

**MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY  
UNDERGROUND STORAGE TANK BRANCH**

**STANDARDIZATION  
OF HOURS  
FOR ASSESSMENT  
AND REMEDIATION  
TASKS FOR  
PROPOSAL SUBMITTALS**

**REQUESTED BY  
MDEQ ON OR AFTER  
11/1/2017**

**Revised 2/28/2018**

# Introduction

This document provides the personnel and the maximum allowable hours considered for proposals for projects, which are approved for reimbursement under the Mississippi Groundwater Protection Trust Fund for assessment and remediation tasks. If additional or alternative personnel are needed, or if the site conditions warrant additional hours, contact the Underground Storage Tank (UST) project manager to discuss the recommended changes prior to the submittal of the proposal. If an agreement is not reached, the standards in this document will apply. If an agreement is reached, then a written justifiable explanation for the change in personnel and/or increase in hours shall be submitted with the proposal.

However, if the maximum hours are not needed, then the Environmental Response Action Contractor (ERAC) shall submit the proposal to reflect these hours. If the ERAC recommends maximum hours in situations that do not require as many hours, then the project manager may recommend reductions in the proposal below the maximum allowable hours given in this document.

The activities included in this document at this time are as follows:

- Groundwater Sampling
- Preliminary Subsurface Investigation (PSI)
- Additional Subsurface Investigation (ASI)
- Discharge Permits
- Dual Phase Remediation Systems
- Vacuuming
- Bailing / Skimmers / Socks

**The ERAC shall include in the proposal any laboratory analysis required as discussed with the UST project manager. All trip blanks, equipment blanks, and duplicate samples shall be included in the proposal.**

## Activities Not Included

The UST Branch has established a scope of work (SOW) for the following assessment (these two are rarely used now), groundwater sampling, and monitoring well plugging activities. Standardized hours and maximum allowable cost have already been calculated for these SOWs. Therefore, these specific activities are not included in this document, because the ERAC is not required to submit a scope of work/cost estimate (SOW/CE) for **MDEQ SOWs**.

- Preliminary Subsurface Investigation (PSI) MDEQ SOW
- Limited Subsurface Investigation (LSI) MDEQ SOW
- Groundwater Sampling (GWS) MDEQ SOW
- Plugging monitoring wells (Plug) MDEQ SOW

**This document may be revised as additional standards are established and as the UST Branch deems necessary.**

## **For All Activities:**

### **A. Project Management Time**

Project Management Time includes making phone calls, scheduling and coordination of subcontractors, writing health and safety plans, ordering needed supplies, checking inventory and equipment.

### **B. Travel Time**

Use Google Maps to calculate the mileage and time based on the fastest route required to travel from the ERAC's office to the specific site. For the ERAC, use the address listed on the most recent ERAC Application/Update Application, unless the proposal states that the personnel will be coming from another office requiring less time. To calculate the round trip mileage, multiply the miles required to travel one-way by two. To calculate the round trip time, multiply the time required to travel one-way by two, then round up to the next 15 minute interval.

Labor for travel will be reimbursed at actual reasonable travel time up to a maximum of 8 hours round trip for approved personnel. Travel time for activities is reimbursed for one person only, unless designated and approved otherwise.

The mileage will be reimbursed up to a maximum of 500 miles for a round trip.

## **Reductions in Reimbursement/Penalties:**

All proposals (along with all reports) are subject to reductions in reimbursement or penalties for failure to provide the information required by the most recent associated MDEQ guidance documents, and/or failure to abide by the most recent MDEQ/UST Branch Manual of Standard Operating Procedures (SOP). Reduction in reimbursement or penalty can also be assessed by \$100 per calendar day for documents submitted to the MDEQ after a written deadline date established by the MDEQ.

