

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
PETROLEUM STORAGE TANK PROGRAM
CAP WORKSHEETS**

Date Prepared:

SOIL VAPOR EXTRACTION (SVE)

Facility Name:	LPST ID No.:
Facility Address/City:	CAPM:
Facility County:	RCAS:
Facility ID No.:	P.E.:
TCEQ Region:	Prepared By:

Please refer to the appropriate section in the EPA CAP Manual for definitions, equations and tables to assist you when completing these worksheets. When supplying the information requested below, please make certain that any calculations and methodology used to arrive at the value or conclusion you have entered is included in the CAP. This document must not be altered in any manner.

SOIL CHARACTERISTICS

Hydraulic conductivity K (m/sec) obtained by:

Feasibility Test	Laboratory Analysis	Other:
Check one:	$K > 10^{-5}$	(effective)
	$10^{-5} \geq K \geq 10^{-7}$	(needs evaluation)
	$K < 10^{-7}$	(not effective)

Average depth to water (ft) in the targeted zone:

Check one:	≥ 10	(effective)
	$3 \leq \text{depth} < 10$	(need evaluation)
	< 3	(not effective)

Does the target zone include the capillary fringe? YES NO

If **yes**, SVE alone will not achieve the target concentrations. Consider a DPE system.

CONSTITUENT CHARACTERISTICS

Non-aqueous phase liquid (NAPL) type released:	Gasoline	Diesel	Other:
Do any of the target COCs present have a vapor pressure < 0.5 mm Hg?			YES NO
Do any of the target COCs present have a boiling temperature > 250 – 300°C?			YES NO
Do any of the target COCs present have a Henry's Law constant < 100 atm?			YES NO

If the answer to any of the questions above is **yes**, SVE is not likely to be effective.

FEASIBILITY TEST

Feasibility test duration (hrs):	Test well orientation:	Horizontal	Vertical
SVE test well construction			
Diameter:	Total Depth:	Screen Interval:	Depth to Water:
Observation well construction			
Diameter:	Total Depth:	Screen Interval:	Depth to Water:
Additional information:			
Observed radius of influence (ft):		Observed maximum airflow rate (scfm):	
Vacuum at the vacuum source (H ₂ O") when generating the maximum airflow rate:		Vacuum at the SVE well head (H ₂ O") when generating the maximum airflow rate:	
Vapor concentrations* (mg/m ³) - During test			
*Use this format for data entry: XXX mg/m ³ (MW-1), XXX mg/m ³ (MW-2), XXX mg/m ³ (MW-3), etc.			
Benzene:			
Ethylbenzene:			
Toluene:			
Xylenes:			
TPH:			
MTBE:			
Vapor Recovery Rate (lbs/hr):			

REMEDIATION SYSTEM DESIGN

Target concentrations:			
SVE well construction			
Diameter:	Total Depth:	Screen Interval:	Depth to Water:
The design of a SVE well with a different diameter size than the SVE feasibility test well will not be accepted.			
Designed vacuum at the well head (H ₂ O"):		Designed radius of influence (ft):	
Area of the plume above target concentrations (ft ²):		Number of SVE wells:	
Designed airflow rate/well (scfm):		Total designed airflow rate (scfm):	
Soil volume to be treated (ft ³):		Pore volume exchange time (hrs):	
Estimated hydrocarbon mass at startup (lbs):		Total recovery rate at startup (lbs/hr):	
Estimated cleanup time (years):		Estimated total recovery rate in final year (lbs/hr):	
Estimated final hydrocarbon mass remaining (lbs):			

REMEDIATION SYSTEM DESIGN (cont.)

Vapor treatment method:

Thermox	Catox	Internal Combustion Engine (ICE)	Carbon Absorption System (CAS)
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Vacuum unit selection:

Vapor treatment unit capacity (scfm):

Additional information:

Remediation system component utility requirement:

Electricity voltage (volts):	Gas pressure (psi):
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Utility supplied at the site:

Electricity voltage (volts):	Gas pressure (psi):
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Which of following system(s) will be operated concurrently with the SVE component?

Dual Phase Extraction System	Groundwater Pump & Treat System	Air Sparging System	Enhanced Aerobic Bioremediation System
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Is a telemetry unit included?

YES NO

Permit requirements:

OPERATION, MONITORING AND PERFORMANCE (OMP) PLAN

Does OMP Plan include daily monitoring for the start-up phase (up to 7 days)?

YES NO

What is the scheduled frequency of long term monitoring?

Weekly

Monthly

Other:

Which of the following will be included in the OMP Plan?

BTEX	TPH	Other:
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CLOSURE PLAN

Does the closure plan include the following?

Confirmation of target concentrations	Submission of site closure request	Removal of equipment
Plugging of wells	Waste disposal	Paving/resurfacing
Deed Recordation	Institutional Controls	