.00800	<0.00800	0.522	<0.00200	0.00920
MW-4	12/1/2005	5.45	6.80	0.528	2.91	15.688	0.355	0.127	NT	NT	NT	NT	NT	NT	NT
	1/6/2006	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT
	2/20/2007	15.5	19.8	1.87	9.83	47.00	1.35	<1.00	0.0155	<0.00200	<0.00200	<0.00800	0.0457	<0.00200	<0.00200
MW-4(DUP)	2/20/2007	15.7	19.5	1.92	9.99	47.11	1.17	0.570	<0.00217	<0.00217	<0.00217	<0.00217	0.0415	<0.00217	<0.00217
MW-5	2/20/2007	1.25	2.32	0.258	1.38	5.208	<0.0200	<0.100	<0.000200	0.000261	<0.00200	<0.00200	0.00497	0.000389	<0.00200
MW-6	2/20/2007	35.6	50.0	5.27	29.9	120.77	<0.200	1.53	<0.00200	<0.00200	<0.00200	<0.00200	0.212	<0.00200	<0.00200
RBCLs (Ingestion of water by a residential child)		0.005	1.00	0.7	10	—	0.02	0.02	0.939	0.0434	0.00117	0.00160	—	0.469	0.135
TDEC SSCLs		0.383	24.6	10.3	20.6	—	175.0	9.81	—	—	—	—	—	—	—

mg/L = Milligrams per Liter
 SB = Soil Boring
 (DUP) = Duplicate sample for OAMOC
 MTBE = methyl tertiary butyl ether
 NT = Not Tested
 NS = Not Sampled

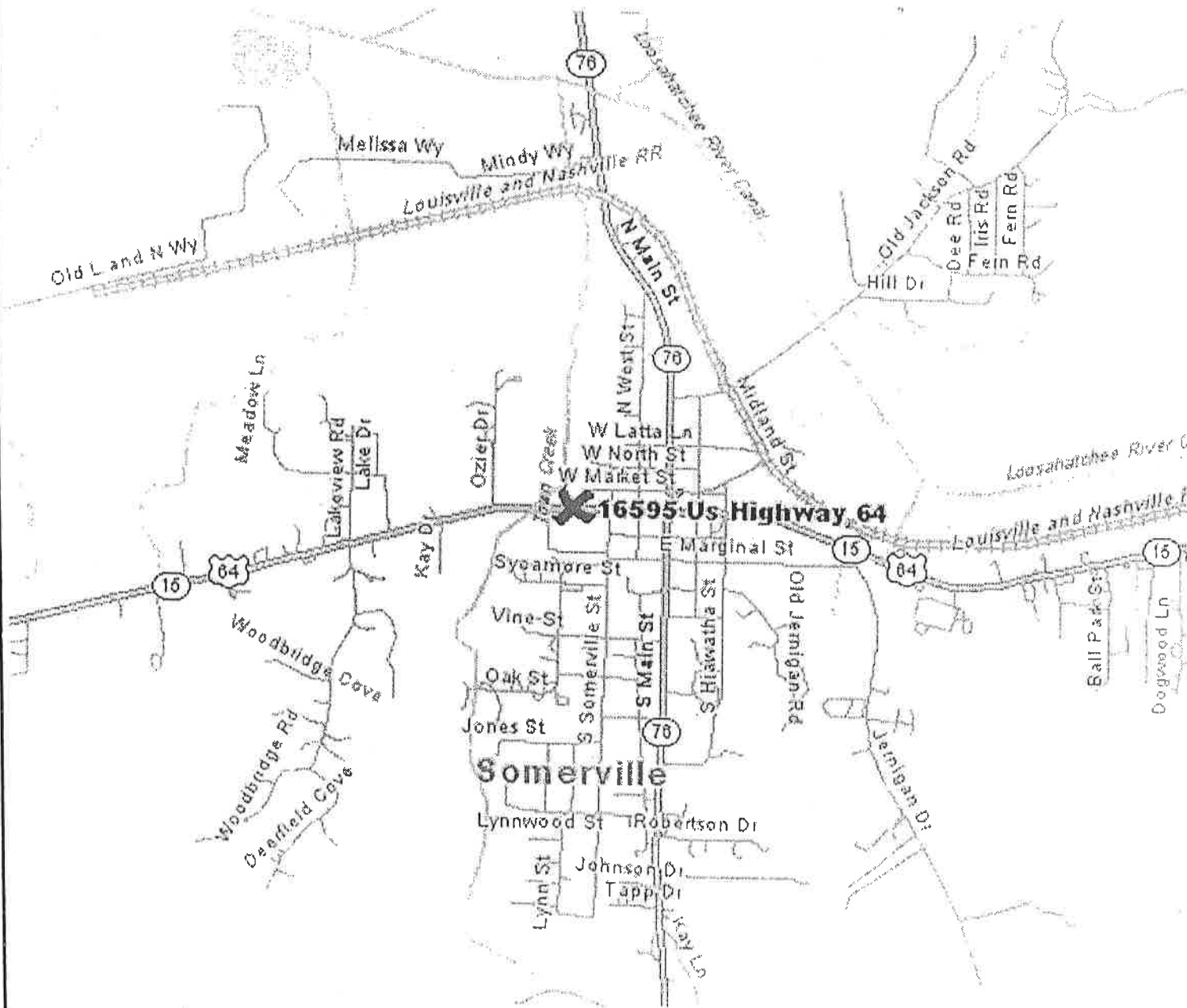
BOLD = Indicates concentrations above TDEC RBCLs
 BOLD = Indicates concentrations above TDEC SSCLs
 SSCLs = Site Specific Clean-up Levels
 RBCLs = Risk-Based Clean-up Levels
 MW = Monitor Well
 NO = Not Detected



