

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
 PETROLUUM STORAGE TANK  
 OPERATION, MONITORING, AND PERFORMANCE REPORT (OMPR)**

**Date Prepared:**

**GENERAL INFORMATION**

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

**SECTION I: OPERATION AND MAINTENANCE DATA**

<b>Remediation System Type</b>				
Select all that apply:				
	Air Sparging (AS)	Dual-Phase Extraction (DPE)	Enhanced Aerobic Bioremediation (EAB)	Groundwater Pump & Treat (GWP&T)
	NAPL-Only Recovery System	Soil Vapor Extraction (SVE)	Other	
If <b>Other</b> was selected (above), please provide an explanation:				
Date of Corrective Action Plan (CAP) approval by TCEQ:				
Date of initial system installation:			Date of initial system activation:	
Date range of the current reporting period:		From:	To:	
Number of days the system was operational during the current reporting period:			Operating percentage:	
Total number of site visits during the current reporting period (including NAPL recovery):				
Were any major repairs performed during the current reporting period?			YES	NO
If <b>yes</b> , please provide an explanation:				
Please provide explanations for any non-operational periods greater than (>) 24 hours:				

**SECTION I: OPERATION AND MAINTENANCE DATA (cont.)**

If the system has been enhanced with any additional remedial method(s), please explain modification(s) and installation date(s) of system modification(s):

Target Concentrations Determination Method(s)

Select all that apply:

<input type="checkbox"/>	Plan A	<input type="checkbox"/>	Plan B	<input type="checkbox"/>	Other
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If Plan B was not selected (above), please provide an explanation:

If **Other** was selected (above), please provide an explanation:

Target Concentrations – Soil (mg/kg)	Target Concentrations – Groundwater (mg/L)
Benzene:	Benzene:
Toluene:	Toluene:
Ethylbenzene:	Ethylbenzene:
Xylenes:	Xylenes:
MTBE:	MTBE:

Check here if no groundwater contamination was found to be above Category I Action Levels.

If any other chemicals of concern (COCs) are present, please provide the chemical name(s) and target concentration(s) in soil (mg/kg) and/or groundwater (mg/L), as appropriate:

Groundwater Beneficial Use Category:	<input type="checkbox"/> I	<input type="checkbox"/> II	<input type="checkbox"/> III
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Total Dissolved Solids or TDS (mg/L):

**SECTION II: NON-AQUEOUS PHASE LIQUID (NAPL) RECOVERY DATA**

Is non-aqueous phase liquid (NAPL) currently present?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
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**If no, go to Section III.**

Number of monitoring wells historically impacted by NAPL:	Number of monitoring wells currently impacted by NAPL:
Historical maximum NAPL thickness (ft):	Current maximum NAPL thickness (ft):

**SECTION II: NON-AQUEOUS PHASE LIQUID (NAPL) RECOVERY DATA (cont.)**

NAPL recovery method(s) (excluding total fluid recovery):	Continuous	Manual
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If manual recovery method(s) were utilized, how many site visits were conducted during the current reporting period?

Total volume of NAPL recovered during this reporting period (gals):	Total volume of NAPL recovered to date (gals):
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Method of NAPL management:	Disposal	Recycled
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**SECTION III: GROUNDWATER RECOVERY DATA**

Is groundwater recovery currently being conducted?	YES	NO
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**If no, go to Section IV.**

Number of monitoring wells exceeding target concentrations:	Monitoring well with maximum Benzene concentration:
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Primary Purpose(s) of Recovery - Groundwater

Select all that apply:

<input type="checkbox"/> Dissolved-Phase Reduction	<input type="checkbox"/> Groundwater Depression	<input type="checkbox"/> Plume Containment	<input type="checkbox"/> Other
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If **Other** was selected (above), please provide an explanation:

Recovery Method(s) - Groundwater

Select all that apply:

<input type="checkbox"/> Direct Pumping	<input type="checkbox"/> Vacuum-Enhanced Pumping	<input type="checkbox"/> Other
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If **Other** was selected (above), please provide an explanation:

How is groundwater recovery being conducted?	Continuous	Pulsed	Other
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If **Other** was selected (above), please provide an explanation:

Number of groundwater extraction wells:

Has a groundwater recovery trench been installed?	YES	NO
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If **yes**, please indicate the following parameters:

Length (ft):	Depth (ft):
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Approximate Location:

Designed average groundwater flow rate (gpm):	Observed average groundwater flow rate (gpm):
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**SECTION III: GROUNDWATER RECOVERY DATA (cont.)**

If the designed average flow rate is different from the observed average flow rate, please provide an explanation:

Designed radius of influence (ft):

Observed radius of influence (ft):

If the designed radius of influence is different from the observed radius of influence, please provide an explanation:

Designed groundwater drawdown (ft):

Observed groundwater drawdown (ft):

If the designed drawdown is different from the observed drawdown, please provide an explanation:

Total volume of groundwater recovered during current reporting period (gals):

Total volume of groundwater recovered to date (gals):

**Maximum Influent Concentrations – Groundwater (mg/L) - During Current Reporting Period**

Benzene:

BTEX:

TPH:

Other:

Are influent groundwater concentrations less than (<) the target concentrations identified in Section I?