## MISSISSIPPI UNDERGROUND STORAGE TANK BRANCH

**GROUNDWATER SAMPLING****Project Management**

Project Engineer/Geologist = 2 to 4 hours depending on the number and depth of wells

**On Site Activities****Time for an Environmental Technician:**

0.5 hour office time for travel preparation

Include Travel Time

Collecting groundwater samples from wells & recording groundwater elevations:

Well Depth	6 inch well	4 inch well	2 inch well	1 inch well
≤ 35 ft	1.25 hour / well	1.0 hour / well	0.75 hour / well	0.5 hour / well
>35 ft & <50 ft	1.5 hour / well	1.25 hour / well	1 hour / well	0.75 hour / well
≥50 ft	1.75 hour / well	1.5 hour / well	1.25 / well	1 hour / well

**The sampling activities include:** calculating well volumes, removing well covers, measuring for free product, measuring water depth and well depth, purging wells by bailer or pump, collecting groundwater samples, pouring groundwater into labeled containers (with preservatives, if necessary), collecting QA/QC samples, completing monitoring well sampling record form, completing chain of custody form, disposing of contaminated groundwater, and putting well covers back on.

**0.17 hour / well** if only recording groundwater elevations

**Equipment**

Oil / water interface probe

Bailers

Sampling Supplies (gloves, alconox, jars, string, rope, pumps, etc.)

For wells 25 feet or less, reimbursement for groundwater sampling will be based on hand purging. The ERAC may use a pump to purge the wells, but the tank owner may not request reimbursement for the pump. (For deeper wells, discuss with the MDEQ/UST project manager before submitting proposal.)

**Report Preparation**

Senior Engineer/Geologist = 2 hours  
 Staff Engineer/Geologist = 6 hours (Add 0.5 hour/well for more than 4 wells.)  
 CADD Operator = 2 hours  
 Clerical = 2 hours

## MISSISSIPPI UNDERGROUND STORAGE TANK BRANCH

**PRELIMINARY SUBSURFACE INVESTIGATION (PSI)****Project Management**

Project Engineer/Geologist = 4 hours

**Initial Assessment Activities**

Site history shall be performed before the PSI SOW/CE is prepared and submitted to MDEQ.

Staff Engineer/Geologist = 4 hours Site history (interview owner & review files)  
 Include Travel Time to Site  
 Include Travel Time to MDEQ Office for file review

Other assessment activities:

Staff Engineer/Geologist = 1 hour Utility survey  
 = 2 hours Water well survey & field verify wells  
 = 1 hour Vicinity survey  
 Field activities should be performed during drilling.

**ERAC Time for Drilling****Time for Staff Engineer / Geologist + Add Travel Time:**

Task	Conventional Drilling			Sonic Drilling		Direct-Push
	6 inch well	4 inch well	2 inch well	4 inch well	2 inch well	1 inch well
Boring drilled & grouted	0.15 hr / ft	0.1 hr / ft	0.075 hr / ft	0.09 hr / ft	0.07 hr / ft	0.05 hr / ft
Boring drilled & well installed	0.25 hr / ft	0.2 hr / ft	0.15 hr / ft	0.15 hr / ft	0.13 hr / ft	0.10 hr / ft

**Groundwater Sampling****Time for an Environmental Technician:**Refer to **On Site Activities** under **GROUNDWATER SAMPLING** on page 1.**Surveying**

Licensed Surveyors (provide 2 quotes unless otherwise approved by MDEQ)

Ground Penetrating Radar (provide quote)

**Slug Tests**

1- Staff Engineer/Geologist **AND**  
 1 - Env. Technician = each at 1 hour / well  
 (Perform during Groundwater Sampling, so add Staff Eng/Geo Travel Time.)

**Equipment**Refer to **Equipment** under **GROUNDWATER SAMPLING** on page 1.

Soil sampling supplies

PID/FID

**Offsite Access (if required)**

Include Travel Time

Staff Engineer/Geologist = 6 hours

Clerical = 1 hour

**Report Preparation**

Senior Engineer/Geologist = 4 hours

Staff Engineer/Geologist = 40 hours (Add 2 hours/well for more than 8 wells.)