0.5 km
1500 ft

NOTE: DISCHARGE WILL FLOW INTO A NEARBY STORM DRAIN
THAT ULTIMATELY DISCHARGES TO TOWN CREEK.

**16595 Us Highway 64
Somerville, TN 38068-6166**



SCS

ENVIRONMENTAL GROUP, LLC

96 BAILEY DR. OLIVE BRANCH, MISSISSIPPI 38654
OFFICE 662-893-6700 * FAX 662-890-6088

GURKIN'S #6
16595 HIGHWAY 64
SOMERVILLE, TENNESSEE

TDEC No. 8-240093

FACILITY
LOCATION MAP

FIGURE

2



"Partners with Industry in Preserving Our World"



December 3, 2007

Ms. Maylynne Pynkala
Tennessee Department of Environment
and Conservation
Division of Underground Storage Tanks
2510 Mt. Moriah, Suite E-645
Memphis, Tennessee 38115-1520

**RE: Discharge Permit Re-issuance Application
Gurkin's #6
16595 Highway 64
Somerville, Fayette County, Tennessee
TN Facility I.D. No. 8-240093**

Dear Ms. Pynkala:

On behalf of Charles Gurkin, SCS Environmental Group, LLC (SCS), is submitting the attached Notice of Intent (NOI) application for re-issuance of the current permit for the discharge of treated groundwater associated with underground storage tank (UST) remediation at the above-referenced site.

If you have any questions or require additional information, please call me at (662) 893-6700.

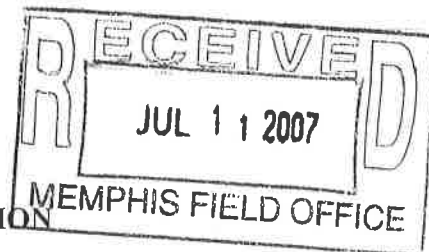
Sincerely,
SCS Environmental Group, LLC

William A. Spicer
Senior Environmental Specialist

cc: Charles Gurkin
Cynthia J. Patton – TDEC/Memphis
Technical Review Section – TDEC/Nashville
SCS (file) – Gurkin's #6



DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER POLLUTION CONTROL
NOTICE OF INTENT (NOI)
for discharges of treated groundwater associated with
UNDERGROUND STORAGE TANK (UST) REMEDIATION



Site Name: GURKIN'S #6	County: FAYETTE
Street Address or Location: 16595 U.S. HIGHWAY 64, SOMERVILLE	Latitude: 35° 14' 37" Longitude: 89° 21' 9.66"
▪ All entries must be in ink. ▪ Attach a copy of U.S.G.S. topographical map, a city map, or a county map, identifying the location of this facility. ▪ This NOI must be signed by a responsible corporate officer for a corporation, a general partner for a partnership, the proprietor for a sole proprietorship, or a principal executive officer or ranking elected official for a public agency. ▪ If this NOI is submitted because of new operator or to update facility information (such as name of facility, new official contact person name, new E-mail address, etc.), provide the existing permit tracking number:	

