

UST PSTEAF REIMBURSEMENT RATES
BREAKDOWN



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Division of Waste Management
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1.0 INTRODUCTION

The UST PSTEAF Reimbursement Rates establishes reimbursement rates for eligible owners and operators of petroleum underground storage tanks (USTs) for permanent closure costs associated with the Small Owners Tank Removal Account (SOTRA) and costs for the completion of corrective action performed by an eligible company or partnership in accordance with 401 KAR Chapter 42. This document establishes the formulated task rates to be reimbursed for specific tasks performed in accordance with 401 KAR Chapter 42. This document also lists rates for equipment and personnel to perform a specific task that does not have a formulated task rate. A cost estimate shall be based on the rates established in this document, as applicable.

The formulated task rates prescribed in this document include, but are not limited to, facility visits, scheduling, oversight, labor, equipment and material needed in order to perform the listed actions.

The cabinet shall not reimburse an owner and operator more than the formulated task rate specified in this document except as provided in 401 KAR 42:250, Section 14.

An eligible company or partnership shall receive a fifteen percent (15%) markup for the following costs:

- Employment of an unaffiliated subcontractor or other vendor for costs that do not have a formulated task rate; or
- Purchase of materials associated with a task for which there is not a formulated task rate.

Reimbursement shall be made in accordance with formulated task rates and rates identified within this document. Refer to 401 KAR 42:250, Section 13, for eligible and ineligible costs.

2.0 FORMULATED TASK RATES FOR SMALL OWNER TANK REMOVAL ACCOUNT (SOTRA)

The following section identifies the formulated task rates allowed, per task performed, for performing permanent closure in association with a SOTRA Application for Assistance in accordance with 401 KAR 42:330. Unless otherwise noted, the following formulated task rates prescribed in this section shall include, but are not limited to, facility visits, scheduling, oversight personnel (one individual), labor, equipment and material needed in order to perform the listed tasks.

2.1 Permanent Closure Cost Matrix

The following table lists formulated task rates associated with permanent closure. Reimbursement from SOTRA shall be determined from the lesser of two (2) dollars and eighty (80) cents per gallon of tank capacity or the matrix table below. The matrix table costs include:

- A. Tank system removal, cleaning, and disposal;
- B. Closure-in-place requirements, including inert solid materials used to backfill the tank;
- C. Permanent closure of thirty-five (35) feet of associated piping outside of the tank pit;
- D. Removal of the pump island and canopy;
- E. Drumming of cleaning material;
- F. Removal of water below screening levels from the excavation zone;
- G. Backfilling to return the excavation to grade to replace tank void;
- H. Concrete or asphalt surface removal;
- I. Equipment and material necessary for the permanent closure;
- J. Preparation of a permit, if required for permanent closure;
- K. Excavation and loading of material;
- L. Collection of samples, including domestic-use wells, domestic-use springs, and domestic-use cisterns within a 100-meter radius of the UST system; and
- M. Labor charges relating to items listed above.

Number of Tanks in Pit	Size of Largest Tank in Pit (<i>gallons</i>)			
	Less than 3,100	3,101 to 5,100	5,101 to 10,000	Greater than 10,000
1	\$4,212	\$4,774	\$6,880	\$7,582
2	\$6,880	\$7,722	\$10,390	\$12,074
3	\$8,986	\$10,530	\$13,619	\$16,567
4	\$11,092	\$12,636	\$16,567	\$19,656
5	\$13,198	\$14,742	\$19,375	\$23,728
Each Extra	\$2,106	\$2,106	\$2,527	\$3,089
If more than one (1) tank pit is located on a facility, the reimbursement shall be calculated by adding the matrix table cost for each pit.				
These formulated task rates are based on invoices received for closure of UST systems.				
Permanent closure of piping greater than 35 feet outside the excavation zone.				\$20 per foot (<i>per tank pit</i>)
This formulated task rate is based on invoices received for permanent closure of piping.				

2.2 Reporting

Formulated task rates for reporting include, but are not limited to, personnel time for preparation of the report (narrative, figures, maps, tables, amended Classification Guides, etc.), secondary reviews, modifications, revisions, any re-submittals necessary to obtain cabinet approval, clerical support, and all other direct costs such as copying, binding and delivery (e.g. electronic submittals, mailing, faxing, hand delivery, etc.). This shall include the cost of preparing a Classification Guide.

Closure Assessment Report for SOTRA (with DWM 4261 and DWM 4262)			\$2,260
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	3.00	\$384.90
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (Geologist, Engineer, Scientist)	\$104.98	13.00	\$1,364.74
Drafting [figure support]	\$69.98	3.50	\$244.93
Admin. /Clerical [copy, filing, etc....]	\$52.49	4.00	\$209.96
Misc. [materials etc....]	\$54.00	1.00	\$54.00
TOTAL			\$2,258.53

2.3 Mobilization/Demobilization and Mileage

The following table lists formulated task rates associated with the mobilization and demobilization of heavy equipment and drilling equipment. One mobilization and demobilization charge for oversight personnel and heavy equipment (including support vehicle), if required, shall be allowed per directive. This includes personnel time and equipment time prior to and after travel time. Mileage shall be based on one-way miles from the State Fire Marshal's Office (SFMO) certified remover's nearest office to the facility. One payment (at the per mile rate listed below) shall be made for each task directed by the cabinet regardless of the number of vehicles or pieces of equipment mobilized.

Mileage allowed per mile for vehicle and oversight personnel. Also used to calculate additional local miles for per diem as allowed in Section 3.2 in this manual.	\$2.20 per mile (maximum \$2,200)
<p><u>Assumption</u> Vehicle travels an average of 55 miles per hour at 14 miles per gallon. Fuel costs \$4 per gallon.</p> <p><u>Calculations</u> \$104.98 hourly rate for project manager divided by 55 miles per hour = \$1.91 per mile 14 miles per gallon at \$4 per gallon = \$0.29 per mile</p> <p>Total of bold items above = \$2.20 per mile for personnel and fuel cost.</p>	

Mileage allowed per mile for heavy equipment: includes all equipment, trailers and personnel needed to transport equipment.	\$5.60 per mile (minimum of \$540)
<u>Assumption</u> Vehicle travels an average of 50 miles per hour.	
<u>Calculations</u> \$108 per hour for track hoe and trailer \$52.49 hourly rate for equipment operator \$108 plus \$52.49 = \$106.49 \$160.49 divided by 50 miles per hour = \$3.21 per mile	
\$65 per hour for backhoe and trailer \$52.49 hourly rate for equipment operator \$65 plus \$52.49 = \$117.49 \$117.49 divided by 50 miles per hour = \$2.35 per mile	
Total of bold items above = \$5.56 per mile. \$5.56 is adjusted to \$5.60 per mile.	

2.4 Transportation and Disposal of Generated Waste Generated at Permanent Closure

The following table lists formulated task rates associated with the transportation and disposal of drums, including all labor, equipment and material costs.

Disposal of drummed tank waste, per drum	Actual cost at point of disposal plus a maximum 15% markup
This formulated task rate is based on invoices received for the disposal of a drum.	
Transportation of drummed tank waste, purged water or soil cuttings, per drum: includes, but is not limited to, all labor, equipment, personnel, scheduling, completion of documentation, and oversight if needed.	\$120 per drum
This formulated task rate is based on invoices received for the transportation of a drum.	
Removal and transportation of tank contents associated with SOTRA closure activities.	\$0.27 per gallon (minimum of \$650)
This formulated task rate is based on invoices received for the transportation of a drum.	
Disposal of tank contents associated with SOTRA closure activities	\$0.49 per gallon
This formulated task rate is based on invoices received for the disposal of tank contents.	
Fee for EPA Generator ID Number (if necessary)	\$324 each
This formulated task rate is based on the fee for a generator ID number.	

2.5 Transportation and Disposal of Material, and Replacement of Backfill within the Excavation Zone

The following table lists formulated task rates associated with excavation, disposal/treatment, transportation, and replacement of material contaminated above screening levels, or otherwise directed in writing by the cabinet. This includes all necessary labor, oversight personnel (one individual), equipment, waste characterization, and material to perform the tasks, as well as the transportation and disposal of asphalt and concrete.

Backfill from borrow area, per ton: includes excavation, loading, weighing, permitting, transportation and restoration of borrow area. Reimbursement shall be based on weigh tickets to verify tonnage.	\$12.60 per ton
<p><u>Assumption</u> A dump truck can carry 22.5 tons of material per hour and the borrow area is within 10 miles of the facility.</p> <p><u>Calculations</u> \$92.49 per hour for a dump truck and an operator \$92.49 per hour divided by 22.5 tons = \$4.11 per ton for loading and transportation \$65 per hour for a backhoe plus \$52.49 for an equipment operator = \$117.49 \$117.49 divided by 22.5 tons = \$5.22 per ton \$4.11 per ton for loading and transportation plus \$5.22 per ton for excavation and loading = \$9.33 per ton \$3.24 per ton to restore borrow area</p> <p>Total of the bold items above = \$12.57 per ton. \$12.57 is adjusted to \$12.60 per ton.</p>	

Backfill material, per ton: includes the purchase and transportation of backfill material to replace the contaminated material that was disposed or treated. Reimbursement shall be based on weigh tickets, to verify tonnage, to the nearest quarry.

Nearest quarry within 50 one-way miles of the facility	\$21 per ton
Nearest quarry 50 to 100 one-way miles from the facility	\$28 per ton
Nearest quarry over 100 one-way miles from the facility	\$35 per ton

Assumptions

The average cost per ton for backfill material is **\$11.88 per ton** (includes tax and 15% markup).

A dump truck travels 50 miles per hour with an average of 3 miles per gallon.

Fuel costs \$4 per gallon

A dump truck will transport 22.5 tons

A dump truck and an operator costs \$92.49 per hour

This is limited to one-way mileage based on the assumption that backfill material will be picked up on the return trip from a disposal facility.

Calculations for Nearest Quarry within 50 One-way Miles of the Facility

50 miles divided by 3 miles per gallon = 16.67 gallons

16.67 gallons multiplied by \$4 per gallon = \$66.68 for fuel for a trip of 50 miles

1-hour for dump truck and operator (\$92.49 per hour) divided by 22.5 tons = **\$4.11 per ton**

\$66.68 for fuel for a trip of 50 miles divided by 22.5 tons = **\$2.96 per ton for fuel**

\$104.98 hourly rate for project manager (for scheduling) multiplied by 2 hours = \$209.96

\$209.96 divided by 8 hours = \$26.25 per hour

\$26.25 per hour divided by 22.5 tons = **\$1.17 per ton**

The total of the bold items above = \$20.12 per ton. \$20.12 is adjusted to \$21 per ton.

Calculations for Nearest Quarry 50 to 100 One-way Miles from the Facility

100 miles divided by 3 miles per gallon = 33.33 gallons

33.33 gallons multiplied by \$4 per gallon = \$133.32 for fuel for a trip of 100 miles

2 hours for dump truck and operator (\$92.49 per hour) = \$184.98

\$184.98 divided by 22.5 tons = **\$8.22 per ton**

\$133.32 for fuel for a trip of 100 miles divided by 22.5 tons = **\$5.93 per ton for fuel**

\$104.98 hourly rate for project manager (for scheduling) multiplied by 2 hours = \$209.96

\$209.96 divided by 8 hours = \$26.25 per hour

\$26.25 per hour divided by 22.5 tons = **\$1.17 per ton**

The total of the bold items above = \$28 per ton.

Calculations for Nearest Quarry over 100 One-way Miles from the Facility

150 miles divided by 3 miles per gallon = 50 gallons

50 gallons multiplied by \$4 per gallon = \$200 for fuel for a trip of 150 miles

3 hours for dump truck and operator (\$92.49 per hour) divided by 22.5 tons = **\$12.33 per ton**

\$200 for fuel for a trip of 150 miles divided by 22.5 tons = **\$8.89 per ton for fuel**

\$104.98 hourly rate for project manager (for scheduling) multiplied by 2 hours = \$209.96

\$209.96 divided by 8 hours = \$26.25 per hour

\$26.25 per hour divided by 22.5 tons = **\$1.17 per ton**

The total of the bold items above = \$34.27 per ton. \$34.27 is adjusted to \$35 per ton.

Transportation and disposal of contaminated material at a permitted disposal facility or permitted treatment facility: includes the transportation and disposal of asphalt and concrete. Reimbursement shall be based on weigh tickets, to verify tonnage, to the nearest quarry.

Nearest landfill within 50 one-way miles of the facility	\$65 per ton
Nearest landfill 50 to 100 one-way miles from the facility	\$80 per ton
Nearest landfill over 100 one-way miles from the facility	\$94 per ton

This includes transportation and disposal in a landfill of debris generated as a result of permanent closure for the facility. Debris includes asphalt, concrete and contaminated material. Reimbursement is based upon the nearest landfill to determine the allowable rate.