-includes preparation of boring logs &amp; monitoring well schematics

CADD Operator = 8 hours for initial map (survey map) &amp; 1 hour/map for additional maps

Clerical = 9 hours

## MISSISSIPPI UNDERGROUND STORAGE TANK BRANCH

**ADDITIONAL SUBSURFACE INVESTIGATION (ASI)****Project Management**

Project Engineer/Geologist = 4 hours

**ERAC Time for Drilling****Time for Staff Engineer / Geologist + Add Travel Time:**

Task	Conventional Drilling			Sonic Drilling		Direct-Push
	6 inch well	4 inch well	2 inch well	4 inch well	2 inch well	1 inch well
Boring drilled & grouted	0.15 hr / ft	0.1 hr / ft	0.075 hr / ft	0.09 hr / ft	0.07 hr / ft	0.05 hr / ft
Boring drilled & well installed	0.25 hr / ft	0.2 hr / ft	0.15 hr / ft	0.15 hr / ft	0.13 hr / ft	0.10 hr / ft

**Groundwater Sampling****Time for an Environmental Technician:**Refer to On Site Activities under **GROUNDWATER SAMPLING** on page 1.**Surveying**

1- Staff Engineer/Geologist **AND**  
 1 - Env. Technician = each at 15 minutes / well  
 (Perform during drilling, so add Tech Travel Time.)

**OR**

If requested by MDEQ, Licensed Surveyors  
 (provide quote).

**Slug Tests**

1- Staff Engineer/Geologist **AND**  
 1 - Env. Technician = each at 1 hour / well

(Perform during Groundwater Sampling, so add  
 Staff Eng/Geo Travel Time.)

**Equipment**Refer to Equipment under **GROUNDWATER SAMPLING** on page 1.

Soil sampling supplies

PID/FID

Survey Equipment (if needed)

**Offsite Access (if required)**

Include Travel Time

Staff Engineer/Geologist = 6 hours

Clerical = 1 hour

**Report Preparation for other Phases**

Senior Engineer/Geologist = 4 hours

Staff Engineer/Geologist = 24 hours (Add 2 hours/well for more than 8 wells)

-includes preparation of boring logs &amp; monitoring well schematics

CADD Operator = 1 hour/map

Clerical = 6 hours

## MISSISSIPPI UNDERGROUND STORAGE TANK BRANCH

**DISCHARGE PERMITS****Collect Samples – if not done in assessment phase****Time for an Environmental Technician:**

Refer to On Site Activities under GROUNDWATER SAMPLING on page 1.

**Equipment – if Collecting Samples**

Refer to Equipment under GROUNDWATER SAMPLING on page 1.

**To Get Authorization from Offsite Sources**

Include Travel Time  
 Staff Engineer/Geologist = 6 hours  
 Clerical = 1 hour

**Time to Prepare the UST Groundwater Remediation General Permit**

A copy of the UST Notice of Intent shall be submitted to the MDEQ – EPD Division and the UST project manager in order for the invoice to be technically approved

Project Engineer/Geologist = 6 hours  
 Clerical = 2 hours

**Time to Prepare Site Specific Permit**

A copy of permit application shall be submitted to the MDEQ – EPD Division and the UST project manager in order for the invoice to be technically approved

Project Engineer/Geologist = 7 hours  
 CADD Operator = 2 hours  
 Clerical = 2 hours

## MISSISSIPPI UNDERGROUND STORAGE TANK BRANCH

**DUAL PHASE REMEDIATION SYSTEMS****Remediation System Startup**

Staff Engineer/Geologist OR Remediation System Technician = 12 hours + Travel Time

If system is leased, startup assistance from the system manufacturer may be included in the proposal.

**Trenching & Installation**

The Environmental Technician must measure trenching before and after completion. If the Environmental Technician is off by 15 % or more, then the tank owner may not be fully reimbursed for the ERAC's oversight of trenching activities. The ERAC installation oversight hours are determined based on the total number of on-site days not-to-exceed provided on the Construction Contractor Quote Summary. Also, include travel time.

**Groundwater Sampling****Time for an Environmental Technician:**

Refer to **On Site Activities** under **GROUNDWATER SAMPLING** on page 1.

**Monthly Operation and Maintenance****First Year of Operation:**

Include Travel Time

Routine site visits = total of 3 visits per month at a maximum of 2.5 hours per visit

- 2 visits for Remediation System Technician or Environmental Technician
- 1 visit for Staff Engineer/Geologist

For large number of wells, additional time may be approved for recording groundwater elevations and pneumatic readings.