Owner or Operator: (the person or legal entity which controls site's operation; this may or may not be the same as the site name or the official contact name) SCS ENVIRONMENTAL GROUP, LLC				
1	Official Contact Person Name: (individual responsible for a site) SHAWN STEWART-POOL	Title or Position: PRESIDENT		
	Mailing Address: 114 BAILEY DRIVE	City: OLIVE BRANCH	State: MS	Zip: 38654
	Phone: (662) 893-6700	E-mail: spool@scsenv.com		
2	Local Contact Person Name: (if appropriate, write "same as #1") CHARLES GURKIN	Title or Position: OWNER		
	Site Address: (this may or may not be the same as street address) 16595 U.S. HIGHWAY 64	Site City: SOMERVILLE	State: TN	Zip: 38068
	Phone: (901) 877-3313	E-mail:		

Write in the box (to the right) or circle the number (above) to indicate where to send correspondence: **1**

Treated groundwater from the site enters following stream(s) and/or lake(s): (for each outfall, give names and stream miles) TOWN CREEK - 0.19 MILE FROM OUTFALL 001	Number of outfalls: 1
Type of product(s) currently or previously stored in tanks located at the site: UNLEADED GASOLINE	UST Site ID Number 8-240093
A description of contamination, assessment study, extent of contamination, etc. Attach additional pages if necessary. SEE ATTACHMENT	
A description and design capacity of treatment process and facilities. Circle discharge type (continuous means more than 4 days at a time): DUAL-PHASE SOIL/GROUNDWATER REMEDIATION SYSTEM - 3.5 GALLONS PER HOUR	<input checked="" type="radio"/> Continuous <input type="radio"/> Intermittent
Expected starting date for groundwater treatment, and estimated life of remediation project: DECEMBER 1, 2007 - TWO YEARS	

CERTIFICATION AND SIGNATURE		
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.		
SHAWN STEWART-POOL Printed Name	PRESIDENT Official Title	 Signature
		7-11-07 Date

STATE USE ONLY				
Received Date	Domestic Water Supply Use	Protective for Lead Conc.	Tracking No.	EAC
Impaired Receiving Stream	High Quality Water	T & E Aquatic Fauna	NOC Date	Reviewer

Submit the original completed and signed form to:
UST NOI Processing
Division of Water Pollution Control
6th Floor L&C Annex, 401 Church Street
Nashville, TN 37243-1534

SITE OVERVIEW

The Gurkin's # 6 service station (subject site) is located at 16595 Highway 64 in Somerville, Fayette County, Tennessee. The site is currently equipped with two 10,000 gallon UST's and one 6,000 gallon UST containing various grades of gasoline. In addition, the site is developed with four gasoline dispenser islands with a fueling canopy and a convenience store.

On May 10, 2005, liquid phase hydrocarbons (LPH) were discovered in the northeast and northwest observation wells located in the underground storage tank (UST) tankfield at thicknesses of 0.21 foot and 0.15 foot, respectively, during a compliance inspection conducted by Mr. Chuck Nance of the Tennessee Department of Environment and Conservation (TDEC).

As a result, the LPH was pumped from the two observation wells utilizing a hand pump. On July 21, 2005, LPH was measured at thicknesses of 0.18 foot and 0.05 foot in the northeast and northwest observation wells, respectively. The wells were then equipped with a high pressure air system and the water and LPH were extracted from the wells in fifteen minute increments over a four hour period. The water and LPH were captured in a 55-gallon drum.

On July 22, 2005, a clean disposable bailer was used to bail the groundwater and residual LPH from the northeast and northwest observation wells until dryness was achieved. Groundwater and any residual LPH was allowed to recharge into the wells and the process was repeated on a daily basis through August 11, 2005. All of the LPH and purge water was placed into a 55-gallon drum.

From August 2005 through November 2005, the observation wells were monitored on a monthly basis. LPH was observed at thicknesses ranging from not detected to 0.36 foot in the two northern observation wells, while no LPH was measured in the two southern observation wells until the November 30, 2005 gauging event.