Assumptions

The cost per ton for disposal or treatment at a permitted facility is **\$50.73** (includes tax and 15% markup).

A dump truck travels 50 miles per hour with an average of 3 miles per gallon.

Fuel costs \$4 per gallon.

A dump truck will transport 22.5 tons.

A dump truck and an operator costs \$92.49 per hour

The nearest landfill is within 50 miles.

A round trip will be required.

Calculations for Nearest Landfill 50 One-way Miles from the Facility

50 miles divided by 3 = 16.67 gallons

16.67 gallons multiplied by \$4 per gallon = \$66.68 for fuel

1-hour for dump truck and operator (\$92.49 per hour) divided by 22.5 tons = **\$4.11 per ton**

\$66.68 for fuel for a trip of 50 miles divided by 22.5 tons = **\$2.96 per ton for fuel**

The total of the bold items above = \$7.07 per ton. \$7.07 multiplied by 2 = \$14.14 per ton for round trip.

\$50.73 per ton plus \$14.08 per ton for round trip = \$64.87 per ton. \$64.87 is adjusted to \$65 per ton.

Calculations for Nearest Landfill 50 to 100 One-way Miles from the Facility

100 miles divided by 3 = 33.33 gallons

33.33 gallons multiplied by \$4 per gallon = \$133.32 for fuel

2 hours for dump truck and operator (\$92.49 per hour) = \$184.98

\$184.98 divided by 22.5 tons = **\$8.22 per ton**

\$133.32 for fuel for a trip of 100 miles divided by 22.5 tons = **\$5.93 per ton for fuel**

The total of the bold items above = \$14.15 per ton. \$14.15 multiplied by 2 = \$28.30 per ton for round trip.

\$50.73 per ton plus \$28.30 per ton for round trip = \$79.03 per ton. \$79.03 is adjusted to \$80 per ton.

Calculations for Nearest Landfill Over 100 One-way Miles from the Facility

150 miles divided by 3 miles per gallon = 50 gallons

50 gallons multiplied by \$4 per gallon = \$200 for fuel for a trip of 150 miles

3 hours for dump truck and operator (\$92.49 per hour) divided by 22.5 tons = **\$12.33 per ton**

\$200 for fuel for a trip of 150 miles divided by 22.5 tons = **\$8.89 per ton for fuel**

The total of the bold items above = \$21.22 per ton. \$21.22 multiplied by 2 = \$42.44 per ton for round trip.

\$50.73 per ton plus \$42.44 per ton for round trip = \$93.17 per ton. \$93.17 is adjusted to \$94 per ton.

2.6 Water/Product Recovery and Management

The following table lists formulated task rates associated with the transportation, treatment, recycling, or disposal of water contaminated above screening levels, including all labor, oversight personnel (one individual), equipment and material needed in order to perform the tasks.

Removal and transportation of contaminated water from within the excavation zone, during permanent closure activities conducted after October 1, 2011.	\$0.27 per gallon (minimum of \$650)
<u>Assumption</u> The volume of a typical tank truck is 2,400 gallons.	
<u>Calculations</u> The cost to pump and transport contaminated pit water or groundwater minimum rate is based on the hourly rate of \$81 per hour (based on invoices received) for the tank truck and operator multiplied by 8 hours = \$648 for the daily rate for a tank truck and operator. \$648 divided by 2,400 gallons (the volume of the tank truck) = \$0.27 per gallon (with a minimum reimbursement of \$650).	
Disposal of contaminated water at a wastewater treatment plant or a recycling facility includes all sampling and laboratory analysis required by the permitted facility, and associated charges, per gallon.	\$0.49 per gallon
This formulated task rate is based on invoices received for the disposal of contaminated water.	

2.7 Laboratory Parameters

The following table lists formulated task rates associated with laboratory parameters for samples collected and analyzed. These formulated task rates include, but are not limited to the cost of preparing the samples for shipment, the cost of shipment, and sample containers.

These formulated task rates are based on invoices received.	
BTEX (Method 8021): MTBE reporting for domestic-use sources as described in Section 4.11 of the UST Corrective Action Manual (incorporated by reference in 401 KAR 42:060).	\$86 per sample
BTEX (Method 8260): MTBE reporting for domestic-use sources as described in Section 4.11 of the UST Corrective Action Manual (incorporated by reference in 401 KAR 42:060).	\$100 per sample
BTEX, Trip Blank (water only)	\$100 per sample
Grain Size Analysis	\$216 per sample
Ignitability	\$59 per sample
Lead, Dissolved (groundwater)	\$54 per sample
Lead, Total (soil)	\$54 per sample
PAH (Method 8270)	\$228 per sample
Paint Filter Test	\$52 per sample
pH	\$43 per sample
Waste Characterization	Actual cost plus 15%

2.8 Point of Compliance Soil Borings

The following table lists formulated task rates associated with the advancement of soil borings for Point of Compliance groundwater assessments in accordance with Section 4.14 of the UST Corrective Action Manual, incorporated by reference in 401 KAR 42:060. These costs include all equipment and material needed in order to perform the tasks, per diem for drilling personnel, and oversight personnel (one individual). Costs associated with traffic control (if necessary) are included in the listed costs.

<p>Soil borings (applies to those borings where monitoring wells are not required in the same location): includes labor, water supply, personnel time for soil sample collection, backfilling of soil boring, and decontamination of equipment. An additional \$3 per foot will be added for each soil boring over 30 feet.</p>	<p>\$335 per soil boring up to 30 feet in depth (minimum \$760)</p>
<p>This includes direct-push equipment, two-man drill crew and project manager (for oversight), equipment decontamination, backfilling of void and soil sample collection. This rate only applies when a soil boring is not converted to a monitoring well.</p> <p><u>Assumptions</u> A 30-foot boring is installed using direct push equipment. Continuous soil samples are collected. 8 borings can be installed in an 8-hour day.</p> <p><u>Calculations</u> \$104.98 hourly rate for project manager (for oversight) multiplied by 8 hours = \$839.84 per day \$839.84 divided by 8 borings = \$104.98 per soil boring</p> <p>\$1,296 for direct push equipment divided by 8 borings = \$162 per boring</p> <p>\$330 per day for a two-man drill crew divided by 8 = \$41.25 per boring</p> <p>\$104.98 hourly rate for project manager (for scheduling) multiplied by 2 hours = \$209.96 per day \$209.96 per day divided by 8 borings = \$26.25 per boring</p> <p>Total of bold items above = \$334.48 per boring. \$334.48 is adjusted to \$335 per boring (with a minimum reimbursement of \$760). An additional \$3 per foot will be added to each boring over 30 feet.</p>	

3.0 FORMULATED TASK RATES FOR CORRECTIVE ACTION

3.1 Mobilization/Demobilization and Mileage

The following table lists formulated task rates associated with the mobilization and demobilization of heavy equipment and drilling equipment. One mobilization and demobilization charge for oversight personnel and heavy equipment (including support vehicle), if required, shall be allowed per directive. This includes personnel time and equipment time prior to and after travel time. Mileage shall be based on one-way miles from the eligible company's or partnership's nearest office to the facility. One payment (at the per mile rate listed below) shall be made for each task directed by the cabinet regardless of the number of vehicles or pieces of equipment mobilized.

Mileage allowed per mile for vehicle and oversight personnel. Also used to calculate additional local miles for per diem as allowed in Section 3.2 of this manual.	\$2.20 per mile <i>(maximum \$2,200)</i>
<p><u>Assumption</u> Vehicle travels an average of 55 miles per hour at 14 miles per gallon. Fuel costs \$4 per gallon.</p> <p><u>Calculations</u> \$104.98 hourly rate for project manager divided by 55 miles per hour = \$1.91 per mile 14 miles per gallon at \$4 per gallon = \$0.29 per mile</p> <p>Total of bold items above = \$2.20 per mile for personnel and fuel cost.</p>	
Mileage allowed per mile for heavy equipment: includes all equipment, trailers and personnel needed to transport equipment.	\$5.60 per mile <i>(minimum of \$540)</i>
<p><u>Assumption</u> Vehicle travels an average of 50 miles per hour.</p> <p><u>Calculations</u> \$108 per hour for track hoe and trailer \$52.49 hourly rate for equipment operator \$108 plus \$52.49 = \$160.49 \$160.49 divided by 50 miles per hour = \$3.21 per mile</p> <p>\$65 per hour for backhoe and trailer \$52.49 hourly rate for equipment operator \$65 plus \$52.49 = \$117.49 \$117.49 divided by 50 miles per hour = \$2.35 per mile</p> <p>Total of bold items above = \$5.56 per mile. \$5.56 is adjusted to \$5.60 per mile.</p>	

Mobilization and demobilization of drilling equipment and support vehicle: includes drill rig or direct-push unit, two-man crew, labor for gathering of equipment, tools, travel time, and all steam cleaning.	\$5.60 per mile <i>(minimum of \$540)</i>
<u>Assumption</u> Vehicle travels an average of 50 miles per hour.	
<u>Calculations</u> \$108 per hour for track hoe and trailer \$52.49 hourly rate for equipment operator \$108 plus \$52.49 = \$160.49 \$160.49 divided by 50 miles per hour = \$3.21 per mile	
\$65 per hour for backhoe and trailer \$52.49 hourly rate for equipment operator \$65 plus \$52.49 = \$117.49 \$117.49 divided by 50 miles per hour = \$2.35 per mile	
Total of bold items above = \$5.56 per mile. \$5.56 is adjusted to \$5.60 per mile.	

3.2 Per Diem

The following table lists formulated task rates for per diem costs for an individual providing supervisory oversight at the facility. Per diem reimbursement for non-supervisory personnel has been integrated into the formulated task rates established. Mileage shall be based on one-way miles from the eligible company or partnerships nearest office to the facility. Per diem shall be determined based upon the following:

A facility must be more than 55 one-way miles from the eligible company or partnership's nearest office, or as determined by the cabinet, and one (1) of the following:	
For over-excavation, a one (1) day per diem per 500 tons (total tonnage expected must exceed 500 tons).	\$165 per day
Any other field work required by the cabinet at a facility (including travel-time) that would constitute more than a 10-hour day or as determined by the cabinet.	
This assumes \$122 per night for hotel (average of rates based on the following areas: Lexington, Louisville, Ashland, and Bowling Green). This includes \$43 per day for meals (\$8 = breakfast, \$12 = lunch, \$23 = dinner). Total of bold items above = \$165 per day	
Additional \$2.20 per mile for mileage when per diem is allowed: maximum thirty (30) local miles.	\$70 for each Per Diem
<u>Assumption</u> Vehicle travels an average of one-way 15 miles locally per day. Thirty (30) miles round trip per day.	
<u>Calculations</u> \$2.20 per mile multiplied by thirty (30) miles = \$66 for each per diem. \$66 is adjusted to \$70 for each per diem.	

3.3 Equipment

The following table lists formulated task rates for necessary equipment needed to complete directed actions by the cabinet.

Field Equipment: includes field screening equipment necessary during site investigation, corrective action, or over-excavation activities for a facility (i.e., PID, water level indicator, LEL meter, multi-meter, or other equipment combinations as required.	\$165 per day
This formulated task rate is based on commonly used equipment during field activities.	
Field Equipment for Vapor Intrusion Assessment: includes field screening equipment necessary during vapor intrusion assessment activities for a facility: includes field equipment costs associated with site investigation and corrective action activities performed in conjunction with the vapor intrusion assessment.	\$220 per day
This formulated task rate is based on commonly used equipment during vapor investigation field activities.	
Tools of the Trade: includes, but is not limited to, camera, log books, measuring wheels, personnel protective and safety equipment, cones, barricades, signage, and other tools or devices typically used by environmental contractors. Allowed for each day of fieldwork at the facility.	\$55 per day
This formulated task rate is based on commonly used tools of the trade and is consistent with other states.	

3.4 Asphalt/Concrete Removal and Disposal

Removal of Asphalt	
Asphalt (3-inch thickness, per square foot)	\$0.54 per sq. ft.
Cost of additional thickness per inch	\$0.16 per sq. ft.
This formulated task rate is based on invoices received for asphalt removal.	
Removal of Concrete (concrete pad, per square foot)	
4-inch thickness	\$0.54 per sq. ft.
6-inch thickness	\$0.81 per sq. ft.
9-inch thickness	\$1.62 per sq. ft.
10-inch or more thickness	\$4.21 per sq. ft.
With rebar	Add 15% to cost per sq. ft.
This formulated task rate is based on invoices received for concrete removal.	
Transportation and disposal of asphalt or concrete at a permitted disposal facility. Reimbursement shall be based on weigh tickets from the permitted disposal facility to verify tonnage to the nearest landfill.	
Nearest landfill within 50 one-way miles of the facility	\$65 per ton
Nearest landfill 50 to 100 one-way miles from the facility	\$79 per ton
Nearest landfill over 100 one-way miles from the facility	\$93 per ton
Refer to the cost breakdown under Section 2.5 of this manual.	