**Subsequent Years:**

The ERAC shall base the proposed number of visits per month, number of hours per visit, and personnel on the actual O&M visits from the previous year by preparing a table with the previous year's associated dates, times, and personnel for each O&M site visit. This table must be included in the proposal. Also, include the System Cleaning in this table.

**System Cleaning & Maintenance**

Two Environmental Technicians at 8 hours each + Travel Time

For the first year, system cleaning may be proposed for once every triannual period. For additional years, the number of cleaning days per year will be decided on a site by site basis.

Reimbursement of the cleaning will be based on the submittal of the completed maintenance forms in the triannual report.

**Equipment**

Refer to Equipment under **GROUNDWATER SAMPLING** on page 1.

PID/FID for every visit

Survey Equipment (if needed)

pH Meter

**Project Management / Monthly Office Time**

Project Engineer/Geologist = 4 hours

Project Engineer/Geologist = 1 hour for Discharge Monitoring Report (DMR)

Clerical = 1 hour for DMR

**Startup Report or Triannual Report Preparation**

Senior Professional Expert = 1 hour

Senior Engineer/Geologist = 4 hours

Staff Engineer/Geologist = 16 hours (Add 0.5 hour/well for more than 8 wells)  
(includes: writing report, tables)

CADD Operator = 5 hours

Clerical = 6 hours



MISSISSIPPI UNDERGROUND STORAGE TANK BRANCH

# VACUUMING

## Project Management

Project Engineer/Geologist = 0.50 hours/event (for coordination of all vacuuming events)

## Environmental Technician

The ERAC may have an Environmental Technician at each vacuuming event.

Include Travel Time

The Environmental Technician will check for free product in the wells before and after the vacuuming is performed.

During the vacuuming, the Environmental Technician will collect PID/FID readings every 15 or 30 minutes as requested by the MDEQ UST project manager.

## On Site Time for Vacuum Truck, Vacuum Truck Operator, and ERAC's Environmental Technician

Use the table below to determine (1) the setup time before vacuuming begins, (2) actual vacuuming time, (3) time allowed for moving the vacuum truck between the wells that are being vacuumed, and (4) breakdown time after vacuuming is completed.

	Setup	Vacuuming	Moving Truck	Breakdown
Vacuum Truck	0 hr	ERAC and UST PM will discuss to determine which wells to vacuum from, and the total vacuuming time. (Minimum Vacuuming Time = 4 hours)	Only 1 well = 0 hr >1 well = 1 hr	0 hr
Vacuum Truck Operator	1 hr	<i>*Included in Vacuum Truck time above</i>	<i>*Included in Vacuum Truck time above</i>	1 hr
Environmental Technician	1 hr	Allow same hours as Vacuum Truck above	Allow same hours as Vacuum Truck above	1 hr

\*Vacuum truck rate includes the reimbursement for the vacuum truck operator's time.

## Equipment

- 1 – Oil/water interface probe
- 1 – PID/FID

Vacuum Truck

## Report Preparation

For the Final Report,

- Senior Engineer /Geologist = 2 hours
- Staff Engineer/Geologist = 2 hours/event with a maximum of 16 hours
- CADD Operator = 2 hours
- Clerical = 6 hours

The number of events will determine total report time for the Staff Engineer/Geologist.

# BAILING / SKIMMERS / SOCKS

## Project Management

Project Engineer/Geologist = 2 hours

## On Site Activities

### Time per trip for an Environmental Technician:

Include Travel Time

0.25 hour / well to measure depth to free product/water, bail, install sock/skimmer, remove sock/skimmer, and replace sock/skimmer as needed.

**0.17 hour / well** if only recording groundwater elevations

## Equipment (as required)

Absorbent Socks

Oil / water interface probe

Bailers

Skimmers

55 gallon drum for storage of used socks or free product until disposal

## Disposal of Socks/Product

Disposal of the used socks

Vacuum truck to recover product

## Report Preparation

Senior Engineer/Geologist	=	2 hours
Staff Engineer/Geologist	=	6 hours
CADD Operator	=	1 hours
Clerical	=	3 hours