The TDEC was notified of the suspected release on September 28, 2005. On October 28, 2005, no LPH was measured in any of the observation wells and the daily purging of the LPH was again suspended.

On November 30, 2005, LPH was measured in the northeast, southeast, and southwest observation wells at thicknesses ranging from 0.01 foot to 0.05 foot. This event marked the first appearance of LPH in the southeast and southwest observation wells. In addition, the Initial Abatement Report (IAR) was submitted on November 30, 2006.

On November 21 and 22, 2005, four monitor wells (MW-1 through MW-4) were installed under SCS supervision to determine if the soil and groundwater beneath the subject site had been impacted by the LPH present in the UST tankfield. Soil samples were collected from various depth intervals and submitted for laboratory analyses of benzene, toluene, ethylbenzene, and total xylenes (BTEX), methyl tertiary butyl ether (MTBE), and naphthalene by EPA Method 8260B. The laboratory analyses of the soil samples submitted indicated benzene concentrations ranging from not detected above method detection limits to 1.34 milligrams per kilogram (mg/kg), toluene concentrations ranging from not detected to 25.2 mg/kg, ethylbenzene concentrations ranging from not detected to 17.9 mg/kg, total xylenes concentrations ranging from not detected to 89.4 mg/kg, MTBE concentrations ranging from not detected to 0.289 mg/kg, and naphthalene concentrations ranging from not detected to 6.95 mg/kg. The soil

sample collected from boring MW-3 at the 26.0 foot depth interval exhibited benzene and total xylenes concentrations above the risk based cleanup levels (RBCLs) for indoor inhalation by a commercial worker.

On December 1, 2005, a comprehensive groundwater sampling event was conducted and groundwater samples were collected from wells MW-1, MW-2, and MW-4 and submitted for laboratory analyses of BTEX, MTBE, and naphthalene. The analytical results indicated benzene concentrations ranging from 0.836 milligrams per liter (mg/L) to 9.28 mg/L, toluene concentrations ranging from 0.0776 mg/L to 10.9 mg/L, ethylbenzene concentrations ranging from 0.347 mg/L to 0.659 mg/L, total xylenes concentrations ranging from 0.382 mg/L to 4.02 mg/L, MTBE concentrations ranging from not detected above method detection limits to 0.371 mg/L, and naphthalene concentrations ranging from 0.0880 mg/L to 0.173 mg/L. Benzene, naphthalene, and MTBE concentrations detected in the groundwater samples collected from wells MW-1 through MW-4, toluene concentrations detected in the groundwater samples collected from wells MW-2 and MW-4, and total xylenes concentrations detected in the groundwater sample collected from well MW-2 exceeded the RBCLs for ingestion of groundwater by a residential child. On the day of the sampling event, 1.93 feet of LPH was measured in well MW-3 and no groundwater sample was collected. It should be noted that unlike the very dark and weathered LPH present in the UST tankfield observation wells, the LPH in well MW-3 was observed to be pale golden in color and did not exhibit evidence of weathering.

On January 6, 2006, a groundwater sample was collected from well MW-4 and submitted for laboratory analyses of iron and manganese. The analytical results indicated an iron concentration of 77.881 mg/L and a manganese concentration of 6.699 mg/L which exceed the TDEC Drinking Water Standards of 0.30 mg/L and 0.05 mg/L, respectively.

Per the request of the TDEC, the LPH was purged from well MW-3 and a groundwater sample was collected on January 6, 2006, to determine the source area constituent of concern (COC) concentrations in groundwater. The analytical results indicated a benzene concentration of 14.6 mg/L, a toluene concentration of 35.1 mg/L, an ethylbenzene concentration of 3.35 mg/L, a total xylenes concentration of 19.4 mg/L, an MTBE concentration of 0.396 mg/L, and a naphthalene concentration of 0.631 mg/L, which all exceed the RBCL values for ingestion by a residential child.

On March 21, 2006, a Mobile Enhanced Multi-phase Extraction (MEME) event was conducted at the subject site. Well MW-3 and the four tankfield observation wells were used as extraction points. According to the MEME results, LPH was detected in well MW-3 at a thickness of 1.47 feet and in the northeast observation well at a thickness of 0.07 foot, while no LPH was detected in any of the remainder of the monitor and/or observation wells on the day of the event. A total of 530 pounds of carbon, which is the equivalent of 100 gallons of gasoline and 606 pounds of petroleum hydrocarbons, was removed during this event. Approximately 1,974 gallons of fluids (including 110 gallons of purge water) were measured in the vacuum truck upon completion of the event and were transported to Classic Petroleum, located in Selmer, Tennessee, for disposal.