3.5 Material Removal, Disposal/Treatment, Transportation and Replacement

The following table lists formulated task rates associated with excavation, disposal/treatment, transportation and replacement of material contaminated above screening levels or otherwise directed in writing by the cabinet, including all labor, oversight personnel (one individual), equipment, waste characterization and material needed in order to perform the tasks.

Excavation of contaminated material (per ton)	\$5.75 per ton <i>(minimum of \$2,500)</i>
<p>This includes excavating contaminated material with the use of a tracked excavator, an operator, a laborer and a project manager.</p> <p><u>Assumption</u> 500 tons can be excavated in an 8-hour day.</p> <p><u>Calculations</u> \$65 per hour for backhoe multiplied by 8 hours = \$520 \$52.49 hourly rate for equipment operator multiplied by 8 hours = \$419.92 \$46.66 hourly rate for laborer multiplied by 8 hours = \$373.28 \$104.98 hourly rate for project manager (for scheduling) multiplied by 2 hours = \$209.96 \$104.98 hourly rate for project manager (for oversight) multiplied by 8 hours = \$839.84 \$165 for two-man crew for per diem = \$330 \$162 for additional traffic control Total of bold items above = \$2,855 per ton.</p> <p>\$2,855 divided by 500 tons = \$5.71 per ton. \$5.71 is adjusted to \$5.75 per ton (with a minimum reimbursement of \$2,500).</p>	
Backfill from borrow area (per ton): includes excavation, loading, weighing, permitting, transportation, and restoration of borrow area. Reimbursement shall be based on weigh tickets to verify tonnage of excavated material disposed.	\$12.60 per ton
<p><u>Assumption</u> A dump truck can carry 22.5 tons of material per hour and the borrow area is within 10 miles of the facility.</p> <p><u>Calculations</u> \$92.49 per hour for a dump truck and an operator \$92.49 per hour divided by 22.5 tons = \$4.11 per ton for loading and transportation \$65 per hour for a backhoe plus \$52.49 for an equipment operator = \$117.49 \$117.49 divided by 22.5 tons = \$5.22 per ton \$4.11 per ton for loading and transportation plus \$5.22 per ton for excavation and loading = \$9.33 per ton \$3.24 per ton to restore borrow area</p> <p>Total of the bold items above = \$12.57 per ton. \$12.57 is adjusted to \$12.60 per ton.</p>	

Backfill material, per ton: Reimbursement shall be based on weigh tickets, to verify tonnage, from the nearest quarry.	
Nearest quarry within 50 one-way miles of the facility	\$21 per ton
Nearest quarry 50 to 100 one-way miles from the facility	\$28 per ton
Nearest quarry over 100 one-way miles from the facility	\$35 per ton
<p><u>Assumptions</u> The average cost per ton for backfill material is \$11.88 per ton (includes tax and 15% markup). A dump truck travels 50 miles per hour with an average of 3 miles per gallon. Fuel costs \$4 per gallon A dump truck will transport 22.5 tons A dump truck and an operator costs \$92.49 per hour This is limited to one-way mileage based on the assumption that backfill material will be picked up on the return trip from a disposal facility.</p> <p><u>Calculations for Nearest Quarry within 50 One-way Miles of the Facility</u> 50 miles divided by 3 miles per gallon = 16.67 gallons 16.67 gallons multiplied by \$4 per gallon = \$66.68 for fuel for a trip of 50 miles 1-hour for dump truck and operator (\$92.49 per hour) divided by 22.5 tons = \$4.11 per ton \$66.68 for fuel for a trip of 50 miles divided by 22.5 tons = \$2.96 per ton for fuel \$104.98 hourly rate for project manager (for scheduling) multiplied by 2 hours = \$209.96 \$209.96 divided by 8 hours = \$26.25 per hour \$26.25 per hour divided by 22.5 tons = \$1.17 per ton</p> <p>The total of the bold items above = \$20.12 per ton. \$20.12 is adjusted to \$21 per ton.</p> <p><u>Calculations for Nearest Quarry 50 to 100 One-way Miles from the Facility</u> 100 miles divided by 3 miles per gallon = 33.33 gallons 33.33 gallons multiplied by \$4 per gallon = \$133.32 for fuel for a trip of 100 miles 2 hours for dump truck and operator (\$92.49 per hour) = \$184.98 \$184.98 divided by 22.5 tons = \$8.22 per ton \$133.32 for fuel for a trip of 100 miles divided by 22.5 tons = \$5.93 per ton for fuel \$104.98 hourly rate for project manager (for scheduling) multiplied by 2 hours = \$209.96 \$209.96 divided by 8 hours = \$26.25 per hour \$26.25 per hour divided by 22.5 tons = \$1.17 per ton</p> <p>The total of the bold items above = \$28 per ton.</p> <p><u>Calculations for Nearest Quarry over 100 One-way Miles from the Facility</u> 150 miles divided by 3 miles per gallon = 50 gallons 50 gallons multiplied by \$4 per gallon = \$200 for fuel for a trip of 150 miles 3 hours for dump truck and operator (\$92.49 per hour) divided by 22.5 tons = \$12.33 per ton \$200 for fuel for a trip of 150 miles divided by 22.5 tons = \$8.89 per ton for fuel \$104.98 hourly rate for project manager (for scheduling) multiplied by 2 hours = \$209.96 \$209.96 divided by 8 hours = \$26.25 per hour \$26.25 per hour divided by 22.5 tons = \$1.17 per ton</p> <p>The total of the bold items above = \$34.27 per ton. \$34.27 is adjusted to \$35 per ton.</p>	

<p>Install, compact, and grade backfill using a vibratory sheepsfoot compactor, per ton. Reimbursement shall be based upon the weight of material as determined above.</p>	<p>\$5.25 per ton</p>
<p><u>Assumptions</u> 500 tons of backfill material can be placed in one 8-hour day with a backhoe and compaction with a vibratory sheepsfoot compactor.</p> <p><u>Calculations</u> \$65 per hour for backhoe multiplied by 8 hours = \$520 \$520 divided by 500 tons = \$1.04 per ton \$52.49 hourly rate for equipment operator multiplied by 8 hours = \$419.92 \$419.92 divided by 500 tons = \$0.84 per ton</p> <p>\$460 per day for a vibratory sheepsfoot compactor divided by 500 tons = \$0.92 per ton \$46.66 hourly rate for laborer multiplied by 8 hours = \$373.28 \$373.28 divided by 500 tons = \$0.75 per ton \$104.98 hourly rate for project manager (for oversight) multiplied by 8 hours = \$839.84 \$839.84 divided by 500 tons = \$1.68 per ton</p> <p>The total of the bold items above = \$5.23 per ton. \$5.23 is adjusted to \$5.25 per ton.</p>	
<p>Trenching (per linear foot)</p>	<p>\$25 per ln. ft. at 5 feet of depth</p>
<p><u>Assumptions</u> Trenches are twenty-four (24) inches wide and 5 feet deep. 80 feet of trenching can be completed in one 8-hour day.</p> <p>\$52.49 hourly rate for equipment operator multiplied by 8 hours = \$419.92 \$104.98 hourly rate for project manager (for oversight) multiplied by 8 hours = \$839.84 \$194.40 per day for a mini-excavator \$104.98 hourly rate for project manager (for scheduling) multiplied by 3 hours = \$314.94 The total of the bold items above = \$1,769.10 per day</p> <p>\$1,769.10 per day divided by 80 feet of trenching = \$22.11 per linear foot for each 5 feet depth. \$22.11 is adjusted to \$25 per linear foot for each 5 feet of depth.</p>	

Transportation and disposal of contaminated material at a permitted disposal facility or permitted treatment facility. Reimbursement shall be based on weigh tickets, to verify tonnage, to the nearest landfill.

Nearest landfill within 50 one-way miles of the facility	\$65 per ton
Nearest landfill 50 to 100 one-way miles from the facility	\$80 per ton
Nearest landfill over 100 one-way miles from the facility	\$94 per ton

This includes transportation and disposal in a landfill of debris generated as a result of corrective action for the facility. Debris includes asphalt, concrete and contaminated material. Reimbursement is based upon the nearest landfill to determine the allowable rate.

Assumptions

The cost per ton for disposal or treatment at a permitted facility is **\$50.73** (includes tax and 15% markup).

A dump truck travels 50 miles per hour with an average of 3 miles per gallon.

Fuel costs \$4 per gallon.

A dump truck will transport 22.5 tons.

A dump truck and an operator costs \$92.49 per hour

The nearest landfill is within 50 miles.

A round trip will be required.

Calculations for Nearest Landfill 50 One-way Miles from the Facility

50 miles divided by 3 = 16.67 gallons

16.67 gallons multiplied by \$4 per gallon = \$66.68 for fuel

1-hour for dump truck and operator (\$92.49 per hour) divided by 22.5 tons = **\$4.11 per ton**

\$66.68 for fuel for a trip of 50 miles divided by 22.5 tons = **\$2.96 per ton for fuel**

The total of the bold items above = \$7.07 per ton. \$7.07 multiplied by 2 = \$14.14 per ton for round trip.

\$50.73 per ton plus \$14.14 per ton for round trip = \$64.87 per ton. \$64.87 is adjusted to \$65 per ton.

Calculations for Nearest Landfill 50 to 100 One-way Miles from the Facility

100 miles divided by 3 = 33.33 gallons

33.33 gallons multiplied by \$4 per gallon = \$133.32 for fuel

2 hours for dump truck and operator (\$92.49 per hour) = \$184.98

\$184.98 divided by 22.5 tons = **\$8.22 per ton**

\$133.32 for fuel for a trip of 100 miles divided by 22.5 tons = **\$5.93 per ton for fuel**

The total of the bold items above = \$14.15 per ton. \$14.15 multiplied by 2 = \$28.30 per ton for round trip.

\$50.73 per ton plus \$28.30 per ton for round trip = \$79.03 per ton. \$79.03 is adjusted to \$80 per ton.

Calculations for Nearest Landfill Over 100 One-way Miles from the Facility

150 miles divided by 3 miles per gallon = 50 gallons

50 gallons multiplied by \$4 per gallon = \$200 for fuel for a trip of 150 miles

3 hours for dump truck and operator (\$92.49 per hour) divided by 22.5 tons = **\$12.33 per ton**

\$200 for fuel for a trip of 150 miles divided by 22.5 tons = **\$8.89 per ton for fuel**

The total of the bold items above = \$21.22 per ton. \$21.22 multiplied by 2 = \$42.44 per ton for round trip.

\$50.73 per ton plus \$42.44 per ton for round trip = \$93.17 per ton. \$93.17 is adjusted to \$94 per ton.

3.6 Water/Product Recovery and Management

The following table lists formulated task rates associated with the removal, transportation, treatment, recycling, or disposal of water. These costs are not reimbursable during permanent closure unless the closure is approved in accordance with 401 KAR 42:330 (SOTRA). Formulated task rates include all labor, oversight personnel (one individual), transportation, equipment and material needed in order to perform the tasks.

Removal of water: rate is limited to approximately 2,400 gallons, per event, unless otherwise approved by the cabinet.	\$0.11 per gallon <i>(minimum of \$325)</i>
This formulated task rate is based on invoices received for the removal of water.	
Removal, treatment, and discharge of contaminated water from an on-site mobile unit: includes all equipment, labor, permitting, sampling and laboratory analysis required by a Kentucky Pollution Discharge Elimination System (KPDES) permit or local regulatory authority, and associated charges, per gallon. Transportation will not be included for on-site treatment and/or discharge.	\$0.49 per gallon
This formulated task rate is based on invoices received for the removal, treatment and discharge of contaminated water from a mobile unit.	
Transportation of contaminated water	\$0.16 per gallon <i>(minimum of \$325)</i>
This formulated task rate is based on invoices received for the transportation of water.	
Disposal of contaminated water at a wastewater treatment plant, a sanitary sewer (if required by the wastewater treatment plant), or a recycling facility: includes all sampling and laboratory analysis required by the permitted facility, and associated charges, per gallon. Removal and transportation will be added based on the formulated task rates, if applicable.	\$0.49 per gallon
This formulated task rate is based on invoices received for the disposal of contaminated water.	
Discharge of water permitted by a KPDES permit into a storm sewer or on the ground surface.	\$0.11 per gallon
This formulated task rate is based on invoices received for the discharge of water.	
Discharge of water below site-specific screening levels into an excavation.	\$0.11 per gallon
This formulated task rate is based on invoices received for the discharge of contaminated water.	
Free Product Recovery (by hand bailing, absorbent socks, etc.) per well as directed by the cabinet.	\$90 per well
This includes personnel and time to record and estimate the amount of free product removed. Additional reimbursement will be available for applicable equipment and tools of the trade in Section 3.3 of this manual.	
<u>Assumption</u> 8 wells can be hand bailed in an 8-hour day	
<u>Calculations</u> \$75.82 hourly rate for field technician multiplied by 1-hour = \$75.82 per well \$104.98 hourly rate for project manager (for scheduling) for 1-hour \$104.98 divided by 8 wells = \$13.12 per well	
Total of bold items above = \$88.94 per well. \$88.94 is adjusted to \$90 per well.	