YES

NO

If **yes**, please provide an explanation which includes, 1) an estimated operation time-frame for the groundwater pump & treat system, and 2) why it will be operational for this estimated time-frame:

**Treatment Method(s) – Recovered Groundwater**

Select all that apply:

Air Stripping

Carbon Adsorption

Other

If **Other** was selected (above), please provide an explanation:

**SECTION III: GROUNDWATER RECOVERY DATA (cont.)**

Maximum Effluent Concentrations – Groundwater (mg/L) – During Current Reporting Period

Benzene:	BTEX:
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TPH:	Other:
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How is the recovered/treated groundwater managed/discharged?

Are any permits required for discharge?	YES	NO
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If **yes**, please complete the following information:

Type(s) of Permit(s):

Date(s) Permit(s) Issued:

Permitting Authority(ies):

Permit(s) Expiration Date(s):

Permitted Target Concentrations – Groundwater (mg/L)

Benzene:	MTBE:
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Toluene:	TPH:
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Ethylbenzene:	Pb:
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Xylenes:	Other:
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Did any unauthorized discharge(s) occur during the current reporting period?	YES	NO
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If **yes**, indicate date(s) and repair procedure(s):

Are influent concentrations less than (<) the discharge permit concentrations?	YES	NO
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Are influent concentrations less than (<) the discharge permit concentrations?	YES	NO
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**If yes, shut down the groundwater treatment unit with concurrence from TCEQ.**

**SECTION III: GROUNDWATER RECOVERY DATA (cont.)**

If continuing with groundwater pumping, please provide an explanation:

Is groundwater reinjection and/or infiltration currently in use?	YES	NO
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**If no, go to Section IV.**

If **yes**, please indicate the following parameters:

How many injection and/or infiltration points are currently in use?

Reinjection Method(s) - Groundwater

Select all that apply:

<input type="checkbox"/>	Injection Well	<input type="checkbox"/>	Infiltration Gallery	<input type="checkbox"/>	Other
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If **Other** was selected (above), please provide an explanation:

Designed groundwater reinjection rate (gpm):	Observed groundwater reinjection rate (gpm):
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If the designed reinjection rate is different from the observed reinjection rate, please provide an explanation:

Location(s) of injection point(s):

**SECTION IV: VAPOR RECOVERY DATA**

Is vapor recovery/treatment currently being performed?	YES	NO
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**If no, go to Section V.**

Recovery Method(s) - Vapor

Select all that apply:

<input type="checkbox"/>	Dual-Phase (vacuum) Extraction (DPE)	<input type="checkbox"/>	Enhanced Aerobic Bioremediation (EAB)	<input type="checkbox"/>	Soil Vapor Extraction (SVE)
<input type="checkbox"/>	Soil Vapor Extraction (SVE) with Air Sparging (AS)	<input type="checkbox"/>	Other		

If **Other** was selected (above), please provide an explanation:

Number of vapor recovery points:	Extraction point with maximum vapor concentration:
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**SECTION IV: VAPOR RECOVERY DATA (cont.)**

Designed vapor flow rate (scfm):	Observed vapor flow rate (scfm):
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If the designed vapor flow rate is different from the observed vapor flow rate, please provide an explanation:

Designed radius of influence (ft):	Observed radius of influence (ft):
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If the designed radius of influence is different from the observed radius of influence, please provide an explanation:

Is in-situ air sparging and/or enhanced aerobic bioremediation currently in use?	YES	NO
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If **yes**, how many sparging points and/or other injection points are currently in use?