On July 14, 2006, SCS submitted an Exposure Assessment Report to the TDEC requesting the following site specific cleanup levels (SSCLs) for soil and groundwater:

CHEMICALS OF CONCERN	Maximum Groundwater Concentration (ppm)	Maximum Soil Concentration (ppm)
Benzene	0.383	4.24
Toluene	24.6	62.5
Ethylbenzene	10.3	1,320
Total Xylenes	20.6	98.2
MTBE	175	366
Naphthalene	9.81	403

In a letter dated November 21, 2006, the TDEC approved the requested SSCLs and, based upon the exceedance of the SSCLs for benzene and toluene in groundwater and the presence of LPH, requested that an option for corrective action be selected of the site.

Based upon the laboratory results from the December 2005 comprehensive groundwater sampling event, the TDEC approved a request to install two additional monitor wells in order to define the hydrocarbon plume to the west and south of the subject site. However, attempts to obtain offsite access for the installation of the monitor wells were not successful until February 2007, following the intervention of the TDEC.

While awaiting offsite access for the installation of the two additional monitor wells, two mobile enhanced multi-phase extraction (MEME) events were conducted at the site on March 21, 2006, and January 30, 2007. Cumulative totals of 1,122 pounds of carbon and 3,778 gallons of extracted fluids were removed during the two MEME events.

On February 12, 2007, SCS installed wells MW-5 and MW-6 at the subject site. Well MW-5 was installed in the parking lot of the Hair Gallerie located across Highway 64 to the south of the site. Well MW-6 was installed in the parking area at the southwest corner of the site west of the tankfield.

On February 20, 2007, comprehensive groundwater samples were collected and analyzed for BTEX, MTBE, and naphthalene by EPA Method 8260B and PAHs by EPA Method 8270c/sim. Groundwater levels were measured in all monitor and observation wells and samples were collected from wells MW-1 through MW-6. Analytical results indicated benzene, toluene, ethylbenzene, total xylenes, and 2-methylnaphthalene (PAH) concentrations in all of the wells sampled. MTBE concentrations were detected above method detection limits in the groundwater samples collected from wells MW-2, MW-3, and MW-4. Naphthalene concentrations were detected above method detection limits in the groundwater samples collected from wells MW-1, MW-4, and MW-6. In addition, PAH concentrations were detected above method detection limits in wells MW-1 (acenaphthene, benzo[a]pyrene, chrysene, and pyrene), MW-3 (acenaphthene and pyrene), MW-4 (acenaphthene), and MW-5 (anthracene and phenanthrene).

In a letter dated May 9, 2007, the TDEC requested that a Corrective Action Plan be prepared and submitted for the site. Due to the presence of LPH and the location of underground utilities across the site, excavation of impacted soils is not a viable option for corrective action. Therefore, at the direction of the TDEC, a CAS will be installed at this site for corrective action purposes.