3.7 Drilling/Well Installation, Sampling, and Abandonment

The following table lists formulated task rates associated with drilling, well installation, sampling (includes chain-of-custody documentation), required surveying (excluding well abandonments and borings) and abandonment. These costs include all equipment and material needed in order to perform the tasks, per diem for drilling personnel, and oversight personnel (one individual). Costs associated with traffic control (if necessary) are included in the listed costs.

Installation of a PVC monitoring well: includes, but is not limited to, decontamination of down-hole equipment, grout or backfill material, development of well, personnel time for soil sample collection, surface completion, preparation and submission of well records, and photographic documentation. Additional costs will be added per foot for each well over 30 feet.	\$1,915 per well up to 30 feet in depth (with soil sampling)
\$64 per foot per well over 30 feet with soil sampling	\$1,580 per well up to 30 feet in depth (without soil sampling)
\$53 per foot per well over 30 feet without soil sampling	
<p>This includes all well construction and completion materials, equipment decontamination, surface preparation, completion and submittal of well records, two-man drill crew and project manager (for oversight).</p> <p><u>Assumptions for \$1,911 per well up to 30 feet in depth (with soil sampling)</u> A 30 foot 2-inch well is installed using a hollow stem auger. Continuous soil samples are collected. 4 wells can be installed in an 8-hour day. \$37.80 per foot accounts for equipment and materials.</p> <p><u>Calculations</u> \$104.98 hourly rate for project manager (for oversight) multiplied by 8 hours = \$839.84 per day \$839.84 divided by 4 wells = \$209.96 \$209.96 divided by 30 feet = \$7 per foot</p> <p>\$324 for monitoring well surface completion divided by 30 feet = \$10.80 per foot</p> <p>\$330 per day for a two-man drill crew divided by 4 = \$82.50 \$82.50 divided by 30 feet = \$2.75 per foot</p> <p>\$104.98 hourly rate for project manager (for scheduling) multiplied by 2 hours = \$209.96 \$209.96 divided by 4 wells = \$52.49 \$52.49 divided by 30 feet = \$1.75 per foot</p> <p>Total of bold items above = \$22.30 per foot</p> <p>\$37.80 per foot for equipment and materials plus \$22.30 per foot = \$60.10 per foot \$60.10 per foot multiplied by 30 feet = \$1,803</p> <p>\$1,803 plus \$108 per well for surveying = \$1,911 per well. \$1,911 is adjusted to \$1,915 per well. An additional \$64 per foot will be added to each foot installed over 30 feet.</p> <p><u>Assumptions for \$1,576 per well up to 30 feet in depth (without soil sampling)</u> A 30 foot 2-inch well is installed using a hollow stem auger. 4 wells can be installed in an 8-hour day. \$37.80 per foot accounts for equipment and materials.</p> <p>\$1,911 per well from above minus \$335 (soil boring sampling cost) = \$1,576 per well. \$1,576 is adjusted to \$1,580 per well. An additional \$53 per foot will be added to each foot installed over 30 feet.</p>	

<p>Installation of PVC monitoring well in bedrock: includes, but is not limited to, decontamination of down-hole equipment, grout or backfill material, development of well, personnel time for soil sample collection, surface completion, preparation and submission of well records, and photographic documentation. Additional costs will be added per foot for each well over 30 feet.</p>	<p>\$2,560 per well up to 30 feet in depth <i>(with soil sampling)</i></p>
<p>\$86 per foot per well over 30 feet with soil sampling</p>	<p>\$2,225 per well up to 30 feet in depth <i>(without soil sampling)</i></p>
<p>\$75 per foot per well over 30 feet without soil sampling</p>	
<p>This includes all well construction in bedrock and completion materials, equipment decontamination, surface preparation, completion and submittal of well records, two-man drill crew and project manager (for oversight).</p> <p><u>Assumptions for \$2,559 per well up to 30 feet in depth <i>(with soil sampling)</i></u> A 30 foot 2-inch well is installed using an air rotary drill. Continuous soil samples are collected in overburden. 4 wells can be installed in an 8-hour day. \$59.40 per foot accounts for equipment and materials.</p> <p><u>Calculations</u> \$104.98 hourly rate for project manager (for oversight) multiplied by 8 hours = \$839.84 per day \$839.84 divided by 4 wells = \$209.96 \$209.96 divided by 30 feet = \$7 per foot</p> <p>\$324 for monitoring well surface completion divided by 30 feet = \$10.80 per foot</p> <p>\$330 per day for a two-man drill crew divided by 4 = \$82.50 \$82.50 divided by 30 feet = \$2.75 per foot</p> <p>\$104.98 hourly rate for project manager (for scheduling) multiplied by 2 hours = \$209.96 \$209.96 divided by 4 wells = \$52.49 \$52.49 divided by 30 feet = \$1.75 per foot</p> <p>Total of bold items above = \$22.30 per foot</p> <p>\$59.40 per foot for equipment and materials plus \$22.30 per foot = \$81.70 per foot \$81.70 per foot multiplied by 30 feet = \$2,451</p> <p>\$2,451 plus \$108 per well for surveying = \$2,559 per well. \$2,559 is adjusted to \$2,560 per well. An additional \$86 per foot will be added to each foot installed over 30 feet.</p> <p><u>Assumptions for \$2,224 per well up to 30 feet in depth <i>(without soil sampling)</i></u> A 30 foot 2-inch well is installed using an air rotary drill. 4 wells can be installed in an 8-hour day. \$59.40 per foot accounts for equipment and materials.</p> <p>\$2,559 per well from above minus \$335 (soil boring sampling cost) = \$2,224 per well. \$2,224 is adjusted to \$2,225 per well. An additional \$75 per foot will be added to each foot installed over 30 feet.</p>	

<p>Installation of double-cased PVC monitoring well in bedrock: includes, but is not limited to, decontamination of down-hole equipment, grout or backfill material, development of well, personnel time for soil sample collection, surface completion, preparation and submission of well records, and photographic documentation. Additional costs will be added per foot for each well over 30 feet.</p>	<p>\$3,425 per well up to 30 feet in depth <i>(with soil sampling)</i></p>
<p>\$115 per foot per well over 30 feet with soil sampling</p>	<p>\$3,090 per well up to 30 feet in depth <i>(without soil sampling)</i></p>
<p>\$103 per foot per well over 30 feet without soil sampling</p>	
<p>This includes all well construction in bedrock and completion materials, equipment decontamination, surface preparation, completion and submittal of well records, two-man drill crew and project manager (for oversight). For double cased wells, an additional mobilization or per diem for the project manager (for oversight) will be included, if applicable.</p> <p><u>Assumptions for \$3,423 per well up to 30 feet in depth (with soil sampling)</u> A 30 foot 2-inch well is installed using an air rotary drill. Continuous soil samples are collected in overburden. 4 wells can be installed in an 8-hour day. \$88.20 per foot accounts for equipment and materials.</p> <p><u>Calculations</u> \$104.98 hourly rate for project manager (for oversight) multiplied by 8 hours = \$839.84 per day \$839.84 divided by 4 wells = \$209.96 \$209.96 divided by 30 feet = \$7 per foot</p> <p>\$324 for monitoring well surface completion divided by 30 feet = \$10.80 per foot</p> <p>\$330 per day for a two-man drill crew divided by 4 = \$82.50 \$82.50 divided by 30 feet = \$2.75 per foot</p> <p>\$104.98 hourly rate for project manager (for scheduling) multiplied by 2 hours = \$209.96 \$209.96 divided by 4 wells = \$52.49 \$52.49 divided by 30 feet = \$1.75 per foot</p> <p>Total of bold items above = \$22.30 per foot</p> <p>\$88.20 per foot for equipment and materials plus \$22.30 per foot = \$110.50 per foot \$110.50 per foot multiplied by 30 feet = \$3,315</p> <p>\$3,315 plus \$108 per well for surveying = \$3,423 per well. \$3,423 is adjusted to \$3,425 per well. An additional \$115 per foot will be added to each foot installed over 30 feet.</p> <p><u>Assumptions for \$3,088 per well up to 30 feet in depth (without soil sampling)</u> A 30 foot 2-inch well is installed using an air rotary drill. 4 wells can be installed in an 8-hour day. \$88.20 per foot accounts for equipment and materials.</p> <p>\$3,423 per well from above minus \$335 (soil boring sampling cost) = \$3,088 per well. \$3,088 is adjusted to \$3,090 per well. An additional \$103 per foot will be added to each foot installed over 30 feet.</p>	

<p>Installation of 4-inch minimum Recovery well: includes, but is not limited to, decontamination of down-hole equipment, grout or backfill material, development of well, personnel time for soil sample collection, surface completion, preparation and submission of well records (if a sample is collected from the well), and photographic documentation. Additional costs will be added per foot for each well over 30 feet.</p>	<p>\$2,560 per well up to 30 feet in depth <i>(with soil sampling)</i></p>
<p>\$86 per foot per well over 30 feet with soil sampling</p>	<p>\$2,225 per well up to 30 feet in depth <i>(without soil sampling)</i></p>
<p>\$75 per foot per well over 30 feet without soil sampling</p>	
<p>This includes all well construction and completion materials, equipment decontamination, surface preparation, completion and submittal of well records, two-man drill crew and project manager (for oversight).</p>	
<p><u>Assumptions for \$2,559 per well up to 30 feet in depth <i>(with soil sampling)</i></u></p>	
<p>A 30 foot 2-inch well is installed using an air rotary drill. Continuous soil samples are collected in overburden. 4 wells can be installed in an 8-hour day. \$59.40 per foot accounts for equipment and materials.</p>	
<p><u>Calculations</u></p>	
<p>\$104.98 hourly rate for project manager (for oversight) multiplied by 8 hours = \$839.84 per day</p>	
<p>\$839.84 divided by 4 wells = \$209.96</p>	
<p>\$209.96 divided by 30 feet = \$7 per foot</p>	
<p>\$324 for monitoring well surface completion divided by 30 feet = \$10.80 per foot</p>	
<p>\$330 per day for a two-man drill crew divided by 4 = \$82.50</p>	
<p>\$82.50 divided by 30 feet = \$2.75 per foot</p>	
<p>\$104.98 hourly rate for project manager (for scheduling) multiplied by 2 hours = \$209.96</p>	
<p>\$209.96 divided by 4 wells = \$52.49</p>	
<p>\$52.49 divided by 30 feet = \$1.75 per foot</p>	
<p>Total of bold items above = \$22.30 per foot</p>	
<p>\$59.40 per foot for equipment and materials plus \$22.30 per foot = \$81.70 per foot</p>	
<p>\$81.70 per foot multiplied by 30 feet = \$2,451</p>	
<p>\$2,451 plus \$108 per well for surveying = \$2,559 per well. \$2,559 is adjusted to \$2,560 per well. An additional \$86 per foot will be added to each foot installed over 30 feet.</p>	
<p><u>Assumptions for \$2,224 per well up to 30 feet in depth <i>(without soil sampling)</i></u></p>	
<p>A 30 foot 2-inch well is installed using an air rotary drill.</p>	
<p>4 wells can be installed in an 8-hour day.</p>	
<p>\$59.40 per foot accounts for equipment and materials.</p>	
<p>\$2,559 per well from above minus \$335 (soil boring sampling cost) = \$2,224 per well. \$2,224 is adjusted to \$2,225 per well. An additional \$75 per foot will be added to each foot installed over 30 feet.</p>	