Designed injection flow rate (scfm or L/m):	Observed injection flow rate (scfm or L/m):
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If the designed injection flow rate at any well is different from the observed injection flow rate, please provide an explanation:

Designed injection pressure (psi):	Observed injection pressure (psi):
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If the designed injection pressure at any well is different from the observed injection pressure, please provide an explanation:

**Maximum Influent Concentrations – Vapor (ppmv or mg/m<sup>3</sup>) – During Current Reporting Period**

Benzene:	BTEX:
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TPH:	Other:
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Is vapor treatment required?	YES	NO
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**If no, go to Section V.**

**SECTION IV: VAPOR RECOVERY DATA (cont.)**

If **yes**, please indicate the following parameters:

Treatment Method(s) – Recovered Vapor

Select one:

<input type="checkbox"/>	Carbon System	<input type="checkbox"/>	Catalytic Oxidizer	<input type="checkbox"/>	Internal Combustion Engine (ICE)
<input type="checkbox"/>	Thermal Incinerator	<input type="checkbox"/>	Other		

If **Other** was selected (above), please provide an explanation:

If applicable, please indicate the following parameters for the selected vapor treatment method:

Optimal operating temperature range (°F):	Observed temperature range (°F):
Optimal operating pressure range (psi):	Observed pressure range (psi):

If the optimal operating parameter(s) is/are different from the observed operating parameter(s), please provide an explanation:

Maximum Effluent Concentrations – Vapor (ppmv or mg/m<sup>3</sup>) – During Current Reporting Period

Benzene:	BTEX:
TPH:	Other:

Are permits required for emission?	YES	NO
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If **yes**, complete the following information:

Type(s) of Permit(s):

Date(s) Permit(s) Issued:

Permitting Authority(ies):

Permit(s) Expiration Date(s):

**SECTION IV: VAPOR RECOVERY DATA (cont.)**

Permitted Emission Limits – Vapor (lbs/hr)

Benzene:	TPH:
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Maximum Recovery Rate – Vapor (lbs/hr)

Benzene:	TPH:
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Is the maximum vapor recovery rate less than (<) the permitted emission limits?	YES	NO
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**If yes, shut down vapor treatment unit with concurrence from TCEQ.**

Will the soil vapor extraction unit continue to operate?	YES	NO
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If **yes**, please provide an explanation:

Maximum Emission Rate – Vapor (lbs/hr)

Benzene:	TPH:
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Is the maximum vapor emission rate greater than (>) the permitted emission limits?	YES	NO
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If **yes**, indicate date(s) and procedure(s) utilized to correct exceeded emission limits:

If the vapor treatment unit is no longer in use, has it been decommissioned?	YES	NO
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If **yes**, please provide the following information:

Date(s) the unit was last operational:	Date(s) the unit was decommissioned:
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If <b>no</b> , are there plans to reactivate the vapor treatment unit in the near future?	YES	NO
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If reactivation plans exist, please provide an explanation:

**SECTION V: PERFORMANCE EVALUATION DATA**

Estimated time remaining to achieve target concentrations (years/months):	Years:	Months:
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Total Estimated Hydrocarbon Mass (lbs) - System Startup, by phase<sup>1</sup>

Select all that apply and enter response(s):

NAPL:	Adsorbed-Phase:	Dissolved-Phase:
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Total Estimated Hydrocarbon Mass (lbs) - Currently Remaining, by phase

Select all that apply and enter response(s):

NAPL:	Adsorbed-Phase:	Dissolved-Phase:
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**SECTION V: PERFORMANCE EVALUATION DATA (cont.)**

**Projected Hydrocarbon Removal Rates (lbs/hr) - System Startup<sup>1</sup>**

Select all that apply and enter response(s):

Dissolved-phase recovery rate		Vapor-phase recovery rate	
	Benzene:		Benzene:
	BTEX:		BTEX:
	TPH:		TPH:

**Observed Hydrocarbon Removal Rates (lbs/hr) - Current**

Select all that apply and enter response(s):

Dissolved-phase recovery rate		Vapor-phase recovery rate	
	Benzene:		Benzene:
	BTEX:		BTEX:
	TPH:		TPH:

**Total Hydrocarbon Mass Recovered (lbs) – During Current Reporting Period, by phase**

Select all that apply and enter response(s):

NAPL:	Vapor-Phase:	Dissolved-Phase:
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**Total Hydrocarbon Mass Recovered (lbs) - To Date, by phase**

Select all that apply and enter response(s):

NAPL:	Vapor-Phase:	Dissolved-Phase:
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Are the projected hydrocarbon recovery rates currently being met?	YES      NO
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If **no**, please provide an explanation which includes, 1) why they are not being met and 2) what will be done to remedy the issue:

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Were the plans/specifications for the remediation system(s) for this site properly sealed by a registered Professional Engineer (P.E.) licensed by the Texas State Board of Registration for Professional Engineers?	YES      NO
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Was the installation and/or construction of the remediation system for this site performed under the supervision of a registered P.E. licensed by the Texas State Board of Registration for Professional Engineers?	YES      NO
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**SECTION V: PERFORMANCE EVALUATION DATA (cont.)**

If **no**, please provide an explanation which includes, 1) why the remediation system was started up, and 2) why it has continued to operate:

<sup>1</sup> The TCEQ is aware that this information may not be available for all existing systems. However, this information should be provided, if possible.