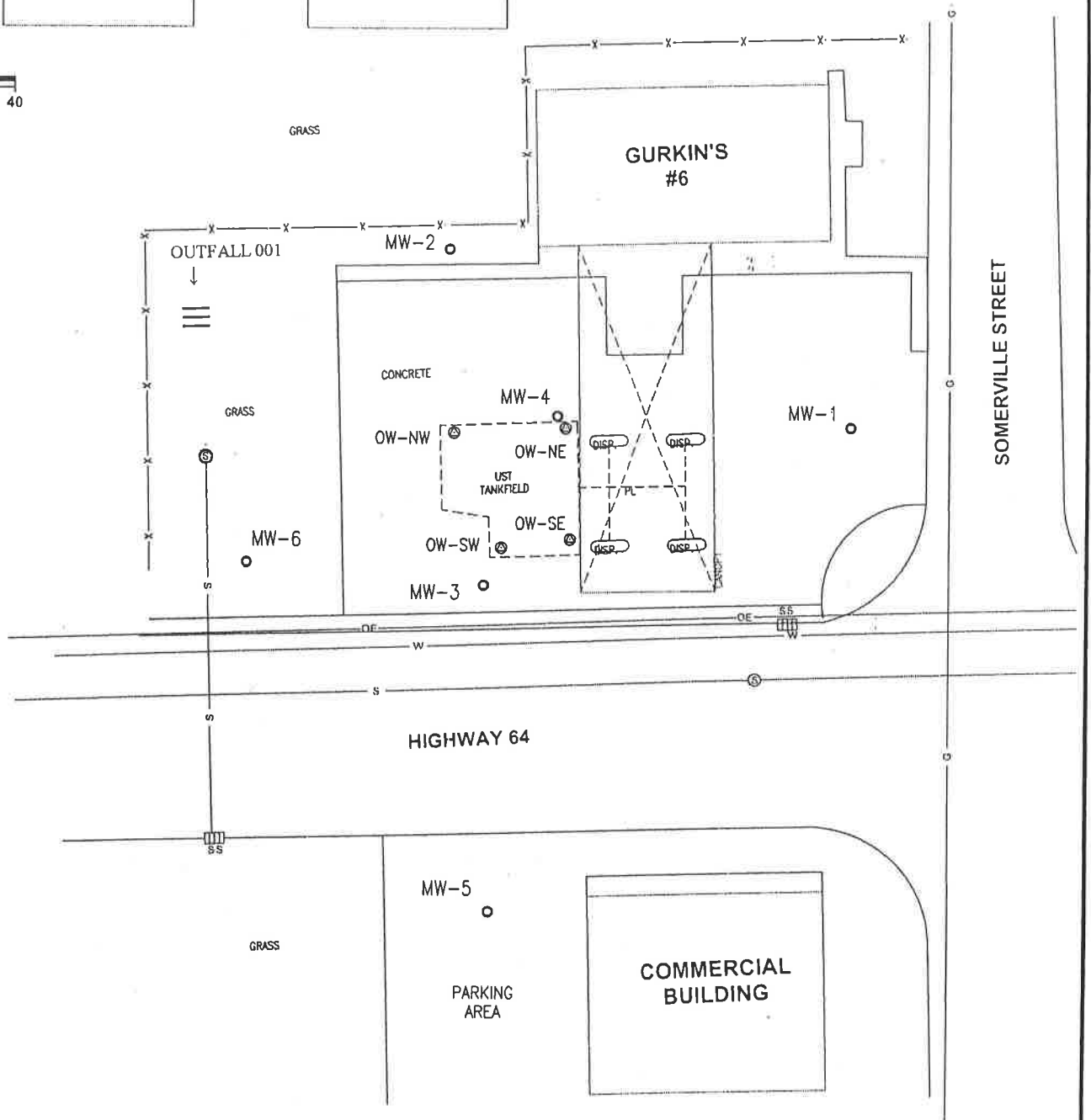
The proposed CAS selected for this site is a soil-vapor extraction system utilizing a liquid ring vacuum pump to extract hydrocarbon vapors, LPH, and groundwater from the soils surrounding the extraction points/recovery wells at the site. The CAS will remove LPH from the extracted fluids by way of an oil-water separator and the LPH will be stored in a holding tank until it is removed from the site by a TDEC-approved transport and disposal contractor. SCS proposes to discharge treated groundwater into a storm sewer drain located on the property of the Gurkin's #6 facility.

According to Tommy Harris of the Town of Somerville Department of Public Works, the storm sewer drain at the subject site flows northwesterly approximately 1,000 feet to Town Creek. Mr. Harris further stated that Town Creek flows to the north to the Loosahatchie River.

A site map showing monitor well locations is presented as **Figure 1**. Groundwater analytical results are summarized in **Table 1**. A facility location map showing the specific discharge location is presented as **Figure 2**.