<p>Overburden Well Abandonment by a variance (i.e., casing pulled, cut-off, and borehole grouted, etc.): includes the cost of all material, equipment and labor, including oversight personnel, the preparation and submission of variance request and well records, photographic documentation, and surface material replacement.</p>	<p>\$540 per well</p>
<p><u>Assumption</u> Typical well depth is less than 30 feet. 1-hour necessary to abandon a well by this method.</p> <p><u>Calculations</u> \$104.98 hourly rate for project manager oversight for 1-hour = \$104.98 per well \$52.49 hourly rate for drill operator for 1-hour = \$52.49 per well \$46.66 hourly rate for laborer for 1-hour = \$46.66 per well \$104.98 hourly rate for project manager scheduling time multiplied by 1-hour = \$104.98 per well \$7.56 per foot for equipment and material multiplied by 30 feet = \$226.80 per well</p> <p>Total of bold items above = \$535.91 per well. \$535.91 is adjusted to \$540 per well.</p>	
<p>Overburden Well Abandonment during Over-excavation: includes the cost for the preparation and submission of variance request and well records.</p>	<p>\$160 per well</p>
<p><u>Assumptions</u> Material, equipment and labor, oversight personnel, photographic documentation, and surface material replacement are included in the over-excavation costs.</p> <p><u>Calculations</u> \$104.98 hourly rate for project manager scheduling time multiplied by 1-hour = \$104.98 per well \$104.98 hourly rate for project manager multiplied by 0.5 hours = \$55 per record</p> <p>Total of bold items above = \$157.38 per well. \$157.38 is adjusted to \$160 per well.</p>	
<p>Overburden Well Abandonment in accordance with Section 11 of 401 KAR 6:350 (i.e., casing screen-grout-filter pack removed and borehole grouted): includes the cost of all material, equipment and labor, including oversight personnel, the preparation and submission of well records, photographic documentation, and surface material replacement. An additional \$29 per foot will be added for each well abandoned over 30 feet.</p>	<p>\$860 per well up to 30 feet in depth</p>
<p><u>Assumption</u> 2 hours are necessary to abandon a 30 foot well by this method.</p> <p><u>Calculations</u> \$104.98 hourly rate for project manager (for oversight) multiplied by 2 hours = \$209.96 per well \$52.49 hourly rate for equipment operator (driller) multiplied by 2 hours = \$104.98 per well \$46.66 hourly rate for laborer multiplied by 2 hours = \$93.32 per well \$104.98 hourly rate for project manager (for scheduling) multiplied by 0.25 hours = \$26.25 per well \$14.04 per foot for equipment and material multiplied by 30 feet = \$421.20 per well</p> <p>Total of bold items above = \$855.71 per well. \$855.71 is adjusted to \$860 per well. An additional \$29 per foot will be added for each well abandoned over 30 feet.</p>	

<p>Bedrock Well Abandonment in accordance with Section 11 of 401 KAR 6:350 (i.e., casing screen-grout-filter pack removed and borehole grouted): includes the cost of all material, equipment and labor, including oversight personnel, the preparation and submission of well records, photographic documentation, and surface material replacement. An additional \$38 per foot will be added for each well abandoned over 30 feet.</p>	<p>\$1,115 per well up to 30 feet in depth</p>
<p><u>Assumption</u> 2 hours are necessary to abandon a 30 foot well by this method.</p> <p><u>Calculations</u> \$104.98 hourly rate for project manager (for oversight) multiplied by 2 hours = \$209.96 per well \$52.49 hourly rate for equipment operator (driller) multiplied by 2 hours = \$104.98 per well \$46.66 hourly rate for laborer multiplied by 2 hours = \$93.32 per well \$104.98 hourly rate for project manager (for scheduling) multiplied by 0.25 hours = \$26.25 per well \$22.68 per foot for equipment and material multiplied by 30 feet = \$680.40 per well</p> <p>Total of bold items above = \$1,114.91 per well. \$1,114.91 is adjusted to \$1,115 per well. An additional \$38 per foot will be added for each well abandoned over 30 feet.</p>	
<p>Bedrock Double-Cased Well Abandonment in accordance with Section 11 of 401 KAR 6:350 (i.e., casing screen-grout-filter pack removed and borehole grouted): includes the cost of all material, equipment and labor, including oversight personnel, the preparation and submission of well records, photographic documentation, and surface material replacement. An additional \$38 per foot will be added for each well abandoned over 30 feet.</p>	<p>\$1,450 per well up to 30 feet in depth</p>
<p><u>Assumption</u> 3 hours are necessary to abandon a 30 foot well by this method.</p> <p><u>Calculations</u> \$104.98 hourly rate for project manager (for oversight) multiplied by 3 hours = \$314.94 per well \$52.49 hourly rate for equipment operator (driller) multiplied by 3 hours = \$157.47 per well \$46.66 hourly rate for laborer multiplied by 3 hours = \$139.98 per well \$104.98 hourly rate for project manager (for scheduling) multiplied by 0.25 hours = \$26.25 per well \$27 per foot for equipment and material multiplied by 30 feet = \$810 per well</p> <p>Total of bold items above = \$1,448.64 per well. \$1,448.64 is adjusted to \$1,450 per well. An additional \$38 per foot will be added for each well abandoned over 30 feet.</p>	
<p>Abandonment records for lost or destroyed wells: includes preparation and submission of well plugging records in lieu of the well abandonment cost.</p>	<p>\$55 per record</p>
<p><u>Calculations</u> \$104.98 hourly rate for project manager multiplied by 0.5 hours = \$52.40 per record. \$52.40 is adjusted to \$55 per record.</p>	

Soil borings (applies to those borings where monitoring wells are not required in the same location): includes labor, water supply, personnel time for soil sample collection, backfilling of soil boring, and decontamination of equipment. An additional \$3 per foot will be added for each soil boring over 30 feet.	\$335 per soil boring up to 30 feet in depth (minimum \$760)
<p>This includes direct-push equipment, two-man drill crew and project manager (for oversight), equipment decontamination, backfilling of void and soil sample collection. This rate only applies when a soil boring is not converted to a monitoring well.</p> <p><u>Assumptions</u> A 30-foot boring is installed using direct push equipment. Continuous soil samples are collected. 8 borings can be installed in an 8-hour day.</p> <p><u>Calculations</u> \$104.98 hourly rate for project manager (for oversight) multiplied by 8 hours = \$839.84 per day \$839.84 divided by 8 borings = \$104.98 per soil boring</p> <p>\$1,296 for direct push equipment divided by 8 borings = \$162 per boring</p> <p>\$330 per day for a two-man drill crew divided by 8 = \$41.25 per boring</p> <p>\$104.98 hourly rate for project manager (for scheduling) multiplied by 2 hours = \$209.96 per day \$209.96 per day divided by 8 borings = \$26.25 per boring</p> <p>Total of bold items above = \$334.48 per boring. \$334.48 is adjusted to \$335 per boring (with a minimum reimbursement of \$760). An additional \$3 per foot will be added to each boring over 30 feet.</p>	
Installation and construction of temporary monitoring well: includes down-hole material, well development, abandonment, and decontamination of equipment. An additional \$32 per foot will be added for each well installed over 30 feet.	\$930 per temporary monitoring well
<p>This includes direct push equipment, two-man drill crew and project manager (for oversight), equipment decontamination, abandonment, and soil sample collection.</p> <p><u>Assumptions</u> A 30-foot temporary monitoring well is installed using direct push equipment. Continuous soil samples are collected. 8 temporary monitoring wells can be installed in an 8-hour day.</p> <p><u>Calculations</u> \$104.98 hourly rate for project manager (for oversight) multiplied by 8 hours = \$839.84 per day \$839.84 divided by 8 temporary monitoring wells = \$104.98 per temporary monitoring well</p> <p>\$1,296 for direct push equipment divided by 8 temporary monitoring wells = \$162 per temporary monitoring well</p> <p>\$104.98 hourly rate for project manager (for scheduling) multiplied by 2 hours = \$209.96 per day \$209.96 per day divided by 8 temporary monitoring wells = \$26.25 per temporary monitoring well.</p> <p>\$330 per day for a two-man drill crew divided by 8 = \$41.25 per temporary monitoring well</p> <p>\$16.20 for material and abandonment multiplied by 30 feet per temporary monitoring well = \$486 per temporary monitoring well</p> <p>\$108 per temporary monitoring well for surveying</p> <p>Total of bold items above = \$928.48 per temporary monitoring well. \$928.48 is adjusted to \$930. An additional \$32 per foot will be added to each temporary assessment well over 32 feet.</p>	

Installation and construction of piezometer: includes down-hole material, well development, backfilling of void, and decontamination of equipment. An additional \$32 per foot will be added for each piezometer installed over 30 feet.	\$930 per piezometer
<p>This includes direct push equipment, operator and project manager (for oversight), equipment decontamination, backfilling of void and soil sample collection.</p> <p><u>Assumptions</u> A 30-foot piezometer is installed using direct push equipment. Continuous soil samples are collected. 8 piezometers can be installed in an 8-hour day.</p> <p><u>Calculations</u> \$104.98 hourly rate for project manager (for oversight) multiplied by 8 hours = \$839.84 per day \$839.84 divided by 8 piezometers = \$104.98 per piezometer</p> <p>\$1,296 for direct push equipment divided by 8 piezometers = \$162 per piezometer</p> <p>\$104.98 hourly rate for project manager (for scheduling) multiplied by 2 hours = \$209.96 per day \$209.96 per day divided by 8 piezometers = \$26.25 per piezometer \$330 per day for a two-man drill crew divided by 8 = \$41.25 per piezometer</p> <p>\$16.20 for material and abandonment multiplied by 30 feet per piezometer = \$486 per piezometer</p> <p>\$108 per piezometer for surveying</p> <p>Total of bold items above = \$928.48 per piezometer. \$928.48 is adjusted to \$930 per piezometer. An additional \$32 per foot will be added for each piezometer installed over 30 feet.</p>	
Domestic-Use Cistern or Domestic-Use Well Abandonment (as directed by the cabinet)	\$1,730 each
<p><u>Assumption</u> Grout costs \$75.60 per cubic yard. 4 hours are necessary to abandon a domestic-use well or a 2,000 gallon domestic-use cistern.</p> <p><u>Calculations</u> \$104.98 hourly rate for project manager (for oversight) multiplied by 4 hours = \$419.92 per well \$52.49 hourly rate for equipment operator (driller) multiplied by 4 hours = \$209.96 per well \$46.66 hourly rate for laborer multiplied by 4 hours = \$186.64 per well \$104.98 hourly rate for project manager (for scheduling) multiplied by 1.5 hours = \$157.47 per well \$75.60 per cubic yard for grout multiplied by 10 cubic yards = \$756 for grout</p> <p>Total of bold items above = \$1,729.99 per domestic-use well or domestic-use cistern. \$1,729.99 is adjusted to \$1,730 per domestic-use well or domestic-use cistern.</p>	
Water sampling per well: includes gauging and purging for monitoring wells as directed by the cabinet.	\$90 per well
<p><u>Assumptions</u> 1-hour is necessary to sample each well. 8 wells can be sampled in one 8-hour day.</p> <p><u>Calculations</u> \$104.98 hourly rate for project manager (scheduling) divided by 8 wells = \$13.12 per well \$75.82 hourly rate for field technician = \$75.82 per well</p> <p>Total of the bold items above = \$88.94 per well. \$88.94 is adjusted to \$90 per well.</p>	

Low-Flow Water Sampling per well: includes gauging and purging for monitoring wells as directed by the cabinet.	\$180 per well
<u>Assumptions</u> 2 hours are necessary to collect a low-flow sample from each well. 4 wells can be sampled in one 8-hour day. <u>Calculations</u> \$104.98 hourly rate for project manager (scheduling) divided by 4 wells = \$26.25 per well \$75.82 hourly rate for field technician multiplied by 2 = \$151.64 per well Total of the bold items above = \$177.89 per well. \$177.89 is adjusted to \$180 per well.	
Surface Water Sampling (as directed by the cabinet)	\$30 per sample point
<u>Assumption</u> 20 minutes are necessary to collect a surface water sample. <u>Calculation</u> \$75.82 hourly rate for field technician multiplied by 0.33 hours = \$25.02 per well. \$25.02 is adjusted to \$30 per well.	
Well Gauging, per well	\$45 per well
<u>Assumption</u> 30 minutes are necessary to gauge a well. <u>Calculation</u> \$75.82 hourly rate for field technician multiplied by 0.5 hours = \$37.91 per well. \$37.91 is adjusted to \$45 per well (formulated task rate remains the same).	
Monitoring Well Pad Replacement: damage (e.g., cracked concrete pad, damaged protective casing, etc.), shall be reported to the cabinet in writing, and include photo documentation of the damaged monitoring well pad.	\$386 per well pad replacement
This includes personnel time, materials and equipment needed to replace a damaged monitoring well pad. \$52.49 hourly rate for equipment operator (driller) \$46.66 hourly rate for laborer \$178.20 for materials and equipment \$108 per monitoring well for surveying Total of bold items above = \$385.35 per monitoring well pad replacement. \$385.35 is adjusted to \$386 per monitoring well pad replacement.	
Rock Coring	\$140 per foot
This includes personnel time, materials and equipment needed for rock coring. Set-up time \$162 per core divided by 30 feet = \$5.40 per foot of core \$104.98 hourly rate for project manager (for oversight) multiplied by 8 hours = \$839.84 per day \$839.84 divided by 8 cores = \$104.98 per foot of core \$29.16 per foot of core for equipment Total of bold items above = \$139.54 per foot of core. \$139.54 is adjusted to \$140 per foot of core.	
Daily Rate for Direct-Push (as directed by the cabinet for bedrock soundings)	\$2,455 per day
This includes personnel time, materials and equipment needed for bedrock soundings. \$104.98 hourly rate for project manager (for oversight) multiplied by 8 hours = \$839.84 per day \$1,296 for direct push equipment \$104.98 hourly rate for project manager (for scheduling) multiplied by 3 hours = \$314.94 per day Total of bold items above = \$2,450.78 per day. \$2,450.78 is adjusted to \$2,455 per day.	