Notes:

Wherever necessary, assume the specific gravity of gasoline to be 0.75 and the weight of one (1) gallon (gal) of gasoline to be 6.25 pounds (lbs). If values other than these are used, please specify what values are being used and reference the source(s) used.

The total average groundwater flow rate is the total amount of water (gallons) divided by the actual operating time (minutes).

**SECTION VI: REPORT PREPARATION**

**This document must be signed by the Responsible Party, a registered Corrective Action Project Manager, and a registered Corrective Action Specialist.**

Based upon available site data and TCEQ rules and guidance documents, I certify that to the best of my knowledge, the information presented in this form is accurate and that the work was conducted in accordance with accepted industry standards and practices. I also certify that the remedial system(s) is/are achieving its/their intended purpose(s).

Corrective Action Project Manager (CAPM):

Company:

CAPM No.:

Expiration Date:

Phone No.:

Fax No.:

Signature:

Date:

Corrective Action Specialist (RCAS):

Company:

RCAS No.:

Expiration Date:

Phone No.:

Fax No.:

Signature:

Date:

**By my signature below, I certify that I have reviewed this report for completeness.**

Responsible Party (RP):

RP Address/City/State/Zip Code:

Phone No.:

Fax No.:

Signature:

Date:

**If the remediation system was evaluated during the current reporting period by a Professional Engineer, please complete the following information:**

Professional Engineer (P.E.):

P.E. Registration No.:

Company:

Phone No.:

Fax No.:

Signature:

Date:

P.E. Seal:

## ATTACHMENTS

**Please note that tables and graphs may be combined as long as the information requested is presented in a clear and concise manner.**

**All attached tables and graphs should contain current information**

**The following information must be submitted with this document:**

- Chronology
- Site map with well locations, system components, and groundwater gradient
- Groundwater gradient map
- Cumulative graph of hydrocarbon removal rate (lbs/hr) for NAPL, vapor phase, dissolved-phase, and total
- Cumulative graph of mass (lbs) of hydrocarbons recovered for NAPL, vapor phase, dissolved-phase, and total
- Cumulative graph of cost/mass of hydrocarbons removed
- Cumulative table of estimated mass of hydrocarbons remaining
- Cumulative table of groundwater elevations from each monitoring well
- Single COC concentration map for the COC greater than (>)the applicable target concentration
- Cumulative table of groundwater analytical data/NAPL thickness from each monitoring well
- Graph of system operational periods
- Graph of performance target goals
- Graph of cumulative decline rate for each well
- Waste manifests and permit(s) and/or authorization(s)
- Laboratory reports with Quality Assurance/Quality Control (QA/QC) Review, Verification and Validation

**The following information is technology specific and should be submitted when applicable:**

### **NAPL Recovery**

- Cumulative table of recovery rate from each recovery well
- Cumulative table of total NAPL removed

### **Groundwater Extraction**

- Cumulative table of flow rate from each recovery well and total flow rate
- Cumulative table of groundwater extraction operating time (clock-meter readings)
- Cumulative table of dissolved-phase influent concentrations and dissolved phase recovery rate
- Cumulative table of dissolved-phase effluent concentrations
- Cumulative table of total fluid recovered to date by month or recovery event
- Site map with observed radius of influence
- Cumulative table of groundwater discharge by month or discharge event
- Table of depth to groundwater under static conditions, depth to groundwater under pumping conditions, and depth to pump intake for each recovery well

### **Soil Vapor Extraction (SVE)**

- Cumulative table of flow rate from each vapor extraction well and the total flow rate
- Cumulative table of soil vapor extraction operating time (clock-meter readings)
- Cumulative table of influent vapor concentrations from each extraction well and vapor recovery rate
- Cumulative table of effluent vapor concentrations
- Site map with observed radius of influence
- Cumulative table of vapor discharged
- Cumulative table of vacuum pressure at each well
- Cumulative table of pore volume exchange rate (show sample calculation)

### **Sparging/Enhanced Aerobic Bioremediation (EAB)**

- Cumulative table of injection rate in each sparging/injection well
- Cumulative table of sparging/injection pressure at each sparging/injection well
- Cumulative table of dissolved-oxygen concentration in each sparging/injection well and all adjacent observation wells or adjacent monitoring wells
- Site map with observed radius of influence
- Cumulative table of natural attenuation sample analysis results with sample locations and dates