SCALE IN FEET
0 20 40



LEGEND :

- | | |
|-------------------------|--------------------------|
| MW ○ = MONITOR WELL | OE = OVERHEAD ELECTRIC |
| OW ● = OBSERVATION WELL | E = UNDERGROUND ELECTRIC |
| — X — X = FENCE LINE | T = TELEPHONE |
| G = GAS | P = PROPERTY LINE |
| W = WATER MAIN | PL = PRODUCT LINES |
| PP = POWER POLE | SS = STORM SEWER |
| VL = VENT LINES | LP = LIGHT POLE |

SCS

ENVIRONMENTAL GROUP, LLC

114 BAILEY DR. OLIVE BRANCH, MISSISSIPPI 38654
OFFICE 662-893-6700 * FAX 662-890-6088

GURKIN'S #6
16595 HIGHWAY 64
SOMERVILLE, TENNESSEE

TDEC No. 8-240093

SITE MAP

FIGURE

1

TABLE 1
SUMMARY of GROUNDWATER ANALYSES
GURKIN'S # 6
16595 HIGHWAY 64
SOMERVILLE, TENNESSEE
TN FACILITY I.D. NO. 8-240093

Well Boring No.	Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	Total BTEX (mg/L)	MTBE (mg/L)	Naphthalene (mg/L)	Acenaphthene (mg/L)	Anthracene (mg/L)	Benzo(a)anthracene (mg/L)	Chrysene (mg/L)	2-Methylnaphthalene (mg/L)	Phenanthrene (mg/L)	Pyrene (mg/L)
MW-1	12/1/2005	0.836	0.0776	0.347	0.382	1.6426	<0.0100	0.0880	NT	NT	NT	NT	NT	NT	NT
	1/6/2006	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT
	2/20/2007	0.714	0.0337	0.146	0.170	1.0637	<0.00500	0.121	0.000503	<0.00200	0.000956	0.000291	0.00675	<0.000200	0.00214
MW-2	12/1/2005	9.28	10.9	0.659	4.02	24.859	0.0442	0.169	NT	NT	NT	NT	NT	NT	NT
	1/6/2006	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT
	2/20/2007	23.6	29.6	2.08	12.2	67.48	0.308	<1.00	<0.00200	<0.00200	<0.00200	<0.00200	0.0317	<0.00200	<0.00200
MW-3	12/1/2005	LPH	LPH	LPH	LPH	LPH	LPH	LPH	NT	NT	NT	NT	NT	NT	NT
	1/6/2006	14.6	3.35	0.396	0.631	18.977	35.1	19.4	NT	NT	NT	NT	NT	NT	NT
	2/20/2007	24.6	39.2	3.30	19.2	86.30	0.697	<1.00	0.0155	<0.00800	<0.00800	<0.00800	0.522	<0.00200	0.00920
MW-4	12/1/2005	5.45	6.80	0.528	2.91	15.688	0.355	0.127	NT	NT	NT	NT	NT	NT	NT
	1/6/2006	NS	NS	NS	NS	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT
	2/20/2007	15.5	19.8	1.87	9.83	47.00	1.35	<1.00	0.0155	<0.00200	<0.00200	<0.00800	0.0457	<0.00200	<0.00200
MW-4(DUP)	2/20/2007	15.7	19.5	1.92	9.99	47.11	1.17	0.570	<0.00217	<0.00217	<0.00217	<0.00217	0.0415	<0.00217	<0.00217
MW-5	2/20/2007	1.25	2.32	0.258	1.38	5.208	<0.0200	<0.100	<0.000200	0.000261	<0.00200	<0.00200	0.00497	0.000389	<0.00200
MW-6	2/20/2007	35.6	50.0	5.27	29.9	120.77	<0.200	1.53	<0.00200	<0.00200	<0.00200	<0.00200	0.212	<0.00200	<0.00200
RBCLs (Ingestion of water by a residential child)		0.005	1.00	0.7	10	--	0.02	0.02	0.939	0.0434	0.00117	0.00160	---	0.469	0.135
TDEC SSCLs		0.383	24.6	10.3	20.6	--	175.0	9.81	--	--	--	--	--	--	--

BOLD = Indicates concentrations above TDEC RBCLs
 BOLD = Indicates concentrations above TDEC SSCLs
 SSCLs = Site Specific Clean-up Levels
 RBCLs = Risk-Based Clean-up Levels
 MW = Monitor Well
 ND = Not Detected

mg/L = Milligrams per Liter
 SB = Soil Boring
 (DUP) = Duplicate sample for QA/QC
 MTBE = methyl tertiary butyl ether
 NT = Not Tested
 NS = Not Sampled