Shoring Evaluation Boring soundings. An additional \$3 per foot will be added for each shoring evaluation boring over 30 feet.	\$335 per boring
This includes direct push equipment, operator and project manager (for oversight), equipment decontamination, backfilling of void, and soil sample collection.	
<p><u>Assumptions</u> A 30-foot shoring evaluation boring is installed using direct push equipment. Continuous soil samples are collected. 8 shoring evaluation borings can be installed in an 8-hour day.</p>	
<p><u>Calculations</u> \$104.98 hourly rate for project manager (for oversight) multiplied by 8 hours = \$839.84 per day \$839.84 divided by 8 shoring evaluation borings = \$104.98 per soil shoring evaluation boring</p> <p>\$1,296 for direct push equipment divided by 8 shoring evaluation borings = \$162 per shoring evaluation boring \$330 per day for a two-man drill crew divided by 8 = \$41.25 per shoring evaluation boring</p> <p>\$104.98 hourly rate for project manager (for scheduling) multiplied by 2 hours = \$209.96 per day \$209.96 per day divided by 8 shoring evaluation borings = \$26.25 per shoring evaluation boring</p> <p>Total of bold items above = \$334.48 per shoring evaluation boring. \$334.48 is adjusted to \$335 per shoring evaluation boring. An additional \$3 per foot will be added to each shoring evaluation boring over 30 feet.</p>	
Well or piezometer top of casing elevation survey, not in conjunction with installation or repair of a well or piezometer (as directed by the cabinet).	\$430 per directive
This includes materials and equipment needed for surveying.	
<p><u>Calculations</u> \$104.98 hourly rate for project manager (for scheduling) multiplied by 1-hour = \$104.98 per directive \$162 for two-man survey crew multiplied by 2 hours = \$324 per directive</p> <p>Total of bold items above = \$428.98 per directive. \$428.98 is adjusted to \$430 per directive.</p>	

3.8 Drums

The following table lists formulated task rates associated with the transportation and disposal of drums, including all labor, equipment and material costs.

Transportation of drummed waste, purged water or soil cuttings, per drum: includes, but is not limited to, all labor, equipment, personnel, scheduling, completion of documentation, and oversight if needed.	\$120 per drum
This formulated task rate is based on invoices received for the transportation of a drum.	
Disposal of drummed waste, purged water or soil cuttings: includes all costs associated with this task, including the initial drum cost. Reimbursement shall be based upon the number of drums documented on waste manifests from the permitted disposal facility.	\$135 per drum
This formulated task rate is based on invoices received for the disposal of a drum.	

3.9 Surveying

The following table lists formulated task rates associated with initial and additional site surveys, including all labor, equipment, and material costs.

Initial Site Survey: survey shall be performed in accordance with the UST Corrective Action Manual incorporated by reference in 401 KAR 42:060 as directed by the cabinet.	\$1,505 per 100-foot radius of the excavation zone
<p><u>Assumption</u> An Initial Site Survey can be completed in one 8-hour day.</p> <p><u>Calculations</u> \$75.82 hourly rate for field technician multiplied by 2 = \$151.64 \$151.64 multiplied by 8 hours = \$1,213.12 per survey</p> <p>\$104.98 hourly rate for project manager (for scheduling) multiplied by 2.75 hours = \$288.70 per survey</p> <p>Total of the bold items above = \$1,501.82 per survey. \$1,501.82 is adjusted to \$1,505 per survey.</p>	
Additional Site Survey: for each additional directional 30-meters (100 feet) area beyond those identified on the initial site survey for a facility as directed by the cabinet.	\$740 each
<p><u>Assumption</u> An Additional Site Survey can be completed in 4 hours.</p> <p><u>Calculations</u> \$75.82 hourly rate for field technician multiplied by 2 = \$151.64 \$151.64 multiplied by 4 hours = \$606.56 per survey</p> <p>\$104.98 hourly rate for project manager (for scheduling) multiplied by 1.25 hours = \$131.23 per survey</p> <p>Total of the bold items above = \$737.79 per survey. \$737.79 is adjusted to \$740 per survey.</p>	
Private Utility Locate (as directed by the cabinet)	Actual cost plus 15% (not-to-exceed \$2,000)
This formulated task rate is based on invoices received for private utility locates.	

3.10 Encroachment Permits and Off-Site Access Agreements

The following table lists formulated task rates associated with encroachment permits and off-site access agreements, including all labor and associated costs.

Initial Encroachment Permit (as directed in writing by the cabinet)	\$430 each
<p>\$104.98 hourly rate for project manager multiplied by 3 hours = \$314.94 \$52.49 hourly rate for administrative assistant multiplied by 1.5 hours = \$78.74 \$32.94 for materials, postage, etc.</p> <p>Total of bold items above = \$426.62 per initial encroachment permit. \$426.62 is adjusted to \$430 per initial encroachment permit.</p>	
Encroachment Permit Renewal (must be approved/directed in writing by the cabinet prior to renewal)	\$190 each
<p>\$113.40 for bond renewal cost \$52.49 hourly rate for administrative assistant multiplied by 0.75 hours = \$39.37 \$32.94 for postage</p> <p>Total of bold items above = \$185.71 per encroachment permit renewal. \$185.71 is adjusted to \$190 per encroachment permit renewal.</p>	
Encroachment Permit Renewal without Insurance Bond (must be approved/directed in writing by the cabinet prior to renewal)	\$55 each
<p>\$52.49 hourly rate for administrative assistant multiplied by 1-hour to contact DOT for renewal = \$52.49 per encroachment permit renewal without insurance bond. \$52.49 is adjusted to \$55 per encroachment permit renewal without insurance bond.</p>	
Off-Site Property Access Agreement (including properly documented denials in accordance with the UST Corrective Action Manual incorporated by reference in 401 KAR 42:060). When an off-site property access agreement is directed in writing by the cabinet, this formulated task rate is allowed, so long as the off-site property owner is not the PSTEAF applicant.	\$430 each
<p>\$104.98 hourly rate for project manager multiplied by 3 hours = \$314.94 \$52.49 hourly rate for administrative assistant multiplied by 1.5 hours = \$78.74 \$32.94 for materials, postage, etc.</p> <p>Total of bold items above = \$426.62 per off-site property access agreement. \$426.62 is adjusted to \$430 per off-site property access agreement.</p>	

3.11 Interim Corrective Action Activities

The following table lists formulated task rates associated with interim corrective action, including all labor, equipment and material costs.

Pump Test: includes the disposal or treatment of water as directed by the cabinet	
8-hr pump test	\$2,010 per test
12-hr pump test	\$3,010 per test
24-hr pump test	\$6,020 per test
<p>This includes all field personnel and equipment to set up and perform a pump test to determine aquifer parameters. Equipment includes a submersible pump, two interface probes, a data logger with pressure transducers, a generator, a portable tank, decontamination expendables, etc.</p> <p><u>Calculations</u> \$104.98 hourly rate for project manager (for oversight) multiplied by 8 hours = \$839.84 \$189 per day for portable tank \$977.40 per day for field equipment listed above per day</p> <p>Total of bold items above = \$2,006.24</p> <p>\$2,006.24 divided by 8 hours = \$250.78 per hour</p> <p>8 hours multiplied by \$250.78 = \$2,006.24 per 8-hour event. \$2,006.24 is adjusted to \$2,010 per test. 12 hours multiplied by \$250.78 = \$3,009.36 per 12-hour event. \$3,009.36 is adjusted to \$3,010 per test. 24 hours multiplied by \$250.78 = \$6,018.72 per 24-hour event. \$6,018.72 is adjusted to \$6,020 per test.</p>	
Slug Test: includes all field personnel and equipment as directed by the cabinet.	\$540 per well
This formulated task rate is based on information received from eligible companies.	
Mobile dual-phase extraction (MDPE) initial event: includes all personnel, equipment, material, set up/tear down costs needed in order to perform this task as directed by the cabinet.	\$3,240 (initial 8-hour day)
This formulated task rate is based on information received from eligible companies.	
Continuous MDPE event, for each day after the initial event: includes all personnel, equipment, material needed in order to perform this task as directed by the cabinet. Reimbursement shall be prorated based on the duration of system operation.	\$1,620 per day
This formulated task rate is based on information received from eligible companies.	

<p>Injection at high pressure: requires industrial pumps capable of safely delivering and maintaining pressures up to 1,200 psi in order to create an appropriate velocity to achieve radial distribution-fracture emplacement: includes all field personnel and all equipment needed in order to perform this task, and excludes project manager oversight as directed by the cabinet.</p>	<p>\$79 per vertical injection interval <i>(minimum \$17,930)</i></p>
<p>At a minimum, equipment includes a direct-push unit, concrete corer, tow motor, generator, forklift, skid loader, wet/dry vacuum, hoses, electrical costs, and injection trailer (pumps and mixing tank). Project manager oversight, injectate, and mobilization is not included and will be added as a separate cost.</p>	
<p>This includes 3 field personnel (geoprobe operator and 2 field technicians), materials to patch boreholes, and equipment to set up and perform high pressure injections.</p> <p><u>Assumptions</u> 19 borings can be performed in 1-day with 4 vertical injections per boring. 19 borings per day multiplied by 4 vertical injections per boring = 76 vertical injections per day The cost of each vertical injection is \$76 based on invoices received from eligible companies. \$200 per day for concrete corer</p> <p><u>Calculations</u> The average cost per day for 76 vertical injections multiplied by \$76 = \$5,776 per day \$200 per day</p> <p>Total of bold items above = \$5,976 per day</p> <p>\$5,976 divided by 76 vertical injections per day = \$78.63 per vertical injection. \$78.63 is adjusted to \$79 per vertical injection.</p> <p>Minimum of 3 working days at \$5,976 per day multiplied by 3 days = \$17,928 minimum cost. \$17,928 is adjusted to \$17,930 for a minimum cost.</p>	

3.12 Operation and Maintenance

The following table lists formulated task rates associated with operation and maintenance of remedial systems, including all labor, equipment, and material costs.

Routine Operation and Maintenance of a remediation system per an approved Corrective Action Plan (CAP) and as reported in the UST Groundwater Monitoring Checklist, DWM 4264. This formulated task rate includes all personnel and equipment and excludes utilities.	
High maintenance (3-days per month)	\$3,415 per qtr.
Medium maintenance (2-days per month)	\$1,820 per qtr.
Low maintenance (1-day per month)	\$1,140 per qtr.
<p><u>Assumptions for high maintenance</u> The cost associated with high maintenance is based on 3 months per quarter and visiting the site 3-days per month and being on site 5 hours per (each) visit.</p> <p><u>Calculations</u> \$75.82 hourly rate for field technician multiplied by 5 hours = \$379.10 per day \$379.10 per day multiplied by 9-days = \$3,411.90 per qtr. \$3,411.90 is adjusted to \$3,415 per qtr.</p> <p><u>Assumptions for medium maintenance</u> The cost associated with medium maintenance is based on 3 months per quarter and visiting the site 2-days per month and being on site 4 hours per (each) visit:</p> <p><u>Calculations</u> \$75.82 hourly rate for field technician multiplied by 4 hours = \$303.28 per day \$303.28 per day multiplied by 6-days = \$1,819.68 per qtr. \$1,819.68 is adjusted to \$1,820 per qtr.</p> <p><u>Assumptions for low maintenance</u> The cost associated with low maintenance is based on 3 months per quarter and visiting the site 1-day per month and being on site 5 hours per (each) visit:</p> <p><u>Calculations</u> \$75.82 hourly rate for field technician multiplied by 5 hours = \$379.10 per day \$379.10 per day multiplied by 3-days = \$1,137.30 per qtr. \$1,137.30 is adjusted to \$1,140 per qtr.</p>	
Unscheduled Maintenance of a Remediation System: includes all personnel and equipment and excludes replacement of components. Reimbursement shall be limited to four (4) unscheduled maintenance visits per twelve (12) month period. Additional unscheduled maintenance visits shall be approved in advance by the cabinet and shall result in a re-evaluation of the system.	\$1,080 per visit
<p>\$75.82 hourly rate for field technician multiplied by 8 hours = \$606.56 per unscheduled maintenance visit</p> <p>\$104.98 hourly rate for project manager divided by 4.5 hours = \$472.41 per unscheduled maintenance visit</p> <p>Total of bold items above = \$1,078.97 per unscheduled maintenance visit. \$1,078.97 is adjusted to \$1,080 per unscheduled maintenance visit.</p>	

3.13 Other Tasks

The following table lists formulated task rates associated with other tasks, including all labor, equipment, and material costs.

Initial and Immediate Response Actions: for actions taken outside of the excavation zone, in accordance with Section 2.2 of the UST Corrective Action Manual, incorporated by reference in 401 KAR 42:060, prior to a written directive from the UST Branch or prior to the date of a declared environmental emergency by the cabinet. Response actions may include mitigation of fire and explosion hazards, and cleanup of spills and overfills using absorbent pads or booms, and prevention of further UST system releases.	\$1,080 per occurrence
The formulated task rate includes all personnel and equipment, preparation of the required status letter, facility sketch, description of work completed, photographic documentation, and recommendations for future actions.	
This formulated task rate is based on a general estimate to complete the associated tasks.	
Site visit to reevaluate previously confirmed classification criteria when directed in writing by the cabinet, as a stand-alone event: includes completion of an amended UST Classification Guide, DWM 4261.	\$435 per request
\$75.82 hourly rate for field technician multiplied by 4 hours = \$303.28 \$128.30 hourly rate for P.E./P.G. to complete the class guide	
The total of the bold items above = \$431.58 per request for site visit to reevaluate classification. \$431.58 is adjusted to \$435 per request for site visit to reevaluate classification.	
Site visit to complete a UST Classification Guide, DWM 4261, as part of a Site Check (as directed by the cabinet).	\$435 per request
\$75.82 hourly rate for field technician multiplied by 4 hours = \$303.28 \$128.30 hourly rate for P.E./P.G. to complete the class guide	
The total of the bold items above = \$431.58 per request for site visit to complete class guide. \$431.58 is adjusted to \$435 per request for site visit to complete class guide.	
Tank & Line Tightness Testing in conjunction with site check, site investigation, or corrective action activities for a facility as directed by the cabinet.	\$640 per test
This formulated task rate is based on invoices received for tank & line tightness testing plus a 15% markup.	

3.14 Laboratory Parameters

The following table lists formulated task rates associated with laboratory parameters for samples collected and analyzed. These formulated task rates include, but are not limited to, the cost of preparing the samples for shipment, the cost of shipment, and sample containers.

These formulated task rates are based on invoices received.	
Laboratory Parameters	
Active Persulfate	\$12 per sample
Biological Oxygen Demand (BOD)	\$43 per sample
BTEX (Method 8021): MTBE reporting included if directed by the cabinet for domestic-use sources	\$86 per sample
BTEX (Method 8260): MTBE reporting included if directed by the cabinet for domestic-use sources	\$100 per sample
BTEX (Method 8260) 24-hour turn around: MTBE reporting included if directed by the cabinet for domestic-use sources	\$160 per sample
BTEX, Field Blank (water only)	\$100 per sample
BTEX, Trip Blank (water only)	\$100 per sample
Calcium (Ca)	\$54 per sample
Carbon Dioxide (CO ₂)	\$52 per sample
Carbonate Alkalinity	\$22 per sample
Chemical Oxygen Demand (COD)	\$38 per sample
Dissolved Calcium	\$50 per sample
Dissolved Iron	\$18 per sample
Dissolved Magnesium	\$25 per sample
Ferrous Iron	\$23 per sample
Grain Size Analysis	\$216 per sample
Hardness	\$18 per sample
Heterotrophic Plate Count	\$65 per sample
Ignitability	\$59 per sample
Inorganic Nitrogen (N)	\$70 per sample
Intrinsic Soil Permeability (includes all costs for collection and analysis)	\$540 per sample
Iron (Fe)	\$43 per sample
Iron, Total	\$25 per sample
Lead, Total (soil)	\$54 per sample
Lead, Total (soil) 24-hour turn around	\$115 per sample
Lead, Dissolved (groundwater)	\$54 per sample
Lead Dissolved (groundwater) 24-hour turn around	\$115 per sample
Low Level Volatile Fatty Acids	\$135 per sample
PAH (Method 8270)	\$228 per sample
PAH (Method 8270) 24-hour turn around	\$288 per sample
Manganese (Mn)	\$25 per sample
Methane	\$60 per sample
Microbe Enumeration Studies	\$113 per sample
Nitrate (NO ₃)	\$38 per sample
Nitrite (NO ₂)	\$38 per sample
Paint Filter Test	\$52 per sample
pH	\$43 per sample

Phosphate (PO ₃)	\$33 per sample
Soil Moisture Content	\$16 per sample
Soil Oxidation Reduction Potential (Redox)	\$43 per sample
Soluble Ferrous Iron	\$40 per sample
Sulfate (SO ₄)	\$30 per sample
Sulfide (S ²⁻)	\$32 per sample
Total Dissolved Solids (TDS)	\$27 per sample
Total Organic Carbon (TOC)	\$81 per sample
Total Petroleum Hydrocarbon (TPH-GRO and TPH-DRO)	\$81 per sample
Total Organic Nitrogen (TON)	\$54 per sample
Waste Characterization	Actual cost plus 15%
Vapor Intrusion Assessment Laboratory Parameters	
Individual Summa Canister Certification	\$108 each
Method TO-15	\$324 per sample
Method 8260	\$135 per sample
Oxygen/Carbon Dioxide (O ₂ /CO ₂)	\$108 per sample

3.15 Reporting

Formulated task rates for reporting include, but are not limited to, personnel time for preparation of the report (narrative, figures, maps, tables, amended Classification Guides, etc.), secondary reviews, modifications, revisions, any re-submittals necessary to obtain cabinet approval, clerical support, and all other direct costs such as copying, binding and delivery (e.g. mailing, faxing, hand delivery, etc.).

Initial Abatement Reporting			
Initial Abatement Report			\$1,205
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	2.00	\$256.60
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (Geologist, Engineer, Scientist)	\$104.98	7.00	\$734.86
Drafting [figure support]	\$69.98	1.50	\$104.97
Admin. /Clerical [copy, filing, etc....]	\$52.49	1.00	\$52.49
Misc. [materials etc....]	\$54.00	1.00	\$54.00
TOTAL			\$1,202.92

Site Check Reporting			
Site Check Report (with DWM 4268)			\$1,190
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	2.00	\$256.60
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (Geologist, Engineer, Scientist)	\$104.98	6.00	\$629.88
Drafting [figure support]	\$69.98	3.00	\$209.94
Admin. /Clerical [copy, filing, etc....]	\$52.49	1.00	\$52.49
Misc. [materials etc....]	\$54.00	0.75	\$40.50
TOTAL			\$1,189.41

Closure Reporting			
Optional Soil Removal at the time of Permanent Closure Report (submitted with the Closure Assessment Report)			\$545
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	1.00	\$128.30
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (Geologist, Engineer, Scientist)	\$104.98	2.50	\$262.45
Drafting [figure support]	\$69.98	1.00	\$69.98
Admin. /Clerical [copy, filing, etc....]	\$52.49	0.50	\$26.25
Misc. [materials etc....]	\$54.00	1.00	\$54.00
TOTAL			\$540.98

Site Investigation Reporting			
Site Investigation Report – Base Report (with DWM 4269): this reporting cost will be added to all site investigation reports when directed by the cabinet.			\$2,865
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	4.00	\$513.20
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (Geologist, Engineer, Scientist)	\$104.98	16.00	\$1,679.68
Drafting [figure support]	\$69.98	5.00	\$349.90
Admin. /Clerical [copy, filing, etc....]	\$52.49	4.00	\$209.96
Misc. [materials etc....]	\$54.00	2.00	\$108.00
TOTAL			\$2,860.74

Initial Site Survey Reporting – Supplemental Site Investigation Reporting: this reporting cost will be added to the base report cost when directed by the cabinet.			\$1,005
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	1.00	\$128.30
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	3.00	\$314.94
Drafting [figure support]	\$69.98	8.00	\$559.84
Admin. /Clerical [copy, filing, etc....]	\$52.49	0.00	\$0.00
Misc. [materials etc....]	\$54.00	0.00	\$0.00
TOTAL			\$1,003.08

Additional Site Survey Reporting – Supplemental Site Investigation Reporting: this reporting cost will be added to the base report cost when directed by the cabinet.			\$620
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	1.00	\$128.30
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	2.00	\$209.96
Drafting [figure support]	\$69.98	4.00	\$279.92
Admin. /Clerical [copy, filing, etc....]	\$52.49	0.00	\$0.00
Misc. [materials etc....]	\$54.00	0.00	\$0.00
TOTAL			\$618.18

Supplemental Site Investigation Reporting: this reporting cost will be added to the base report cost when directed by the cabinet.			\$970
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	1.00	\$128.30
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	4.00	\$419.92
Drafting [figure support]	\$69.98	6.00	\$419.88
Admin. /Clerical [copy, filing, etc....]	\$52.49	0.00	\$0.00
Misc. [materials etc....]	\$54.00	0.00	\$0.00
TOTAL			\$968.10
Vapor Assessment – Supplemental Site Investigation Reporting: this reporting cost will be added to the base report cost when directed by the cabinet.			\$820
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	2.00	\$256.60
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	4.00	\$419.92
Drafting [figure support]	\$69.98	2.00	\$139.96
Admin. /Clerical [copy, filing, etc....]	\$52.49	0.00	\$0.00
Misc. [materials etc....]	\$54.00	0.00	\$0.00
TOTAL			\$816.48
Corrective Action Reporting			
Over-Excavation Scope of Work Proposal (with 4263)			\$830
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	1.00	\$128.30
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	6.00	\$629.88
Drafting [figure support]	\$69.98	1.00	\$69.98
Admin. /Clerical [copy, filing, etc....]	\$52.49	0.00	\$0.00
Misc. [materials etc....]	\$54.00	0.00	\$0.00
TOTAL			\$828.16
Over-Excavation Report < 500 cubic yards (with DWM 4267)			\$545
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	1.00	\$128.30
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	2.50	\$262.45
Drafting [figure support]	\$69.98	1.00	\$69.98
Admin. /Clerical [copy, filing, etc....]	\$52.49	0.50	\$26.25
Misc. [materials etc....]	\$54.00	1.00	\$54.00
TOTAL			\$540.98
Over-Excavation Report > 500 cubic yards (with DWM 4267)			\$1,390
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	1.00	\$128.30
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	8.50	\$892.33
Drafting [figure support]	\$69.98	3.00	\$209.94
Admin. /Clerical [copy, filing, etc....]	\$52.49	2.00	\$104.98
Misc. [materials etc....]	\$54.00	1.00	\$54.00
TOTAL			\$1,389.55

Scope of Work Proposal for Injection, Geophysics, High Resolution Site Characterization (HRSC), and Vapor Assessment or another report as directed by the cabinet (with DWM 4263)			\$1,545
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	6.00	\$769.80
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	5.00	\$524.90
Drafting [figure support]	\$69.98	2.00	\$139.96
Admin. /Clerical [copy, filing, etc....]	\$52.49	1.00	\$52.49
Misc. [materials etc....]	\$54.00	1.00	\$54.00
TOTAL			\$1,541.15
Injection, Geophysics, or High Resolution Site Characterization (HRSC) Report or another report as directed by the cabinet (with DWM 4263)			\$1,615
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	6.00	\$769.80
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	6.00	\$629.88
Drafting [figure support]	\$69.98	1.50	\$104.97
Admin. /Clerical [copy, filing, etc....]	\$52.49	1.00	\$52.49
Misc. [materials etc....]	\$54.00	1.00	\$54.00
TOTAL			\$1,611.14
Scope of Work Proposal for a Feasibility Study or Pilot Study (with DWM 4263)			\$1,545
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	6.00	\$769.80
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	5.00	\$524.90
Drafting [figure support]	\$69.98	2.00	\$139.96
Admin. /Clerical [copy, filing, etc....]	\$52.49	1.00	\$52.49
Misc. [materials etc....]	\$54.00	1.00	\$54.00
TOTAL			\$1,541.15
Feasibility Study Report (with DWM 4263)			\$1,730
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	8.00	\$1,026.40
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	5.00	\$524.90
Drafting [figure support]	\$69.98	1.00	\$69.98
Admin. /Clerical [copy, filing, etc....]	\$52.49	1.00	\$52.49
Misc. [materials etc....]	\$54.00	1.00	\$54.00
TOTAL			\$1,727.77
Pilot Study Report (with DWM 4263)			\$3,280
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	16.00	\$2,052.80
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	9.00	\$944.82
Drafting [figure support]	\$69.98	2.50	\$174.95
Admin. /Clerical [copy, filing, etc....]	\$52.49	1.00	\$52.49
Misc. [materials etc....]	\$54.00	1.00	\$54.00
TOTAL			\$3,279.06