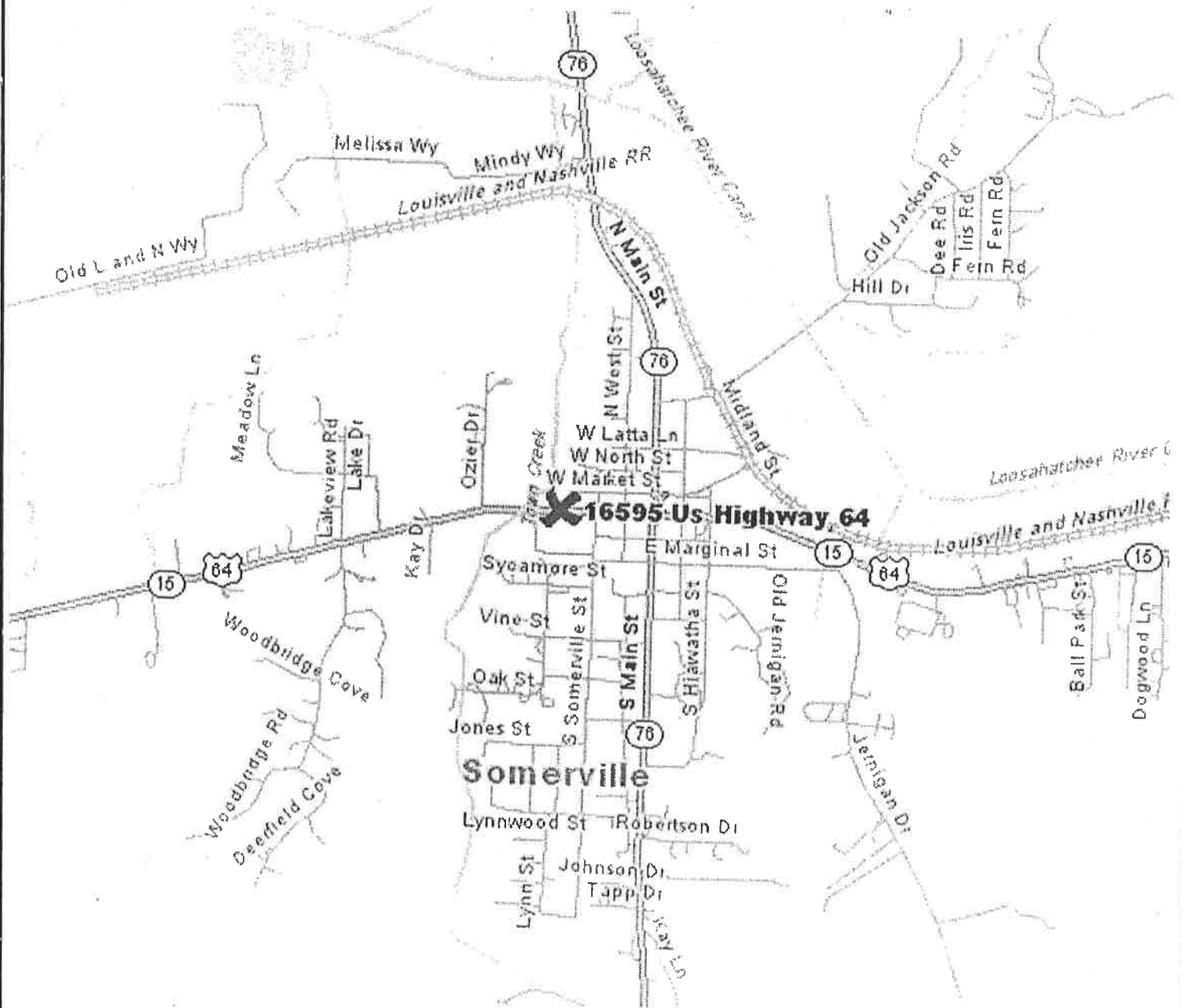


NORTH

0.5 km
500 ft

NOTE: DISCHARGE WILL FLOW INTO A NEARBY STORM DRAIN
THAT ULTIMATELY DISCHARGES TO TOWN CREEK.

**16595 Us Highway 64
Somerville, TN 38068-6166**



SCS

ENVIRONMENTAL GROUP, LLC

96 BAILEY DR. OLIVE BRANCH, MISSISSIPPI 38654
OFFICE 662-893-6700 * FAX 662-890-6088

GURKIN'S #6
16595 HIGHWAY 64
SOMERVILLE, TENNESSEE

TDEC No. 8-240093

FACILITY
LOCATION MAP

FIGURE

2