As-Built or Corrective Action Implementation Report (with DWM 4263)			\$1,100
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	2.00	\$256.60
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	5.00	\$524.90
Drafting [figure support]	\$69.98	3.00	\$209.94
Admin. /Clerical [copy, filing, etc....]	\$52.49	1.00	\$52.49
Misc. [materials etc....]	\$54.00	1.00	\$54.00
TOTAL			\$1,097.93
Groundwater Monitoring Report (with DWM 4264)			\$1,220
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	2.00	\$256.60
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	6.00	\$629.88
Drafting [figure support]	\$69.98	4.00	\$279.92
Admin. /Clerical [copy, filing, etc....]	\$52.49	1.00	\$52.49
Misc. [materials etc....]	\$54.00	0.00	\$0.00
TOTAL			\$1,218.89
Corrective Action Plan – Soil Only (with DWM 4263)			\$3,600
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	16.00	\$2,052.80
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	9.00	\$944.82
Drafting [figure support]	\$69.98	4.00	\$279.92
Admin. /Clerical [copy, filing, etc....]	\$52.49	4.00	\$209.96
Misc. [materials etc....]	\$54.00	2.00	\$108.00
TOTAL			\$3,595.50
Corrective Action Plan – Groundwater Only or Groundwater and Soil (with DWM 4263)			\$6,000
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	26.00	\$3,335.80
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	17.00	\$1,784.66
Drafting [figure support]	\$69.98	8.00	\$559.84
Admin. /Clerical [copy, filing, etc....]	\$52.49	4.00	\$209.96
Misc. [materials etc....]	\$54.00	2.00	\$108.00
TOTAL			\$5,998.26
Amended Corrective Action Plan – Soil Only (with DWM 4263)			\$1,905
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	8.00	\$1,026.40
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	5.00	\$524.90
Drafting [figure support]	\$69.98	2.00	\$139.96
Admin. /Clerical [copy, filing, etc....]	\$52.49	2.00	\$104.98
Misc. [materials etc....]	\$54.00	2.00	\$108.00
TOTAL			\$1,904.24

Amended Corrective Action Plan – Groundwater Only or Groundwater and Soil (with DWM 4263)			\$3,390
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	16.00	\$2,052.80
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	9.00	\$944.82
Drafting [figure support]	\$69.98	2.50	\$174.95
Admin. /Clerical [copy, filing, etc....]	\$52.49	2.00	\$104.98
Misc. [materials etc....]	\$54.00	2.00	\$108.00
TOTAL			\$3,385.55

Risk Assessment Scope of Work Proposal (with DWM 4263)			\$3,120
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	9.00	\$1,154.70
Toxicologist	\$145.80	12.00	\$1,749.60
Project Manager (geologist, engineer, scientist)	\$104.98	0.00	\$0.00
Drafting [figure support]	\$69.98	0.00	\$0.00
Admin. /Clerical [copy, filing, etc....]	\$52.49	2.00	\$104.98
Misc. [materials etc....]	\$54.00	2.00	\$108.00
TOTAL			\$3,117.28

Risk Assessment Report (Tier II or Tier III) (with DWM 4263)			\$24,690
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	44.00	\$5,645.20
Toxicologist	\$145.80	120.00	\$17,496.00
Project Manager (geologist, engineer, scientist)	\$104.98	0.00	\$0.00
Drafting [figure support]	\$69.98	16.00	\$1,119.68
Admin. /Clerical [copy, filing, etc....]	\$52.49	4.00	\$209.96
Misc. [materials etc....]	\$54.00	4.00	\$216.00
TOTAL			\$24,686.84

Miscellaneous Reporting			\$400
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	0.50	\$64.15
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	2.00	\$209.96
Drafting [figure support]	\$69.98	1.00	\$69.98
Admin. /Clerical [copy, filing, etc....]	\$52.49	0.50	\$26.25
Misc. [materials etc....]	\$54.00	0.50	\$27.00
TOTAL			\$397.34

Free Product Recovery Report			\$545
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	1.00	\$128.30
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	2.50	\$262.45
Drafting [figure support]	\$69.98	1.00	\$69.98
Admin. /Clerical [copy, filing, etc....]	\$52.49	0.50	\$26.25
Misc. [materials etc....]	\$54.00	1.00	\$54.00
TOTAL			\$540.98

Minor Field Work Report			\$790
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	1.50	\$192.45
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	4.50	\$472.41
Drafting [figure support]	\$69.98	1.00	\$69.98
Admin. /Clerical [copy, filing, etc....]	\$52.49	0.50	\$26.25
Misc. [materials etc....]	\$54.00	0.50	\$27.00
TOTAL			\$788.09
Mobile Dual-Phase Extraction Report (with DWM 4265)			\$1,180
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	1.00	\$128.30
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	8.50	\$892.33
Drafting [figure support]	\$69.98	1.00	\$69.98
Admin. /Clerical [copy, filing, etc....]	\$52.49	0.50	\$26.25
Misc. [materials etc....]	\$54.00	1.00	\$54.00
TOTAL			\$1,170.86
Shoring Evaluation Report			\$1,235
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	6.00	\$769.80
Toxicologist	\$145.80	0.00	\$0.00
Project Manager (geologist, engineer, scientist)	\$104.98	3.00	\$314.94
Drafting [figure support]	\$69.98	1.00	\$69.98
Admin. /Clerical [copy, filing, etc....]	\$52.49	0.50	\$26.25
Misc. [materials etc....]	\$54.00	1.00	\$54.00
TOTAL			\$1,234.97
Completion of UST Vapor Intrusion Building Assessment Checklist, DWM 4271			\$195.00 per building
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	1.50	\$192.45
TOTAL			\$192.45
Completion of UST Vapor Intrusion Assessment Checklist, DWM 4270			\$195.00 per sampling event
Personnel	Unit Rate (\$)	Total Units (hours)	Reimbursement (\$)
Professional Geologist (Alt. PE)	\$128.30	1.50	\$192.45
TOTAL			\$192.45

4.0 SURFACE MATERIAL REPLACEMENT

The following table lists formulated task rates associated with surface material replacement. These costs include all necessary labor, oversight personnel (one individual), equipment, and material needed to perform surface material replacement. Rebar and curbing costs are included in the formulated task rates.

Asphalt replacement	\$1.50 per sq. ft. per inch thick <i>(minimum \$2,400)</i>
This cost is based on invoices received for surface material replacement of asphalt.	
Concrete replacement	\$1.92 per sq. ft. per inch thick <i>(minimum \$2,400)</i>
This cost is based on invoices received for surface material replacement of concrete.	
Reseeding	
Reseeding < 1-acre	\$0.20 per sq. ft.
Reseeding ≥ 1-acre	\$0.10 per sq. ft.
These costs are based on invoices received for surface material replacement.	

5.0 RATES

The following tables lists rates for equipment and personnel to perform a specific task that does not have a formulated task rate. The rates listed in this section shall be used when completing a cost estimate, as applicable.

5.1 Equipment

These formulated task rates are based on average rental rates.	
Air compressor (< 190 CFM)	\$130 per day
Air compressor (> 190 CFM)	\$233 per day
Asphalt (bag)	\$25 per bag
Backhoe (trailer and accessories)	\$65 per hour
Bentonite chips (bag)	\$17 per bag
Concrete saw (hand or push)	\$104 per day
Conductivity meter	\$22 per day
Concrete corer	\$200 per day
Dingo Stand on loader	\$38 per hour
Direct-push unit (includes operator)	\$1,296 per day
Direct-push unit (excluding operator)	\$1,080 per day
Drum (55 gallon)	\$42 each
Dissolved oxygen (DO) meter	\$49 per day
Dump Truck	\$40 per hour
Electronic water level indicator	\$22 per day
Electronic water level recorder/transducer (two (2) well capability)	\$54 per day
Electronic water level recorder/transducer (four (4) well capability)	\$108 per day
Excavator (25,000 – 34,000 lbs.)	\$750 per day
Excavator (35,000 – 44,000 lbs.)	\$900 per day
Excavator (45,000 – 50,000 lbs.)	\$1,050 per day
Fencing/chain link (100 feet with 10 posts)	\$200 per month
Fencing/safety orange plastic (100 feet x 6 feet)	\$175 each
Flame ionization detector (FID) / Organic vapor analyzer (OVA)	\$165 per day
Flow regulator (air samples only)	\$44 per day
Frac Tank (~21,000 gallon) including poly tanks or holding tanks	\$75 per day
Generator	\$86 per day
Grout pump	\$81 per day
Injection trailer (includes drill rig, operator, and mounted pumping system)	\$2,800 per day
Jackhammer / Rock drill (air with bit and hose)	\$88 per day
Jackhammer / Rock drill (electric with bit)	\$122 per day
Lower explosive limit (LEL) meter	\$38 per day
Loader (skid)	\$42 per hour
Multi-meter (multiple measurement device)	\$43 per day
pH Meter	\$22 per day
Photoionization detector (PID) / Hnu meter	\$120 per day
Post hole auger for Bobcat	\$64 per hour
Power auger (hand held)	\$70 per day

Pump 2-inch submersible pump (electric)	\$49 per day
Pump 2-inch trash pump	\$71 per day
Pump 3-inch trash pump	\$92 per day
Rebar #3 (10-foot section)	\$6 each
Self-contained steam cleaning unit	\$135 per day
Steam cleaner	\$115 per day
Survey equipment	\$49 per day
Trencher (walk behind)	\$49 per hour
Track hoe (trailer and accessories)	\$108 per hour
Traffic control (one-time startup cost if necessary above traffic control in formulated task rates)	\$75 each
Traffic control, cones	\$0.25 per day
Traffic control, safety barricade (50-foot roll)	\$25 per day
Traffic control, signage	\$2 per day
Velocity meter	\$49 per day
Water truck (500 gallon), usage must be justified	\$170 per day
Water truck (800 gallon capacity or greater), usage must be justified	\$189 per day
6L Summa canister rental (weekly)	\$54 each
1L Summa canister rental (weekly)	\$54 each
Flow regulator rental (weekly)	\$54 each
Copies	\$0.11 per page
Faxes	\$1.35 per page
Mileage, per mile for personnel vehicle (based upon the date of the directive issued)	State reimbursement rate established pursuant to 200 KAR 2:006

5.2 Personnel Rates

Professional, technical and labor rates include fringe benefits, contractor's overhead and profit. If reimbursement of labor rates is to be based upon time and material, reimbursement shall be based upon the task performed by an employee rather than the qualifications of the employee. See Appendix A for rates associated with certain tasks.

Title	Maximum Hourly Rate
Professional Engineer (licensed in KY)	\$128.30
Professional Geologist (registered in KY)	
Project Manager (geologist, engineer, scientist)	\$104.98
Field Technician	\$75.82
Toxicologist	\$145.80
Administrative Assistant	\$52.49
Draftsperson/CAD	\$69.98
Laborer	\$46.66
Equipment Operator	\$52.49
Electrical Contractor (license required)	\$69.98
Apprentice Plumber	\$52.49
Journeyman Plumber	\$58.32
Master Plumber (license required)	\$64.15
Flagger	\$43.20

5.3 Legal Services

The following table lists rates associated with reimbursement of legal services. An invoice from the legal service provider shall be provided with a written description explaining legal costs incurred.

Title	Maximum Hourly Rate
Sole practitioner	\$128.30 per hour
Partner or principal in firm	\$204.12 per hour
Associate in firm	\$163.30 per hour
Paralegal	\$69.98 per hour

6.0 APPENDIX A – Personnel Tasks and Responsibilities

Professional Classification	Tasks and Responsibilities
Professional Engineer Professional Geologist	<p>Professionally registered in the Commonwealth of Kentucky to practice geology or licensed in the Commonwealth of Kentucky to practice engineering. Duties include direct practice and/or direct oversight of the practice of geology or engineering. Ancillary duties to the practice of geology or engineering typically include developing strategies, contract meetings with clients and developing contract cost estimates. Responsible for final data analysis and interpretation, review and approval of designs, reports, plans and specifications before submittal to client or regulatory agency. Performs limited, but appropriate, levels of fieldwork, but should be continually involved in the technical aspects that involve the practice and/or oversight of the practice of geology or engineering for the entire project and reporting, in addition to the oversight of lower level professional staff.</p>
Project Manager (geologist, engineer, scientist)	<p>Has responsibility for managing and implementing entire remediation projects, estimating costs within the project and controlling project budgets. Identifies and develops approaches for corrective action. Serves as the technical expert. Performs data compilation and presentation for analysis and interpretation by the P.E. or P.G., assists in the performance of hydraulic tests, and may prepare limited or technical sections of reports. Supervises the work of lower level professional and technical staff.</p> <ul style="list-style-type: none"> • Project management • Report review • Report preparation • Development and oversight of project budget • Field work planning • Work plan preparation • Field direction, coordination, and management: coordinate with agency, client and subcontractors; equipment specifications review, selection and design; and acquire property access as required by the cabinet
Toxicologist	<p>Uses and compiles data and information concerning the concentrations of chemical constituents that may be present in environmental media (e.g., soil, water, air), along with toxicological data, in order to characterize the nature and magnitude of health risks to humans (e.g., residents, workers, recreational visitors) and ecological receptors (e.g., birds, fish, wildlife).</p> <p>Primarily engaged when performing a Tier II or III risk assessment along with the P.E. or P.G.</p>
Field Technician	<p>Performs routine labor tasks related to installation, maintenance and repair of machinery and equipment. Performs routine tasks such as soil and groundwater sampling, well purging/development, etc. The majority of work performed in this classification is fieldwork.</p> <ul style="list-style-type: none"> • Fieldwork preparation • Operation and maintenance of equipment • Well development • Remediation system installation • Waste handling • Sampling and monitoring • Decontamination